

AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JUNE 25, 1996  
REGISTRATION NO. 333-

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM S-1

REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

AWARE, INC.  
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

MASSACHUSETTS  
(STATE OR OTHER JURISDICTION  
OF INCORPORATION)

7373  
(PRIMARY STANDARD INDUSTRIAL  
CLASSIFICATION CODE NUMBER)

04-2911026  
(I.R.S. EMPLOYER  
IDENTIFICATION NUMBER)

ONE OAK PARK  
BEDFORD, MASSACHUSETTS 01730  
(617) 276-4000  
(ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF  
REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

JAMES C. BENDER  
PRESIDENT AND CHIEF EXECUTIVE OFFICER  
AWARE, INC.  
ONE OAK PARK  
BEDFORD, MASSACHUSETTS 01730  
(617) 276-4000  
(NAME, ADDRESS, INCLUDING ZIP CODE AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF  
AGENT FOR SERVICE)

COPIES TO:

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APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. / /

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. / /

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED(1)	PROPOSED MAXIMUM OFFERING PRICE PER SHARE(2)	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE	AMOUNT OF REGISTRATION FEE
Common Stock, par value \$.01 per share.....	3,910,000	\$12.00	\$46,920,000.00	\$16,179.31

- (1) Includes 510,000 shares subject to an over-allotment option granted to the Underwriters by the Registrant. See "Underwriting."
- (2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(a) under the Securities Act of 1933.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

- .....  
- .....

AWARE, INC.

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CROSS-REFERENCE SHEET SHOWING LOCATION IN PROSPECTUS  
OF INFORMATION REQUIRED BY ITEMS IN PART I OF FORM S-1

FORM S-1 ITEM NUMBER AND HEADING -----	LOCATION IN PROSPECTUS -----
1. Forepart of the Registration Statement and Outside Front Cover Page of Prospectus.....	Outside Front Cover Page of Prospectus
2. Inside Front and Outside Back Cover Pages of Prospectus.....	Inside Front Cover Page of Prospectus
3. Summary Information, Risk Factors and Ratio of Earnings to Fixed Charges.....	Summary; Risk Factors
4. Use of Proceeds.....	Summary; Use of Proceeds; Management's Discussion and Analysis of Financial Condition and Results of Operations
5. Determination of Offering Price.....	Outside Front Cover Page of Prospectus; Underwriting
6. Dilution.....	Dilution
7. Selling Security Holders.....	Not Applicable
8. Plan of Distribution.....	Outside Front Cover Page of Prospectus; Underwriting
9. Description of Securities to be Registered.....	Summary; Capitalization; Description of Capital Stock
10. Interests of Named Experts and Counsel....	Legal Matters; Experts
11. Information with Respect to the Registrant.....	Outside Front Cover Page of Prospectus; Summary; Risk Factors; Dividend Policy; Capitalization; Selected Financial Data; Management's Discussion and Analysis of Financial Condition and Results of Operations; Business; Management; Certain Transactions; Principal Stockholders; Description of Capital Stock; Shares Eligible for Future Sale; Financial Statements
12. Disclosure of Commission Position on Indemnification for Securities Act Liabilities.....	Not Applicable

INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.

SUBJECT TO COMPLETION DATED JUNE 25, 1996

[LOGO]

AWARE, INC.

3,400,000 SHARES

COMMON STOCK

All of the 3,400,000 shares of Common Stock offered hereby are being sold by Aware, Inc. ("Aware" or the "Company"). Prior to this offering, there has been no public market for the Common Stock of the Company. It is currently estimated that the initial public offering price of the Common Stock will be between \$10.00 and \$12.00 per share. See "Underwriting" for information relating to the method of determining the initial public offering price.

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THE COMMON STOCK OFFERED HEREBY INVOLVES A HIGH DEGREE OF RISK.  
SEE "RISK FACTORS" AT PAGE 6.

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THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	PRICE TO PUBLIC	UNDERWRITING DISCOUNTS AND COMMISSIONS	PROCEEDS TO COMPANY(1)
Per Share.....	\$	\$	\$
Total(2).....	\$	\$	\$

(1) Before deducting expenses payable by the Company, estimated at \$800,000.

(2) The Company has granted to the Underwriters a 30-day option to purchase up to an additional 510,000 shares of Common Stock solely to cover over-allotments, if any. See "Underwriting." If such option is exercised in full, the total Price to Public, Underwriting Discounts and Commissions, and Proceeds to Company will be \$ , \$ and \$ , respectively.

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The Common Stock is offered by the Underwriters as stated herein, subject to receipt and acceptance by them and subject to their right to reject any order in whole or in part. It is expected that delivery of such shares will be made through the offices of Robertson, Stephens & Company LLC ("Robertson, Stephens & Company"), San Francisco, California, on or about , 1996.

ROBERTSON, STEPHENS & COMPANY

FURMAN SELZ

The date of this Prospectus is , 1996.

What is ADSL?

- - ADSL = Asymmetric Digital Subscriber Line
- - Works over existing twisted-pair copper phone lines
- - Provides data downstream at up to 8 Mbps and upstream at up to 640 Kbps, depending upon the configuration chosen and the distance of the local loop
- - Allows for simultaneous data and voice service

[Diagram showing link between telephone company central office and home or business using Asymmetric ADSL Modem]

The Company believes that the ADSL Internet Access Modem provides the highest performance/distance combination available today.

Potential ADSL Applications

[Photograph showing person at computer]  
Internet Access

[Photograph showing two persons at computer]  
Telecommuting

[Diagram showing a local area network]  
LAN Interconnect

[Photograph showing computer]  
Video on Demand

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK OF THE COMPANY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

NO DEALER, SALES REPRESENTATIVE OR ANY OTHER PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS IN CONNECTION WITH THIS OFFERING OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS, AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY OR ANY UNDERWRITER. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL, OR A SOLICITATION OF AN OFFER TO BUY, ANY SECURITIES OTHER THAN THE REGISTERED SECURITIES TO WHICH IT RELATES OR AN OFFER TO, OR A SOLICITATION OF, ANY PERSON IN ANY JURISDICTION WHERE SUCH AN OFFER OR SOLICITATION WOULD BE UNLAWFUL. NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THERE HAS BEEN NO CHANGE IN THE AFFAIRS OF THE COMPANY SINCE THE DATE HEREOF OR THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY TIME SUBSEQUENT TO THE DATE HEREOF.

UNTIL , 1996 (25 DAYS AFTER THE DATE OF THIS PROSPECTUS), ALL DEALERS EFFECTING TRANSACTIONS IN THE COMMON STOCK, WHETHER OR NOT PARTICIPATING IN THIS DISTRIBUTION, MAY BE REQUIRED TO DELIVER A PROSPECTUS. THIS IS IN ADDITION TO THE OBLIGATION OF DEALERS TO DELIVER A PROSPECTUS WHEN ACTING AS UNDERWRITERS AND WITH RESPECT TO THEIR UNSOLD ALLOTMENTS OR SUBSCRIPTIONS.

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The Company intends to distribute to its stockholders annual reports containing financial statements examined by its independent public accounting firm and make available to its stockholders quarterly reports for the first three quarters of each fiscal year containing unaudited financial information.

AccuPress is a registered trademark of the Company. Aware, DWMT, SeisPact, WaveTel HFC and WSQ by Aware are trademarks of the Company. This Prospectus also includes tradenames, trademarks and registered trademarks of other companies.

## SUMMARY

This Prospectus contains certain statements of a forward-looking nature relating to future events or the future financial performance of the Company. Prospective investors are cautioned that such statements are only predictions and that actual events or results may differ materially. In evaluating such statements, prospective investors should specifically consider the various factors identified in this Prospectus, including the matters set forth under the caption "Risk Factors," which could cause actual results to differ materially from those indicated in such forward-looking statements. The following summary is qualified in its entirety by the more detailed information, including "Risk Factors," and Financial Statements and Notes thereto, appearing elsewhere in this Prospectus.

## THE COMPANY

Aware designs, develops and markets telecommunications software, chipsets and modems which incorporate ADSL technology and increase the speed of data communications over conventional copper telephone lines. The Company's products and services are designed to allow telephone companies to utilize their installed bases of dedicated copper lines to provide both residential and business customers with interactive data transmission at speeds much higher than currently available.

The Company's products include software and hardware interfaces that integrate ADSL chipsets into modems and other communications devices, and high speed ADSL Internet Access Modems that incorporate the Company's proprietary technology and software. The Company also develops ADSL chipsets with Analog Devices, Inc. ("ADI"). ADI has an exclusive license to manufacture and sell the chipsets for which the Company receives royalty payments. Several large telcos, including GTE Corporation and BellSouth Corporation, and a number of OEMs that supply telcos, including DSC Communications Corporation, RelTec Corporation, and Westell Technologies, Inc., are testing the Company's products.

Telecommunications service providers are experiencing a fundamental shift in the type of communications traffic transmitted over their networks. Existing infrastructures of twisted-pair copper wiring, originally designed to provide analog voice service ("Plain Old Telephone Service" or "POTS"), are increasingly required to carry the data-intensive, digital communications produced by computers. This communications traffic has increased dramatically in recent years with the rapid expansion of computer-based communication on the Internet and elsewhere. Telcos are faced with the challenge of providing high-speed data communications at reasonable costs, while preserving their large existing investments in copper wire networks. Current technologies for high speed data transmission, including ISDN, T-1 or E-1, and HDSL, increase the transmission speed of data over copper lines but share certain limitations, including an inability to accommodate simultaneous data transmission and POTS on the same line. In a typical configuration, the Company's ADSL Internet Access Modem, which uses digital signal processing to expand the useable bandwidth of copper telephone wire, allows transmission of data at a distance of 12,000 feet at a rate of 4.4 Mbps downstream to the customer and 440 Kbps upstream from the customer while allowing simultaneous POTS on the same telephone line.

Aware designs and develops products that incorporate proprietary software and algorithms based on digital signal processing technology as well as ASICs. In contrast to the approach taken by some competing developers of ADSL technology, Aware's approach is to maintain a high level of functionality in the software component of the product as opposed to the ASIC. The Company believes that this approach allows it to engineer improvements in its technology quickly and efficiently, rather than having to design and produce a new ASIC each time an improvement is made.

Aware was incorporated in Massachusetts in 1986. The Company's executive offices are located at One Oak Park, Bedford, Massachusetts 01730 and its telephone number is (617) 276-4000.

## THE OFFERING

Common Stock Offered by the Company..... 3,400,000 shares  
Common Stock Outstanding after the Offering..... 18,382,397 shares(1)  
Use of Proceeds..... For working capital and general corporate purposes.  
Proposed Nasdaq National Market Symbol..... AWRE

SUMMARY FINANCIAL DATA  
(In thousands, except per share data)

	YEAR ENDED DECEMBER 31,			THREE MONTHS ENDED MARCH 31,	
	1993	1994	1995	1995	1996
STATEMENT OF OPERATIONS DATA:					
Total revenue.....	\$ 3,172	\$ 3,827	\$ 3,260	\$ 950	\$ 962
Income (loss) from operations.....	(1,028)	(1,095)	(454)	(116)	18
Net income (loss).....	(992)	(1,012)	(343)	(87)	41
Pro forma net income (loss) per common share(2).....			\$ (0.17)	\$ (0.04)	\$0.00
Pro forma weighted average number of common shares outstanding(2).....			2,045	2,032	15,109

	MARCH 31, 1996	
	ACTUAL	AS ADJUSTED(3)
BALANCE SHEET DATA:		
Cash and cash equivalents.....	\$2,047	\$ 36,029
Working capital.....	2,617	36,599
Total assets.....	3,351	37,333
Total liabilities.....	382	382
Total stockholders' equity.....	2,969	36,951

- (1) Based on shares outstanding at June 1, 1996 and excludes (i) 3,107,158 shares of Common Stock issuable upon exercise of options outstanding under the Company's stock option plans at a weighted average exercise price of \$4.38 per share, (ii) 1,720,287 shares of Common Stock reserved for future issuance pursuant to such plans and (iii) 100,000 shares of Common Stock reserved for future issuance pursuant to the Company's employee stock purchase plan.
- (2) See Note 1 of Notes to Financial Statements for an explanation of the method of calculation of the pro forma weighted average number of common shares outstanding.
- (3) Adjusted to reflect the sale of 3,400,000 shares of Common Stock offered hereby at an assumed initial public offering price of \$11.00 per share and the application of the net proceeds therefrom. Does not reflect the receipt subsequent to March 31, 1996 of aggregate consideration of approximately \$1.0 million from the exercise of options to purchase an aggregate of 1,009,252 shares of Common Stock.

Unless otherwise indicated, all information contained in this Prospectus assumes (i) no exercise of the Underwriters' over-allotment option, (ii) the amendment and restatement of the Company's Articles of Organization on or before the closing of this offering to increase the authorized capital stock of the Company by 11,350,000 shares of Common Stock and 1,000,000 shares of undesignated Preferred Stock and (iii) the conversion of all outstanding shares of Preferred Stock of the Company into Common Stock on or before the closing of this offering. See "Description of Capital Stock" and "Underwriting."



## RISK FACTORS

In addition to the other information in this Prospectus, the following risk factors should be considered carefully in evaluating the Company's business before purchasing shares of the Common Stock offered hereby.

## HISTORY OF OPERATING LOSSES; ACCUMULATED DEFICIT

The Company has incurred net losses in every fiscal year since inception. In fiscal 1993, 1994 and 1995, the Company sustained net losses of approximately \$992,000, \$1,012,000 and \$343,000, respectively. At March 31, 1996, the Company had an accumulated deficit of approximately \$10.5 million. Since inception, the Company has made significant expenditures for research and development. Substantial additional research and development expenses to enhance the performance and reduce the manufacturing costs of the Company's products will be required before market acceptance can be determined. In addition, significant expenditures will be necessary to develop, market and sell the Company's ADSL products. As a result, the Company may continue to incur losses in the future. There can be no assurance that the Company will achieve profitable operations in any future period. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

## DEPENDENCE ON ACCEPTANCE OF ADSL TECHNOLOGY

The Company's future success, financial condition and results of operations are substantially dependent upon whether Asymmetric Digital Subscriber Line ("ADSL") technology, a new technology that increases the efficiency of digital transmission over copper wire, gains widespread commercial acceptance by telephone companies ("telcos") and end users of telco services. The Company has invested substantial resources in the development of ADSL technology implemented through the Discrete Multi-Tone ("DMT") modulation technique and expects for the foreseeable future to invest substantial resources in the development, marketing and sale of products incorporating such technology. Because telcos have only recently begun to consider implementing DMT-based ADSL technology in their networks, the market for products using DMT-based ADSL technology has not yet developed. Many factors may delay or preclude the development of such a market, including the existence of other technologies that increase the efficiency of digital transmission over copper wire, such as ADSL technology implemented through the Carrierless Amplitude Phase ("CAP") modulation technique, Integrated Service Digital Network ("ISDN"), T-1 and High bit-rate Digital Subscriber Line ("HDSL"), as well as technologies that increase digital transmission speeds over other media, such as hybrid fiber coaxial cable ("HFC"), coaxial cable, fiber optic cable, digital broadcast satellite and other wireless technologies. Many of these competing technologies, including CAP-based ADSL technology, are already available and may soon gain widespread commercial acceptance, a result which could materially limit acceptance of DMT-based ADSL technology. Moreover, many telcos have adopted policies that favor the deployment of fiber optic technologies. The failure of DMT-based ADSL technology to gain widespread commercial acceptance by telcos and end users of telco services would have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Last Mile Technology."

In order to achieve widespread commercial acceptance, DMT-based ADSL technology must first undergo the rigorous approval processes that telcos impose on new products before deploying them on a broad basis. The approval process usually involves a number of different phases, including (i) laboratory evaluation, in which the product is tested against relevant industry standards; (ii) technical trials, in which the product is tested in the field with a small number of users; (iii) marketing trials, in which the product is tested in the field with a larger number of users and telcos begin to train their personnel to install and maintain the product; (iv) initial commercial deployment, in which telcos make the product available to selected customers for selected applications; and (v) full commercial deployment, in which telcos make the product available to a substantial number of customers. See "Business -- ADSL Evaluations and Trials." To date, telcos have deployed ADSL systems solely for technical trials and have not yet begun marketing trials or commercial

deployment of any ADSL systems, including those of the Company. Although certain of the Company's products have been selected for participation in such technical trials, the Company is unable to predict when such trials will be concluded, whether such trials will be successful or whether the Company's products will be reviewed favorably by the telcos. As of June 1, 1996, the Company had derived revenues from sales of its ADSL Internet Access Modem of \$16,350, all of which were derived in the two months preceding June 1, 1996. The Company's revenue from the ADSL market has been derived principally from research and development payments and prepaid royalties relating to potential future sales of its ADSL Internet Access Modem. There can be no assurance that telcos will pursue the deployment of ADSL systems of the type sold by the Company or that, if deployment occurs, telcos or others will purchase the Company's ADSL products in quantities and at a rate sufficient for the Company to operate profitably.

#### RELIANCE ON TELCOS

The Company's future success, financial condition and results of operations will depend to a significant degree upon purchasing decisions by telcos and other prospective customers of the Company and its current and future OEMs. All of these customers have significantly greater resources than the Company, and the Company has little, if any, ability to influence or control decisions made by these customers. Before purchasing products such as those of the Company, telcos subject such products to lengthy approval processes, which can take several years or more for complex products based on new technologies such as ADSL. The Company expects to be required to submit each successive generation of its products as well as new products to its customers for approval. The length of the approval process will depend upon a number of factors, including the complexity of the product involved, priorities of telcos, telcos' budgets and regulatory issues affecting telcos. Moreover, the need for approval from the Federal Communications Commission (the "FCC") for certain new telco services prior to their implementation may delay the approval process. Any such delay would have a material adverse effect on the Company's business, financial condition and results of operations.

Historically, telcos have been cautious in implementing new technologies. Telcos' deployment of ADSL technology may be prevented or delayed by a number of factors, including telcos' lengthy product approval and purchase processes; cost; regulatory barriers that may prevent or restrict telcos from providing interactive multimedia services; the lack of demand for Internet access and other interactive multimedia services; the lack of sufficient programming content for interactive multimedia services; the availability of alternative technologies, such as CAP-based ADSL, ISDN, HFC, coaxial cable, fiber optic cable and wireless technologies; and telcos' policies that favor the use of such alternative technologies over ADSL technology. Moreover, certain competing technologies, such as HFC, coaxial cable, fiber optic cable and certain wireless technologies, have greater transmission speeds than that of the ADSL products being developed by the Company. In addition, telcos are generally reluctant to deploy new technologies available only from a single source, especially when the supplier is as small as the Company, and often require alternative sources before deploying a new technology. This reluctance may put the Company at a competitive disadvantage relative to some of its competitors. Even if telcos adopt policies favoring full-scale implementation of ADSL technology, there can be no assurance that sales of the Company's ADSL products will become significant or that the Company will be able successfully to introduce its ADSL products on a timely basis or to sell those products in material quantities. The failure of telcos to deploy the Company's ADSL systems would have a material adverse effect on the Company's business, financial condition and results of operations. Even if demand for the Company's products is high, telcos may have sufficient bargaining power to demand low prices and other terms and conditions which may have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Last Mile Technology."

## SUBSTANTIAL DEPENDENCE ON ANALOG DEVICES, INC.

The Company is substantially dependent on Analog Devices, Inc. ("ADI") and will not achieve its business objectives without the support and cooperation of ADI. In September 1993, the Company and ADI entered into an agreement to develop an integrated ADSL chipset that is based on system designs, algorithms and software developed by the Company and that incorporates application specific integrated circuits ("ASICs") and digital signal processors developed by ADI (the "ADSL Chipset"). In connection with this development agreement, the Company granted ADI a perpetual, worldwide, exclusive license to make, use and sell ADSL Chipsets and other products that incorporate the Company's proprietary ADSL software. In June 1994 and September 1995, the Company entered into similar arrangements with ADI with respect to certain other technology, including HFC and Very high speed Digital Subscriber Line ("VDSL"). The Company has also agreed that, if it develops and sells ADSL technology that implements the Company's Discrete Wavelet Multi-Tone ("DWMT") transform technology, it would license such technology to ADI on substantially the same terms as those for the Company's ADSL technology. Accordingly, the Company is entirely dependent on ADI for the manufacture and sale of chipsets based on the Company's ADSL, HFC and VDSL technology. The inability or refusal of ADI to manufacture, market and sell such chipsets in substantial quantities would prevent telcos from adopting the Company's technology and would have a material adverse effect on the Company's business, financial condition and results of operations. ADI is not obligated to manufacture, market or sell any chipsets that incorporate the Company's technology, and accordingly, there can be no assurance that ADI will continue to manufacture, market or sell such chipsets. Even if the Company were permitted to license its technology to other parties, the Company has agreed that it will not grant licenses to other parties under terms more favorable than those given to ADI. Because of the limited period during which ADI has manufactured the ADSL Chipset, the Company has not had sufficient opportunity to evaluate ADI's responsiveness or performance or the extent to which manufacturing problems may be encountered. In the past, ADI has experienced certain delays associated with the manufacture of the ADSL Chipsets. On occasion, such delays have been substantial. There can be no assurance that ADI will succeed in producing ADSL Chipsets that satisfy the Company's quality requirements on a timely basis, if at all. Any failure by ADI to produce ADSL Chipsets of a quality and a quantity to meet demand may have a material adverse effect on the Company's business, financial condition and results of operations. In the event of such a failure, there can be no assurance that the Company would be able to find a substitute manufacturer for ADSL Chipsets or that, if a substitute is found, shifting production to such substitute would not involve significant delays, start-up costs and other unforeseeable difficulties, the occurrence of any of which would have a material adverse effect on the Company's business, financial condition and results of operations. In 1993, 1994, 1995 and the three months ended March 31, 1996, the Company derived approximately 12%, 10%, 23% and 8%, respectively, of its total revenue from ADI. The Company has agreed with ADI that if ADI can show that the royalty paid to the Company does not allow ADI to compete in the marketplace, the Company will engage in good faith negotiations to reduce the royalty. Any such reduction could have a material adverse effect on the Company's business, financial condition and results of operations. The Company has also agreed with ADI that if the Company's HFC or VDSL technology becomes an industry standard, the Company will license such technology on fair, equitable and nondiscriminatory terms. See "Business -- Relationship with ADI."

## PROPRIETARY TECHNOLOGY; RISK OF THIRD-PARTY CLAIMS OF INFRINGEMENT

The Company's ability to compete effectively will depend to a significant extent on its ability to protect its proprietary information and to operate without infringing the intellectual property rights of others. Although the Company regards its technology as proprietary and has a number of patents and pending patent applications, none of such patents relates to technology embodied in the Company's current ADSL products. The Company relies on a combination of trade secrets, copyright and trademark law and nondisclosure agreements to protect its unpatented proprietary know-how. Despite these precautions, it may be possible for a third party to copy or otherwise obtain and use the Company's technology or products without authorization. Although the Company intends to defend its

intellectual property, there can be no assurance that the steps taken by the Company to protect its proprietary information will be adequate to prevent misappropriation of its technology. Moreover, there can be no assurance that the Company's competitors will not independently develop technologies substantially equivalent or superior to the Company's technology or that such competitive technology will not have a material adverse effect on the Company's business, financial condition and results of operations. In addition, many participants in the telecommunications industry have an increasing number of patents and have frequently demonstrated a readiness to commence litigation based on allegations of patent and other intellectual property infringement. Third parties may assert exclusive patent, copyright and other intellectual property rights to technologies that are important to the Company. The Company has received letters from two companies, Amati Communications Corporation ("Amati") and Telebit Corporation ("Telebit"), each asserting ownership of certain U.S. and foreign patents, claiming that the Company's ADSL technology would infringe such patents, and offering the Company the opportunity to enter into a license agreement with respect to such patents. The Company has been informed that ADI has received similar letters. The Company has reviewed the Amati and Telebit patents and has received an opinion of its patent counsel, based upon the Company's oral description of its technology, to the effect that the Company's ADSL Internet Access Modem which it intends to sell does not infringe any valid claim of any of the Amati and Telebit patents. Based upon this opinion, the Company believes that it does not require a license under the Amati or Telebit patents in order to conduct its proposed business.

Despite this opinion, there can be no assurance that a court to which the issue is submitted would not find that the Company's products infringe the Amati or Telebit patents, nor that Amati or Telebit will not continue to assert infringement. If the Company is found to have infringed any of such patents, the Company could be subject to substantial damages and/or an injunction preventing it from conducting its proposed business, and the Company's business could be materially and adversely affected. The Company has also received notice from Amati of the pendency of various patent applications which Amati considers to be pertinent to the design and operation of ADSL modems. Unless and until a patent actually issues, there can be no infringement, and the Company has not examined any such patent applications or received an opinion of patent counsel with respect thereto. Although Amati and Telebit have offered to license their patents and their patent applications to the Company, there can be no assurance that any license would be available on acceptable terms should the Company choose to pursue such license or be found to infringe such patents. In addition, there can be no assurance that other third parties will not assert infringement claims against the Company in the future, that these assertions or those of Amati and Telebit, will not result in protracted and costly litigation, or that the Company would prevail in any such litigation or be able to license any valid patents from third parties on commercially reasonable terms. Further, such litigation, regardless of its outcome, could result in substantial costs to and diversion of effort by the Company. Litigation may also be necessary to enforce the Company's intellectual property rights. Any infringement claim or other litigation against or by the Company could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Intellectual Property."

#### RAPID TECHNOLOGICAL CHANGE; DEPENDENCE ON NEW PRODUCTS

The markets for the Company's products are characterized by rapid technological advances, evolving industry standards, changes in end-user requirements, frequent new product introductions and enhancements, and evolving telco service offerings, all of which are outside the control of the Company. If technologies or standards applicable to the Company's products or telco services based on the Company's products become obsolete or fail to gain widespread commercial acceptance, the Company's business, financial condition and results of operations will be materially adversely affected. Moreover, the introduction of products embodying new technology, the emergence of new industry standards or changes in telco services could render the Company's existing products, as well as products under development, obsolete and unmarketable. ANSI, an organization that establishes certain industry standards for the markets in which the Company competes, has not yet established standards for certain of the Company's existing products and products under development. There can

be no assurance that, upon ANSI's adoption of any new industry standard, the Company's products will comply with such standard, that the Company will not encounter substantial financial, technological and other obstacles in modifying its existing products or developing new products to comply with such standard, or that the Company will be able to obtain rights necessary to comply with such standard on commercially acceptable terms. The failure of the Company's products to comply with any industry standard may have a material adverse effect on the market acceptance of such products and on the Company's business, financial condition and results of operations. The Company's future success will also depend upon its ability to enhance its existing products, to develop new products that address the increasingly sophisticated needs of its customers and to respond to technological advances and emerging industry standards and practices. Although certain of the Company's ADSL products are presently being tested by certain of its customers, these products are not being generally distributed at this time. There can be no assurance that the Company will be successful in developing, introducing and marketing new versions of its existing products or any product enhancements or new products, or will not experience difficulties that could delay or prevent the successful development, introduction or marketing of these products, or that its new products and product enhancements will adequately address the needs of the marketplace and achieve market acceptance. Delays in the introduction of new products and enhancements will result in customer dissatisfaction and delay or loss of revenues. Any inability of the Company to develop and introduce new products or enhancements of existing products in a timely manner in response to changing market conditions or customer requirements will have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Telecommunications Products."

#### RISKS ASSOCIATED WITH MANAGING A CHANGING BUSINESS

In order to achieve its business objectives, the Company must undergo substantial changes in its operations to transition from a company primarily involved in sponsored research and development to a company which develops, manufactures, markets, and supports products and services for the commercial telecommunications marketplace. These changes have placed, and are expected to continue to place, a significant strain on the Company's limited administrative, operational and financial resources. The Company has only recently begun the process of developing the management and operational capabilities and financial and accounting systems and controls necessary for this transition. For example, the Company hired its current Chief Financial Officer, Richard P. Moberg, on June 14, 1996. From January 1995 to June 1996, the Company did not have a Chief Financial Officer and had a financial and accounting staff consisting of a single individual. The Company believes that, without additional personnel and other resources, its financial and accounting systems and controls will not be adequate to conduct the commercial telecommunications business which the Company proposes to conduct. Mr. Moberg will be responsible for hiring sufficient accounting personnel and establishing financial and accounting systems and controls adequate to conduct the Company's proposed business as described in this Prospectus. There can be no assurance that the Company will be successful in achieving these objectives. Similarly, the head of the Company's manufacturing operations joined the Company in May 1996, and is responsible for building a manufacturing capability within the Company. The ability of the Company to achieve its business objectives will depend in large part on its ability to build effective financial and accounting systems, to build or subcontract efficient manufacturing operations, to generally improve and expand its operational and sales and marketing capabilities and its financial and management information systems, to develop the management skills of its managers and supervisors, and to train, motivate and manage both its existing employees and the additional employees that will be required if the Company is to achieve its business objectives. There can be no assurance that the Company will succeed in developing all or any of these capabilities, and any failure to do so would have a material adverse effect on the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Management."

## NEW MANAGEMENT TEAM; DEPENDENCE ON KEY PERSONNEL

A significant portion of the Company's senior management team has been in place for only a relatively short period of time. James C. Bender, David C. Hunter and Richard P. Moberg, the Company's President and Chief Executive Officer, Senior Vice President, Product Development and Vice President and Chief Financial Officer, respectively, joined the Company in October 1994, May 1996 and June 1996, respectively. Accordingly, each of these individuals has been involved with only the most recent operating activity of the Company. The Company's success will depend to a significant extent on the ability of its new executive officers to integrate themselves into the Company's daily operations, to gain the trust and confidence of the Company's other employees and to work effectively as a team. The Company's future success will also depend to a significant extent on its executive officers, including Mr. Bender and Michael A. Tzannes, Ph.D., its Senior Vice President, Telecommunications, and other technical, managerial and marketing personnel. The loss of the services of any of these individuals would have a material adverse effect on the Company's business, financial condition and results of operations. The Company does not currently have employment agreements with any of its key employees other than Mr. Bender. The Company does not have, and is not contemplating securing, key man life insurance on any of its executive officers or other key personnel. There can be no assurance that any of these individuals or any other key employee will not voluntarily terminate his or her employment with the Company. The Company believes that its future success will also depend significantly on its ability to attract, motivate and retain additional highly skilled technical, managerial and marketing personnel. Competition for such personnel is intense, and there can be no assurance that the Company will be successful in attracting, assimilating and retaining the personnel required to grow and operate profitably. See "Business -- Employees," "Management -- Executive Officers and Directors" and "--- Employment Agreement."

## DEPENDENCE ON DISTRIBUTION AND MARKETING RELATIONSHIPS

Until recently, the Company was primarily engaged in research and development and, accordingly, did not devote substantial resources to marketing and sales. At June 1, 1996, the Company's sales force was comprised of six employees. Consequently, the Company is, and for the foreseeable future will continue to be, substantially dependent on other companies for the marketing, sale and distribution of the Company's products. The Company is currently negotiating OEM and other agreements with a number of such companies and expects that these agreements will be nonexclusive and that many of the companies with which the Company is negotiating will have similar agreements with its competitors or potential competitors. The Company believes that its success in penetrating markets for its ADSL telecommunications products will depend to a significant degree on its ability to establish these relationships and to cultivate additional relationships. There can be no assurance that the Company's future distributors and OEM partners, most of which will have significantly greater financial and marketing resources than the Company, will not develop and market products in competition with the Company or form additional competing arrangements with the Company's competitors. See "Business -- Strategic Relationships and Customers," "-- Sales and Marketing " and "-- Competition."

## COMPETITION

The markets for the Company's products are intensely competitive and the Company expects competition to increase in the immediate future, especially in the emerging ADSL market. The Company intends to compete on the basis of technology, price, the timing of product delivery, product features, quality, reliability and customer satisfaction. The Company currently competes, or expects to compete in the future, with the following categories of companies: (i) other vendors of DMT-based ADSL technology, such as Amati and Orckit Communications Limited; (ii) vendors of alternative ADSL technologies, such as AT&T Paradyne Corp., which is currently marketing its CAP-based ADSL technology; (iii) the regional Bell operating companies ("RBOCs"), which as a result of the Telecommunications Act of 1996 are no longer prohibited from manufacturing telecommunications

equipment; and (iv) OEMs and other systems integrators, such as US Robotics Corp., Ericsson, Inc., Motorola, Inc. and Alcatel Network Systems, Inc.

In the HFC market, the Company is attempting to sell its products to system integrators such as Tellabs, Northern Telecom Ltd., Scientific-Atlanta, Inc. and General Instrument Corporation. The Company believes that these companies have developed or are developing proprietary modulation schemes using in-house technology that may be competitive with the Company's technology. Although the Company believes that its DWMT technology will offer more robust communications than these proprietary modulation schemes, the Company has not manufactured any marketable products based on its DWMT technology and there can be no assurance that the Company will be able to do so or that a market for such products will develop. The markets for the Company's wavelet image compression technology are competitive, and are expected to become increasingly so in the near future. In addition, the Company's WSQ product is an implementation of an open standard and is therefore subject to competition.

Many of the Company's competitors and potential competitors, including AT&T Paradyne Corp. and the RBOCs, have significantly greater financial, technological, manufacturing, marketing and personnel resources than the Company. There can be no assurance that the Company will be able to compete successfully or that competition will not have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Competition."

#### DEPENDENCE ON LIMITED NUMBER OF CUSTOMERS

The Company expects to derive a substantial portion of its revenues through OEMs from the RBOCs and other telcos, both of which are relatively few in number. Consequently, the Company's future success will depend to a large extent upon the timing and size of future purchase orders for the Company's products from the RBOCs, the financial and operating success of the RBOCs, and the success of the RBOCs' services that use the Company's products. Any attempt by the Company's OEMs or by an RBOC or other telco to seek out additional or alternative suppliers or to undertake the internal development and sale of products comparable to those of the Company could have a material adverse effect on the Company's business, financial condition and results of operations. The Company derived approximately 23%, 18%, 12% and 10% of its total revenue in 1995 from ADI, General Instrument Corporation, the United States government and GSS/Array Technology, respectively, and derived approximately 38% and 10% of its total revenue in 1994 from the United States government and ADI, respectively. These revenues consisted of contract and consulting fees from technology development agreements and government research contracts. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

#### MANUFACTURING RISKS

The Company has limited experience in manufacturing or in supervising the manufacture of its products, including its ADSL Internet Access Modem. To date, the Company has manufactured only extremely limited quantities of a technical evaluation model of its ADSL Internet Access Modem and has shipped such models to a limited number of customers for technical trials. As a result of the Company's limited manufacturing capabilities, the Company has encountered capacity constraints and has been unable to supply all orders for the technical evaluation model, which was designed solely to demonstrate technological feasibility and will not be suitable for mass production without additional redesign to reduce the power requirements, size and cost of the model. The Company relies, and expects to continue to rely, on ADI for the manufacture of chipsets incorporating the Company's ADSL technology. In order to meet any demand for its ADSL Internet Access Modem and other board and system level products, the Company may be required to manage successfully and in a relatively short period the transition to high volume manufacturing, including the establishment of adequate facilities, the control of overhead expenses and inventories and the management and training of its employee base. There can be no assurance that the Company will be successful in these respects, that the Company will not encounter significant difficulties in manufacturing or controlling the quality of

its products, or that its products will be reliable in the field. The Company may use a portion of the proceeds of this offering to acquire and equip manufacturing facilities. If such expansion is required and cannot be implemented in a timely manner, the Company may experience capacity constraints that may cause production and shipping delays. Any such constraints or delays could have a material adverse effect on the Company's business, financial condition and results of operations. Alternatively, the Company may continue to subcontract its manufacturing operations to independent third party manufacturers and may become substantially dependent on them. There are additional risks associated with the use of independent manufacturers, including the lack of availability of or delays in obtaining adequate supplies of products and reduced control of manufacturing quality and production costs. There can be no assurance that the Company's third-party manufacturers will provide adequate supplies of quality products on a timely basis. The inability to obtain such products on a timely basis would have a material adverse effect on the Company's business, financial condition, and results of operations. See "Business -- Manufacturing."

#### DEPENDENCE ON SOLE OR LIMITED SOURCE SUPPLIERS

Certain key components used in the Company's ADSL Internet Access Modem, such as the ADSL Chipset and ADI's digital signal processors, are currently available from only one source or a limited number of suppliers. There can be no assurance that the Company will be able to obtain sufficient quantities of ADSL Chipsets or other electronic components as required, or that such components, if obtained, will be available to the Company on commercially reasonable terms. In addition, the Company anticipates that the production capacity for ADSL Chipsets and the availability of certain other electronic components from its suppliers may be insufficient to meet demand in the future. ADSL Chipsets and other electronic components are fundamental to the Company's business strategy of developing new and succeeding generations of products at reduced unit costs without compromising functionality. There can be no assurance that delays in product deliveries will not occur in the future due to shortages resulting from the limited number of suppliers, the financial or other difficulties of such suppliers, or the possible limitations in production capacity or component availability because of significant worldwide demand for those components. The inability to obtain sufficient key components or to develop alternative sources for such components, if and as required in the future, could limit or delay product shipments, which in turn could have a material adverse effect on the Company's customer relationships and its business, financial condition and results of operations. See "Business -- Telecommunications Products."

#### CAPITAL REQUIREMENTS

Expansion of the Company's business, including the development and marketing of its ADSL products, will require significant additional expenditures for research and development, capital equipment and working capital. The Company has experienced extended periods during which cash flows from operations were negative, and there can be no assurance that the Company will not have negative cash flows from operations in the future. The Company expects that the net proceeds from this offering and its current cash balances will be sufficient to fund its operations for at least the next twelve months. The Company's capital requirements will depend on many factors, including the progress of its research and development efforts, the receipt of software license fees and other product revenue, the timely acceptance of its ADSL technology, the need to devote resources to manufacturing operations, and the demand for the Company's products. There can be no assurance that the Company will not need to raise additional funds through public or private financings or that, if needed, such funds will be available on acceptable terms. If adequate funds are not available, the Company may be required to delay, scale back or eliminate one or more of its research and development or manufacturing programs or to obtain funds through arrangements that may require the Company to relinquish rights to certain of its technologies or potential products or other assets that the Company would not otherwise relinquish. The inability of the Company to raise needed funds would have a material adverse effect on the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Liquidity and Capital Resources."



## FLUCTUATIONS IN QUARTERLY RESULTS; LACK OF BACKLOG

The Company has experienced, and expects to continue to experience, significant fluctuations in its quarterly results of operations. Factors that have contributed or may contribute to future fluctuations in the Company's quarterly results of operations include the size and timing of customer orders and subsequent shipments, customer order deferrals in anticipation of new products, timing of product introductions or enhancements by the Company or its competitors, market acceptance of new products, technological changes in the telecommunications industry, competitive pricing pressures, accuracy of customer forecasts of end-user demand, changes in the Company's operating expenses, personnel changes, changes in the mix of product sales and contract and consulting fees, quality control of products sold, disruption in sources of supply, regulatory changes, capital spending, delays of payments by customers and general economic conditions. The timing and volume of customer orders are difficult to forecast. The Company does not have a material backlog of orders for its products.

The Company intends to continue to make significant ongoing research and development expenditures for new products and technologies, which may have a material adverse effect on the Company's quarterly results of operations. The Company's expense levels are based in part on expectations of future revenues and are relatively fixed in the short term. The Company intends to increase operating expenditures as the Company expands its operations to develop and market the ADSL Internet Access Modem and other products based upon ADSL technology. Consequently, a shortfall in quarterly revenues due to a lack of sales of ADSL products or otherwise would adversely impact the Company's business, financial condition and results of operations in a given quarter due to the Company's inability to adjust expenses or inventory to match revenues for that quarter. In addition, there can be no assurance that, as the Company increases sales of ADSL products, warranty returns will not become significant or that warranty returns, if significant, will not have a material adverse effect on the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business -- Telecommunications Products."

## GOVERNMENT REGULATION

Although the extensive regulation of telcos by Federal, state and foreign regulatory agencies, including the FCC and various state public utility and service commissions, does not directly affect the Company, the effects of such regulation on the Company's customers may have a material adverse effect on the Company's business, financial condition and results of operations. For example, FCC regulatory policies affecting the availability of telco services, and other terms on which telcos conduct their business, may impede the Company's penetration of certain markets. Although the Telecommunications Act of 1996 eliminated or modified many FCC restrictions on telcos' ability to provide interactive multimedia services, the remaining or any future restrictions may have a material adverse effect on telcos' demand for products based upon ADSL technology. Cable operators, which may become another market for the Company's products, are also subject to extensive governmental regulations that may discourage them from deploying the Company's HFC technology. In addition, rates for telecommunications services are generally governed by tariffs of licensed carriers that are subject to regulatory approval. These tariffs could have a material adverse effect on the demand for the Company's products. The imposition of certain tariffs, duties and other import restrictions on components which the Company intends to obtain from non-domestic suppliers, the imposition of export restrictions on products which the Company intends to sell internationally or other changes in laws or regulations in the United States or elsewhere could also have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Government Regulation."

## POTENTIAL PRODUCT LIABILITIES

One or more of the Company's products may contain undetected component, hardware, software or mechanical defects or failures when first introduced or may develop defects or failures after

commencement of commercial production or shipments. Any such defects or failures could cause loss of goodwill, if any, with distributors and with customers, prevent or delay market acceptance of the Company's products, result in cancellations or rescheduling of orders or shipments or product recalls or returns and expose the Company to claims from customers. The Company could also incur unexpected and significant costs, including product redesign costs and costs associated with customer support. The Company expects to sell its products with a limited warranty against defects in materials and workmanship. If any of the Company's products are found within the warranty period to contain such defects, the Company could be required to repair or replace the defective products or refund the purchase price. The occurrence of any such defect or failure could have a material adverse effect on the Company's business, financial condition and results of operations. The Company does not maintain insurance to protect against claims associated with the use of its products and there can be no assurance that the Company will be able to satisfy claims that may be asserted against the Company.

#### CONTROL BY EXISTING STOCKHOLDERS

Upon completion of this offering, the Company's directors and officers will beneficially own approximately 24.1% of the Company's outstanding Common Stock. As a result, these stockholders, if acting together, will have the ability to influence the election of the Company's directors and the outcome of corporate actions requiring stockholder approval. See "Management" and "Principal Stockholders."

#### BROAD MANAGEMENT DISCRETION IN USE OF PROCEEDS

The Company intends to use the net proceeds of this offering for working capital and general corporate purposes, including possible acquisitions of businesses, technologies or products. Accordingly, the Company will have broad discretion in the application of such net proceeds. Purchasers of Common Stock in this offering will not have the opportunity to evaluate the economic, financial or other information which the Company will use to determine the application of such proceeds. See "Use of Proceeds."

#### NO PRIOR PUBLIC MARKET; POSSIBLE VOLATILITY OF STOCK PRICE

Prior to this offering, there has been no public market for the Common Stock. There can be no assurance that an active public market for the Common Stock will develop or be sustained after the offering. The initial public offering price will be determined by negotiations between the Company and the representatives of the Underwriters based upon several factors and may not be indicative of future market prices. The market price of the Common Stock could be subject to wide fluctuations in response to the announcement of operating results below those of financial analysts' projections, changes in such projections, quarterly variations in operating results, announcements of technological innovations or new products by the Company or its competitors, trends or changes in the telecommunications industry, and other events or factors. In addition, the stock market has experienced extreme price and volume fluctuations that have particularly affected the market prices for many high technology companies. This market volatility has had a substantial effect on the market prices of securities issued by companies for reasons unrelated to the operating performance of such companies. These broad market fluctuations may have a material adverse effect on the market price of the Common Stock. See "Underwriting."

#### SHARES ELIGIBLE FOR FUTURE SALE

Sales of substantial amounts of shares in the public market or the prospect of such sales could adversely affect the market price of the Company's Common Stock. The number of shares of Common Stock available for sale in the public market is limited by restrictions under the Securities Act of 1933, as amended (the "Securities Act"), and lock-up agreements under which the holders of 13,647,310 shares of Common Stock have agreed that they will not, directly or indirectly, without the prior written consent of Robertson, Stephens & Company LLC, sell, offer, contract to sell, pledge, grant any option to purchase or otherwise dispose of any shares of Common Stock or any securities convertible into or exchangeable for, or any rights to purchase or acquire, shares of Common Stock beneficially

owned by them for a period of 180 days from the effective date of the registration statement of which this Prospectus forms a part (the "Effective Date"). In its sole discretion and at any time without notice, Robertson, Stephens & Company LLC may release all or any portion of the securities subject to lock-up agreements. As a result of these restrictions, based on the shares outstanding as of June 1, 1996, the following shares of Common Stock will be eligible for future sale: the 3,400,000 shares offered hereby will be eligible for immediate sale without restriction in the public market; 360,158 shares will be eligible for immediate sale on the Effective Date under Rule 144(k) promulgated under the Securities Act; an additional 969,609 shares will first become eligible for sale 90 days after the Effective Date under Rule 144 or Rule 701 promulgated under the Securities Act; and an additional 13,538,968 shares will first become eligible for sale 180 days after the Effective Date. In addition, 90 days after the Effective Date, the Company intends to register 5,774,715 shares issued or reserved for issuance under its stock option plans and 100,000 shares reserved for issuance under its employee stock purchase plan. As of June 1, 1996, options to purchase a total of 3,107,158 shares were outstanding under the Company's stock option plans and no shares were outstanding under the Company's employee stock purchase plan. See "Management -- Stock Option Plans," "-- 1996 Employee Stock Purchase Plan" and "Shares Eligible for Future Sale."

#### EFFECT OF CERTAIN CHARTER AND BY-LAW PROVISIONS AND ANTI-TAKEOVER PROVISIONS; POSSIBLE ISSUANCES OF PREFERRED STOCK

The Company's Articles of Organization, its By-Laws and certain Massachusetts laws contain provisions that may discourage acquisition bids for the Company and that may reduce temporary fluctuations in the trading price of the Company's Common Stock which may be caused by accumulations of stock, thereby depriving stockholders of certain opportunities to sell their stock at temporarily higher prices. The Company's Articles of Organization provide for a classified Board of Directors and directors who are so classified may be removed by the stockholders only for cause. The Company's Articles of Organization also permit the issuance of 1,000,000 shares of Preferred Stock without stockholder approval and upon such terms as the Board of Directors may determine. The rights of the holders of Common Stock will be subject to, and may be adversely affected by, the rights of the holders of any Preferred Stock that may be issued in the future. The issuance of Preferred Stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a majority of the outstanding stock of the Company. The Company has no present plans to issue any shares of Preferred Stock. See "Description of Capital Stock -- Preferred Stock" and "-- Massachusetts Law and Certain Provisions of the Company's Articles of Organization and By-Laws."

#### IMMEDIATE AND SUBSTANTIAL DILUTION TO NEW INVESTORS

The initial public offering price is substantially higher than the net tangible book value per share of the Common Stock. Investors purchasing shares of Common Stock in this offering will therefore incur immediate and substantial net tangible book value dilution, in the amount of \$8.87 per share. To the extent that outstanding options to purchase shares of Common Stock are exercised, there will be further dilution. See "Dilution."

#### ABSENCE OF DIVIDENDS

The Company intends to retain future earnings, if any, for use in the development of its business and does not anticipate paying any cash dividends on the Common Stock in the foreseeable future. See "Dividend Policy."

## USE OF PROCEEDS

The net proceeds from the sale of the 3,400,000 shares of Common Stock offered hereby are estimated to be approximately \$34.0 million (\$39.2 million if the Underwriters' over-allotment option is exercised in full), assuming an initial public offering price of \$11.00 per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by the Company.

The Company intends to use the net proceeds of the offering for general corporate purposes, including working capital, research and development, and the hiring of additional personnel. In the normal course of business, the Company evaluates potential acquisitions of businesses, technologies and products that could complement or expand the Company's business. A portion of the net proceeds of the offering may be used for one or more such transactions, although the Company has no present understandings, commitments or agreements, nor is it currently engaged in any negotiations, with respect to any such transaction. Pending such uses, the Company intends to invest the net proceeds in short-term, interest-bearing, investment-grade securities, including government obligations and money market instruments. The Company has no other specific uses for the proceeds of this offering, and the exact use of such proceeds will be subject to the discretion of management.

## DIVIDEND POLICY

The Company has never declared or paid cash dividends on its Common Stock. The Company currently intends to retain any earnings to fund its business and therefore does not anticipate paying cash dividends in the foreseeable future. See "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Liquidity and Capital Resources."

## CAPITALIZATION

The following table sets forth the capitalization of the Company as of March 31, 1996 (i) on an actual basis, (ii) on a pro forma basis to give effect to (A) the amendment and restatement of the Company's Articles of Organization on or before the closing of this offering to increase the authorized capital stock of the Company by 11,350,000 shares of Common Stock and 1,000,000 shares of undesignated Preferred Stock and (B) the conversion of all outstanding shares of Preferred Stock of the Company into Common Stock on or before the closing of this offering, and (iii) on a pro forma basis as adjusted to reflect the sale of the Common Stock offered hereby at an assumed initial public offering price of \$11.00 per share and after deducting estimated underwriting discounts and commissions and offering expenses payable by the Company.

	MARCH 31, 1996		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED
	(IN THOUSANDS, EXCEPT SHARE DATA)		
Stockholders' Equity:			
Preferred Stock, \$1.00 par value; no shares authorized, actual; 1,000,000 shares authorized and no shares outstanding, pro forma and as adjusted.....	\$ --	\$ --	\$ --
Series B Convertible Preferred Stock, \$1.00 par value (aggregate liquidation preference of \$1,587,500); 15,875 shares authorized; 15,875 shares outstanding, actual; no shares outstanding, pro forma and as adjusted.....	16	--	--
Series C Convertible Preferred Stock, \$1.00 par value (aggregate liquidation preference of \$1,352,500); 13,525 shares authorized; 13,525 shares outstanding, actual; no shares outstanding, pro forma and as adjusted.....	14	--	--
Series D Convertible Preferred Stock, \$1.00 par value (aggregate liquidation preference of \$6,916,575); 74,800 shares authorized; 69,165.75 shares outstanding, actual; no shares outstanding, pro forma and as adjusted.....	69	--	--
Series E Convertible Preferred Stock, \$1.00 par value (aggregate liquidation preference of \$3,826,160); 45,000 shares authorized; 29,432 shares outstanding, actual; no shares outstanding, pro forma and as adjusted.....	29	--	--
Common Stock, \$0.01 par value; 18,650,000 shares authorized, actual; 30,000,000 shares authorized, pro forma and as adjusted; 1,173,370 shares outstanding, actual; 13,973,145 shares outstanding, pro forma; 17,373,145 shares outstanding, as adjusted(1).....	12	140	174
Additional paid-in capital.....	13,816	13,816	47,764
Accumulated deficit.....	(10,534)	(10,534 )	(10,534)
Treasury stock, at cost.....	(453)	(453 )	(453)
Total stockholders' equity.....	2,969	2,969	36,951
Total capitalization.....	\$ 2,969	\$ 2,969	\$ 36,951
	=====	=====	=====

(1) Excludes 2,741,500 shares of Common Stock issuable upon exercise of options outstanding at March 31, 1996. Between March 31, 1996 and June 1, 1996, options to purchase 1,009,252 shares of Common Stock were exercised for aggregate consideration of approximately \$1.0 million, options to purchase an additional 1,378,000 shares of Common Stock were granted at an exercise price of \$8.25 per share, and 1,820,287 shares of Common Stock were reserved for issuance upon the grant of options in the future pursuant to the Company's stock option and stock purchase plans. See "Management -- Stock Option Plans" and "-- 1996 Employee Stock Purchase Plan."

## DILUTION

The pro forma net tangible book value of the Common Stock as of March 31, 1996 was approximately \$3.0 million or \$0.21 per share. Pro forma net tangible book value per share represents the amount of total tangible assets less total liabilities, divided by the pro forma number of shares of Common Stock outstanding. As of March 31, 1996, the Company had no intangible assets. After giving effect to the sale by the Company of the 3,400,000 shares of Common Stock offered hereby (at an assumed initial public offering price of \$11.00 per share and after deducting estimated underwriting discounts and commissions and offering expenses payable by the Company), the pro forma as adjusted net tangible book value of the Company as of March 31, 1996 would have been approximately \$37.0 million or \$2.13 per share. This represents an immediate increase in net tangible book value of \$1.92 per share to existing stockholders and an immediate dilution in net tangible book value of \$8.87 per share to new investors purchasing shares in this offering. The following table illustrates this per share dilution:

Assumed initial public offering price.....		\$11.00
Pro forma net tangible book value as of March 31, 1996.....	\$0.21	
Increase in pro forma net tangible book value attributable to new investors.....	1.92	
	-----	
Pro forma as adjusted net tangible book value after offering.....		2.13
		-----
Dilution to new investors.....		\$ 8.87
		=====

The following table sets forth, on a pro forma basis as of March 31, 1996, the number of shares of Common Stock purchased from the Company, the total consideration paid to the Company and the average price per share paid by existing stockholders and to be paid by new investors (at an assumed initial public offering price of \$11.00 per share and before deducting estimated underwriting discounts and commissions and offering expenses payable by the Company):

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing stockholders.....	13,973,145	80.4%	\$13,502,984	26.5%	\$ 0.97
New investors.....	3,400,000	19.6	37,400,000	73.5	11.00
	-----	-----	-----	-----	-----
Total.....	17,373,145	100.0%	\$50,902,984	100.0%	
	=====	=====	=====	=====	

The calculation of pro forma net tangible book value and the other computations above assume no exercise of options outstanding at March 31, 1996 to purchase an aggregate of 2,741,500 shares of Common Stock. Between March 31, 1996 and June 1, 1996, options to purchase 1,009,252 shares of Common Stock were exercised for aggregate consideration of approximately \$1.0 million and options to purchase an additional 1,378,000 shares of Common Stock were granted at an exercise price of \$8.25 per share. To the extent that any of the options outstanding at June 1, 1996 are exercised or that any of the remaining 1,820,287 shares of Common Stock currently reserved for issuance under the Company's stock option and stock purchase plans are issued, there may be additional dilution to new investors. See "Capitalization," "Management -- Stock Option Plans" and "-- 1996 Employee Stock Purchase Plan."

## SELECTED FINANCIAL DATA

The following selected financial data for the years ended December 31, 1994 and 1995 have been derived from, and are qualified by reference to, the financial statements of the Company audited by Deloitte & Touche LLP, independent accountants, included elsewhere in this Prospectus, and should be read in conjunction with those financial statements and notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations. The following selected financial data for the year ended December 31, 1993 have been derived from, and are qualified by reference to, the financial statements of the Company audited by Price Waterhouse LLP, independent accountants, included elsewhere in this Prospectus, and should be read in conjunction with those financial statements and notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations. The following selected financial data for the years ended December 31, 1991 and 1992 have been derived from audited financial statements not included in this Prospectus. The following selected financial data for the three months ended March 31, 1995 and 1996 have been derived from, and are qualified by reference to, the unaudited financial statements of the Company included elsewhere in this Prospectus, and should be read in conjunction with those financial statements and Management's Discussion and Analysis of Financial Condition and Results of Operations. In the opinion of management of the Company, such unaudited financial statements have been prepared on the same basis as the audited financial statements and include all adjustments, consisting only of normal recurring adjustments and accruals, that the Company considers necessary for a fair presentation. The results of operations for the three-month period ended March 31, 1996 are not necessarily indicative of the results which may be expected for the full year.

	YEAR ENDED DECEMBER 31,					THREE MONTHS ENDED MARCH 31,	
	1991	1992	1993	1994	1995	1995	1996
(IN THOUSANDS, EXCEPT PER SHARE DATA)							
<b>STATEMENT OF OPERATIONS DATA:</b>							
Revenue:							
Product.....	\$ 107	\$ 21	\$ 827	\$ 1,190	\$ 1,443	\$ 539	\$ 653
Research and development.....	5,417	1,887	2,345	2,637	1,817	411	309
Total revenue.....	5,524	1,908	3,172	3,827	3,260	950	962
Costs and expenses:							
Cost of product revenue.....	15	96	122	113	243	84	34
Cost of research and development revenue.....	2,810	1,790	1,701	2,054	1,178	364	248
Research and development.....	2,067	1,886	1,341	1,438	1,155	346	352
Selling and marketing.....	16	49	221	329	412	90	111
General and administrative.....	1,627	1,354	815	988	726	182	199
Total costs and expenses.....	6,535	5,175	4,200	4,922	3,714	1,066	944
Income (loss) from operations.....	(1,011)	(3,267)	(1,028)	(1,095)	(454)	(116)	18
Interest income.....	77	18	36	83	111	29	23
Net income (loss).....	\$ (934)	\$ (3,249)	\$ (992)	\$ (1,012)	\$ (343)	\$ (87)	\$ 41
Pro forma net income (loss) per common share(1).....					\$ (0.17)	\$ (0.04)	\$ 0.00
Pro forma weighted average number of common shares outstanding(1).....					2,045	2,032	15,109
<b>BALANCE SHEET DATA:</b>							
Cash and cash equivalents.....	\$ 335	\$ 813	\$ 186	\$ 2,566	\$ 2,154		\$ 2,047
Working capital.....	765	1,114	281	2,877	2,516		2,617
Total assets.....	2,158	1,902	978	3,930	3,228		3,351
Total liabilities.....	738	405	493	684	309		382
Total stockholders' equity.....	1,419	1,497	485	3,246	2,920		2,969

(1) See Note 1 of Notes to Financial Statements for an explanation of the method of calculation of the pro forma weighted average number of common shares outstanding.

MANAGEMENT'S DISCUSSION AND ANALYSIS  
OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Prospectus contains certain statements of a forward-looking nature relating to future events or the future financial performance of the Company. Prospective investors are cautioned that such statements are only predictions and that actual events or results may differ materially. In evaluating such statements, prospective investors should specifically consider the various factors identified in this Prospectus, including the matters set forth under the caption "Risk Factors," which could cause actual results to differ materially from those indicated in such forward-looking statements.

#### OVERVIEW

Aware was founded in March 1986. During its first seven years, the Company was engaged primarily in research, specializing in wavelet mathematics applications, digital compression, and telecommunications and channel modulation and coding. The Company holds thirteen patents in areas related to wavelet mathematics, digital compression and similar technologies. The Company's revenue during this period consisted largely of research grants from agencies of the U.S. government and certain commercial companies. As the Company has moved from research to commercialization, the percentage of funding from the U.S. government has declined significantly and is expected to decline further.

In 1993, the Company shifted its business from contract research toward development of ADSL and other broadband technologies and data and video compression products. The Company now offers software and modems incorporating its ADSL technology and software-based compression products and will receive royalties on the sale, if any, of ADSL Chipsets by ADI.

Most of the Company's revenue to date related to ADSL and other broadband technologies has come from ADI and certain telco suppliers as fees for development work and as nonrefundable prepaid royalties. The Company has only recently introduced products incorporating ADSL technology and had not received any revenue from sale of these products as of March 31, 1996. Accordingly, the comparisons for the years 1994 and 1995 and for the three months ended March 31, 1995 and 1996 may not be indicative of future performance because the Company was changing its management team, strategic direction, customer base, revenue sources and product offerings.

The Company has sustained annual losses since its inception and the effort needed to bring products to commercialization will require the Company to increase significantly the amount of its expenditures in technical development, sales and marketing and manufacturing. While the Company achieved modest profitability in the third and fourth quarters of 1995, and the first quarter of 1996, there can be no assurance that this will continue. The Company's product revenue has increased in each of the last three years as the Company has begun to obtain revenue from sales of its compression products.

The Company's operating expenses are based in part on its expectations of future sales, and the Company's expense levels are generally committed in advance of sales. The Company currently plans to continue to expand and increase its operating expenses in an effort to generate and support additional future revenue. If sales for any quarter do not materialize as expected, the Company's results of operations for that quarter would be adversely affected. Net income may be disproportionately affected by a reduction of revenues because only a small portion of the Company's expenses vary in proportion to its revenue. See "Risk Factors -- Fluctuations in Quarterly Results; Lack of Backlog."

The Company has only recently begun the process of developing the management and operational capabilities and financial and accounting systems and controls necessary for the transition from its historic business of research and development to a business that develops, manufactures, markets and supports products and services for the commercial telecommunications marketplace. The Company hired its current Chief Financial Officer on June 14, 1996. From January 1995 to June 1996, the Company did not have a Chief Financial Officer and had a financial and accounting staff consisting of a



single individual. The Company believes that, without additional personnel and other resources, its financial and accounting systems and controls will not be adequate to conduct the commercial telecommunications business which the Company proposes to conduct. The Company will be responsible for hiring sufficient accounting personnel and establishing financial and accounting systems and controls adequate to conduct the Company's proposed business as described in this Prospectus. There can be no assurance that the Company will be successful in achieving these objectives. See "Risk Factors -- Risks Associated with Managing a Changing Business."

## RESULTS OF OPERATIONS

The following table sets forth, for the periods indicated, certain statement of operations data as a percentage of total revenue:

	YEAR ENDED DECEMBER 31,			THREE MONTHS ENDED MARCH 31,	
	1993	1994	1995	1995	1996
Revenue:					
Product.....	26.1%	31.1%	44.3%	56.8%	67.8%
Research and development.....	73.9	68.9	55.7	43.2	32.2
Total revenue.....	100.0	100.0	100.0	100.0	100.0
Costs and expenses:					
Cost of product revenue.....	3.9	2.9	7.5	8.9	3.6
Cost of research and development revenue.....	53.6	53.7	36.1	38.3	25.8
Research and development.....	42.3	37.6	35.4	36.4	36.5
Selling and marketing.....	6.9	8.6	12.6	9.5	11.6
General and administrative.....	25.7	25.8	22.3	19.1	20.7
Total costs and expenses.....	132.4	128.6	113.9	112.2	98.2
Income (loss) from operations.....	(32.4)	(28.6)	(13.9)	(12.2)	1.8
Interest income.....	1.1	2.2	3.4	3.0	2.4
Net income (loss).....	(31.3)%	(26.4)%	(10.5)%	(9.2)%	4.2%

## THREE MONTHS ENDED MARCH 31, 1996 AND 1995

**Product Revenue.** Product revenue consists primarily of revenue from licenses of software and other technology, royalties from third parties whose products incorporate the Company's technologies, and revenue from the sale of products manufactured by the Company. Product revenue increased by 21%, from \$539,000 in the first three months of 1995 to \$653,000 in the first three months of 1996. As a percentage of total revenue, product revenue increased from 57% in the first three months of 1995 to 68% in the first three months of 1996. This increase in dollar amount and as a percentage of total revenue is primarily attributable to an increase in license revenues as a result of a significant sale to DSC Telecom L.P. in the first quarter of 1996. The increased revenues associated with DSC were partially offset by a decline in the sale of video editing chipset products, which the Company discontinued in the fourth quarter of 1995.

**Cost of Product Revenue.** Cost of product revenue consists primarily of direct material and direct labor costs to manufacture the Company's products. Costs of product revenue decreased by 60%, from \$84,000 in the first three months of 1995 to \$34,000 in the first three months of 1996. As a percentage of product revenue, cost of product revenue decreased from 16% in the first three months of 1995 to 5% in the first three months of 1996. This decrease in dollar amount and as a percentage of product revenue is due primarily to increased software license and royalty revenues, which have higher profit margins than that for sales of video editing chipset products. Costs associated with license and royalty

revenues are nominal because the associated research and development costs are expensed as incurred.

**Research and Development Revenue.** Research and development revenue consists primarily of revenue from commercial contract engineering and development, and government research contracts. Research and development revenue decreased by 25%, from \$411,000 in the first three months of 1995 to \$309,000 in the first three months of 1996. As a percentage of total revenue, research and development revenue decreased from 43% in the first three months of 1995 to 32% in the first three months of 1996. This decrease in dollar amount and as a percentage of total revenue is due to the Company's shift away from contract research activities toward the development of commercial products.

**Cost of Research and Development Revenue.** Cost of research and development revenue consists primarily of direct labor, direct material and travel expenses associated with commercial contract engineering and development, and government research contracts. Costs of research and development revenue decreased by 32%, from \$364,000 in the first three months of 1995 to \$248,000 in the first three months of 1996. As a percentage of research and development revenue, related costs decreased from 89% in the first three months of 1995 to 80% in the first three months of 1996. The decrease in dollar amount is due to lower revenue from research contracts in the first quarter of 1996 as compared to the first quarter of 1995. The decrease as a percentage of research and development revenue is a result of higher margin contracts in the first quarter of 1996.

**Research and Development Expense.** Research and development expense consists primarily of employee and consultant costs and supplies necessary to develop and enhance the Company's products, as well as a portion of the Company's operating expenses, including rent, attributable to its research and development activities. These expenses increased from \$346,000 in the first three months of 1995 to \$352,000 in the first three months of 1996. As a percentage of total revenue, research and development expense remained consistent at 36%. Higher research and development spending in the first three months of 1996 was driven by increased spending on research and development efforts related to ADSL and HFC projects. These expense increases were largely offset by lower spending as a result of the discontinuance of research involving audio compression technology and lower facilities cost as a result of the relocation of the Company's facilities in June 1995.

**Selling and Marketing Expense.** Selling and marketing expense consists primarily of salaries for sales and marketing personnel and travel and product advertising expenses. These expenses increased by 23% from \$90,000 in the first three months of 1995 to \$111,000 in the first three months of 1996. As a percentage of total revenue, selling and marketing expense increased from 10% in the first three months of 1995 to 12% in the first three months of 1996. This increase in dollar amount and as a percentage of total revenue is due primarily to increased product advertising.

**General and Administrative Expense.** General and administrative expense consists of salary and benefits for administrative officers and support personnel, allocated rent expense and professional services, such as legal and audit expenses. These expenses increased by 10%, from \$182,000 in the first three months of 1995 to \$199,000 in the first three months of 1996. As a percentage of total revenue, general and administrative expense increased from 19% in the first three months of 1995 to 21% in the first three months of 1996. This increase in dollar amount and as a percentage of total revenue is due primarily to additions to the Company's management team.

**Interest Income.** Interest income is generated primarily from the Company's investment of proceeds from sales of its capital stock. Interest income decreased by 21%, from \$29,000 in the first three months of 1995 to \$23,000 in the first three months of 1996. This decrease is due primarily to lower average cash balances and lower average interest rates during the first three months of 1996 as compared to the first three months of 1995.

## YEARS ENDED DECEMBER 31, 1995 AND 1994

**Product Revenue.** Product revenue increased by 21%, from \$1,190,000 in 1994 to \$1,443,000 in 1995. As a percentage of total revenue, product revenue increased from 31% in 1994 to 44% in 1995. This increase in dollar amount and as a percentage of total revenue is due primarily to an increase in sales of video editing chipset products and video compression technology products. The increase in chipset product revenue was due primarily to significant orders from a customer purchasing large quantities before the Company discontinued that product line.

**Cost of Product Revenue.** Cost of product revenue increased by 115%, from \$113,000 in 1994 to \$243,000 in 1995. As a percentage of product revenue, cost of product revenue increased from 10% in 1994 to 17% in 1995. This increase in dollar amount is due to increased product shipments, particularly of video editing chipset products, in 1995. The lower gross margin in 1995 is primarily attributable to a shift in product mix from higher margin royalty and licensing revenue to lower margin video editing chipset product revenue.

**Research and Development Revenue.** Research and development revenue decreased by 31%, from \$2,637,000 in 1994 to \$1,817,000 in 1995. As a percentage of total revenue, research and development revenue decreased from 69% in 1994 to 56% in 1995. This decrease in dollar amount and as a percentage of total revenue is due primarily to a significant decrease in U.S. government research revenue as a result of the Company's decision in 1995 to reduce its government research activities. The decrease in government research revenue was partially offset by an increase in commercial contract engineering revenue.

**Cost of Research and Development Revenue.** Cost of research and development revenue decreased by 43%, from \$2,054,000 in 1994 to \$1,178,000 in 1995. As a percentage of research and development revenue, related costs decreased from 78% in 1994 to 65% in 1995. This decrease in dollar amount and as a percentage of research and development revenue is due primarily to a decrease in expenses associated with the reduction in U.S. government research activity.

**Research and Development Expense.** Research and development expense decreased by 20%, from \$1,438,000 in 1994 to \$1,155,000 in 1995. As a percentage of total revenue, research and development expense decreased from 38% in 1994 to 35% in 1995. This decrease in dollar amount and as a percentage of total revenue is due primarily to the discontinuance, in January 1995, of research and development efforts associated with audio compression technology, and lower facilities costs as a result of the relocation of the Company's facilities in June 1995.

**Selling and Marketing Expense.** Selling and marketing expense increased by 25%, from \$329,000 in 1994 to \$412,000 in 1995. As a percentage of total revenue, selling and marketing expense increased from 9% in 1994 to 13% in 1995. This increase in dollar amount and as a percentage of total revenue is due primarily to increases in the Company's sales force and product advertising.

**General and Administrative Expense.** General and administrative expense decreased by 27%, from \$988,000 in 1994 to \$726,000 in 1995. As a percentage of total revenue, general and administrative expense decreased from 26% in 1994 to 22% in 1995. This decrease in dollar amount and as a percentage of total revenue is due primarily to management and support staff reductions in January 1995.

**Interest Income.** Interest income increased by 34%, from \$83,000 in 1994 to \$111,000 in 1995. This increase is due primarily to higher average cash balances in 1995 as compared to 1994.

## YEARS ENDED DECEMBER 31, 1994 AND 1993

**Product Revenue.** Product revenue increased by 44%, from \$827,000 in 1993 to \$1,190,000 in 1994. As a percentage of total revenue, product revenue increased from 26% in 1993 to 31% in 1994. This increase in dollar amount and as a percentage of total revenue is due primarily to increased license fees and increased sales of the Company's compression products.

Cost of Product Revenue. Cost of product revenue decreased by 8%, from \$122,000 in 1993 to \$113,000 in 1994. As a percentage of product revenue, cost of product revenue decreased from 15% in 1993 to 10% in 1994. This decrease in dollar amount and as a percentage of product revenue is a result of improved gross margins associated with the Company's compression products.

Research and Development Revenue. Research and development revenue increased by 12%, from \$2,345,000 in 1993 to \$2,637,000 in 1994. As a percentage of total revenue, research and development revenue decreased from 74% in 1993 to 69% in 1994. This increase in dollar amount is due primarily to revenue from a new U.S. government research contract and increased commercial research and engineering business in 1994. The decrease as a percentage of total revenue is attributable to the 44% increase in product revenue.

Cost of Research and Development Revenue. Cost of research and development revenue increased by 21%, from \$1,701,000 in 1993 to \$2,054,000 in 1994. As a percentage of research and development revenue, related costs increased from 73% in 1993 to 78% in 1994. This increase in dollar amount is due primarily to increased direct material and labor costs associated with research and development revenue growth in 1994.

Research and Development Expense. Research and development expense increased by 7%, from \$1,341,000 in 1993 to \$1,438,000 in 1994, but decreased as a percentage of total revenue from 42% in 1993 to 38% in 1994. This increase in dollar amount is due primarily to increased spending related to the development of the commercial product business. The decrease as a percentage of total revenue is due to revenue growth which exceeded the rate of growth of research and development spending.

Selling and Marketing Expense. Selling and marketing expense increased by 49%, from \$221,000 in 1993 to \$329,000 in 1994. As a percentage of total revenue, selling and marketing expense increased from 7% in 1993 to 9% in 1994. This increase in dollar amount and as a percentage of total revenue is due primarily to increases in the Company's sales force and product advertising.

General and Administrative Expense. General and administrative expense increased by 22%, from \$815,000 in 1993 to \$988,000 in 1994. As a percentage of total revenue, general and administrative expense remained consistent at 26% in 1993 and 1994. This increase in dollar amount is due primarily to additions to the Company's management team.

Interest Income. Interest income increased by 131%, from \$36,000 in 1993 to \$83,000 in 1994. This increase is due primarily to higher average cash balances in 1994 as compared to 1993.

## QUARTERLY RESULTS OF OPERATIONS

The following table sets forth certain unaudited quarterly financial data for the eight quarters ended March 31, 1996. In the opinion of management, this information has been presented on the same basis as the audited financial statements appearing elsewhere in this Prospectus, and includes all adjustments, consisting only of normal recurring adjustments and accruals, that the Company considers necessary for a fair presentation. Such quarterly results are not necessarily indicative of future results of operations and should be read in conjunction with the financial statements and notes thereto.

	THREE MONTHS ENDED							
	JUN. 30, 1994	SEP. 30, 1994	DEC. 31, 1994	MAR. 31, 1995	JUN. 30, 1995	SEP. 30, 1995	DEC. 31, 1995	MAR. 31, 1996
	(IN THOUSANDS)							
Revenue:								
Product.....	\$ 159	\$ 412	\$ 487	\$ 539	\$ 78	\$ 450	\$ 376	\$ 653
Research and development.....	582	749	784	411	283	513	610	309
Total revenue.....	741	1,161	1,271	950	361	963	986	962
Costs and expenses:								
Cost of product revenue.....	25	24	31	84	62	46	50	34
Cost of research and development revenue.....	476	525	631	364	242	259	312	248
Research and development.....	320	328	486	346	313	237	260	352
Selling and marketing.....	71	84	114	90	112	101	109	111
General and administrative.....	216	274	306	182	194	165	186	199
Total costs and expenses.....	1,108	1,235	1,568	1,066	923	808	917	944
Income (loss) from operations.....	(367)	(74)	(297)	(116)	(562)	155	69	18
Interest income.....	7	24	45	29	32	25	25	23
Net income (loss).....	\$ (360)	\$ (50)	\$ (252)	\$ (87)	\$ (530)	\$ 180	\$ 94	\$ 41

The following table sets forth certain unaudited quarterly financial data for the eight quarters ended March 31, 1996 as a percentage of total revenue.

	THREE MONTHS ENDED							
	JUN. 30, 1994	SEP. 30, 1994	DEC. 31, 1994	MAR. 31, 1995	JUN. 30, 1995	SEP. 30, 1995	DEC. 31, 1995	MAR. 31, 1996
Revenue:								
Product.....	21.5%	35.5%	38.3%	56.8%	21.6%	46.7%	38.1%	67.8%
Research and development.....	78.5	64.5	61.7	43.2	78.4	53.3	61.9	32.2
Total revenue.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Costs and expenses:								
Cost of product revenue.....	3.4	2.1	2.5	8.9	17.2	4.8	5.1	3.6
Cost of research and development revenue.....	64.2	45.2	49.6	38.3	67.0	26.9	31.6	25.8
Research and development.....	43.2	28.3	38.2	36.4	86.7	24.6	26.3	36.5
Selling and marketing.....	9.6	7.2	9.0	9.5	31.0	10.5	11.1	11.6
General and administrative.....	29.1	23.6	24.0	19.1	53.8	17.1	18.9	20.7
Total costs and expenses.....	149.5	106.4	123.3	112.2	255.7	83.9	93.0	98.2
Income (loss) from operations.....	(49.5)	(6.4)	(23.3)	(12.2)	(155.7)	16.1	7.0	1.8
Interest income.....	0.9	2.1	3.5	3.0	8.9	2.6	2.5	2.4
Net income (loss).....	(48.6)%	(4.3)%	(19.8)%	(9.2)%	(146.8)%	18.7%	9.5%	4.2%

## LIQUIDITY AND CAPITAL RESOURCES

Since its inception in March 1986, the Company has financed its operations primarily through private sales of equity securities, raising a total of approximately \$14,000,000 through March 31, 1996. In 1994, the Company raised \$3,789,000 from the sale of its Series E Preferred Stock. In 1995 and the

three months ended March 31, 1996, the Company received \$16,000 and \$8,000, respectively, from the exercise of employee stock options.

The Company's operating activities used net cash of \$1,022,000, \$194,000 and \$109,000 in 1994, 1995 and the three months ended March 31, 1996, respectively. The reduction in cash used is primarily attributable to improved cost management.

On March 31, 1996, the Company had working capital of \$2,617,000, as compared to \$2,516,000 on December 31, 1995. Working capital on March 31, 1996 included \$2,047,000 in cash and cash equivalents, \$803,000 in accounts receivable, \$41,000 in unbilled accounts receivable, \$97,000 in inventories and \$11,000 in prepaid expenses. From December 31, 1995 to March 31, 1996, the Company's accounts receivable increased \$302,000 primarily due to license sales in March 1996. The Company's inventories increased \$57,000 from December 31, 1995 to March 31, 1996 in anticipation of increased product sales by the Company in the second quarter of 1996. The Company had no debt outstanding on March 31, 1996 or December 31, 1995.

The Company's investing activities in 1994, 1995 and the three months ended March 31, 1996 consisted primarily of purchases of engineering, manufacturing, computer and phone equipment. The Company does not currently have significant commitments outstanding to acquire additional property or equipment.

The Company intends to use the net proceeds from this offering for general corporate purposes, including working capital, research and development, capital expenditures, and hiring of additional personnel. See "Use of Proceeds." The Company believes that cash generated from operations and the net proceeds to the Company of this offering will be sufficient, based on the Company's presently anticipated needs, to fund necessary capital expenditures, to provide adequate working capital and to finance the Company's planned expansion for at least the next twelve months. There can be no assurance, however, that the Company will not require additional financing prior to such date to fund operations. In addition, the Company may require additional financing after such date to fund its operations. There can be no assurance that any additional financing will be available to the Company on acceptable terms, or at all, when required by the Company. If additional funds are raised by issuing equity securities, further dilution to the existing stockholders will result. If adequate funds are not available, the Company may be required to delay, scale back or eliminate one or more of its research and development or manufacturing programs or to obtain funds through arrangements that may require the Company to relinquish rights to certain of its technologies or potential products or other assets that the Company would not otherwise relinquish. Accordingly, the inability to obtain such financing could have a material adverse effect on the Company's business, financial condition and results of operations. See "Risk Factors -- Capital Requirements."

#### INCOME TAXES

The Company has a history of net losses and therefore has not paid any material amount of federal or state income taxes. As of December 31, 1995, the Company had net operating loss carryforwards of approximately \$9,664,000 and approximately \$576,000 of research and development tax credit carryforwards to offset future federal taxable income and liabilities. To the extent not utilized, the net operating loss and tax credit carryforwards expire between 2003 and 2010.

#### OTHER INFORMATION

The Financial Accounting Standards Board ("FASB") has issued Statement of Financial Accounting Standards ("SFAS") No. 121, "Accounting for the Impairment of Long-Lived Assets to Be Disposed Of." The Company adopted this standard on January 1, 1996. This statement establishes accounting standards for the impairment of long-lived assets, certain identifiable intangibles, and goodwill related to those assets to be held and used for long-lived assets and certain identifiable intangibles to be disposed of. Adoption did not have a material effect on the Company's financial position or results of operations.

In November 1995, FASB issued SFAS No. 123, "Accounting for Stock-Based Compensation." The Company adopted this standard on January 1, 1996. As permitted by SFAS 123, the Company intends to continue to apply Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and will make the pro forma disclosures required by SFAS No. 123. The adoption of SFAS No. 123 did not have a material impact on the Company's financial condition or results of operations.

## BUSINESS

This Prospectus contains certain statements of a forward-looking nature relating to future events or the future financial performance of the Company. Prospective investors are cautioned that such statements are only predictions and that actual events or results may differ materially. In evaluating such statements, prospective investors should specifically consider the various factors identified in this Prospectus, including the matters set forth under the caption "Risk Factors," which could cause actual results to differ materially from those indicated in such forward-looking statements.

## OVERVIEW

Aware, Inc. ("Aware" or the "Company") designs, develops and markets telecommunications software, chipsets and modems which incorporate ADSL technology and increase the speed of data communications over conventional copper telephone lines. The Company's products and services are designed to allow telephone companies ("telcos") to utilize their installed bases of dedicated copper lines to provide both residential and business customers with interactive data transmission at speeds much higher than currently available.

The Company's products include software and hardware interfaces that integrate ADSL chipsets into modems and other communications devices, and high speed ADSL Internet Access Modems that incorporate the Company's proprietary technology and software. The Company has developed chipsets incorporating the Company's ADSL technology (the "ADSL Chipset") with Analog Devices, Inc. ("ADI"), a leading supplier of integrated circuits. ADI has an exclusive license to manufacture and sell the chipsets for which the Company receives royalty payments. Several large telcos, including GTE Corporation and BellSouth Corporation, and a number of OEMs that supply telcos, including DSC Communications Corporation, RelTec Corporation and Westell Technologies, Inc., are testing the Company's products.

## BACKGROUND

Telecommunications service providers are experiencing a fundamental shift in the type of communications traffic transmitted over their networks. Existing infrastructures of twisted-pair copper wiring, originally designed to provide analog voice communication ("Plain Old Telephone Service" or "POTS"), are increasingly required to carry the data-intensive, digital communications produced by computers. This communications traffic has increased dramatically in recent years with the rapid expansion of computer-based communication on the Internet and elsewhere. Telcos are faced with the challenge of providing high-speed data communications at reasonable costs, while preserving their large existing investments in copper wire networks.

Copper wire networks, developed and installed over decades to provide POTS to customers worldwide, are estimated to include over 150 million lines in the United States and over 550 million lines worldwide, according to industry sources. These networks represent an undepreciated capital investment of approximately \$100 billion.

To date, telcos' copper wire infrastructures have not proven adequate for the increasing volume of traffic generated by computers remotely connected to each other and the Internet. Digital information requires more bandwidth than traditional analog voice communication if it is to be transmitted at a speed that is satisfactory to the computer user. Currently, the fastest transmission rate readily available to typical home or remote office computer users over existing copper wire is achieved through the use of a 28.8 kilobits per second ("Kbps") modem, although many users still employ modems with speeds ranging from 2.4 Kbps to 14.4 Kbps. Even at 28.8 Kbps, the transmission of a typical one megabyte data file requires three to four minutes. For the over 56 million estimated Internet users in 1995 and the over 199 million estimated to be using the Internet by 1999, this transmission rate is one of the chief frustrations of using the World Wide Web, which is the fastest growing and most data intensive part of the Internet.



Increasingly, telcos are seeking to upgrade their networks by replacing copper wire with fiber optic cable which permits high speed data transmission, particularly throughout the backbone of the network that links their central offices to one another. However, installing fiber optic cable all the way into the home or business is, in most cases, prohibitively expensive, with fiber-to-the-curb only marginally less so. Therefore, the Company believes that, for the foreseeable future, the "last mile" of the phone network will continue to consist of existing copper wire.

In addition to increasing demands for greater bandwidth from consumers, telcos are facing new competition brought about by recent telecommunications deregulation. The enactment of the Telecommunications Act of 1996 (the "Telecommunications Act") has reduced barriers to entry to the telecommunications market and has eliminated many restrictions on the provision of a wide range of telecommunications services by telcos and other service providers. For example, cable companies and alternative access providers are now able to offer phone service to customers. Cable companies are exploring ways to use new technologies to compete with telcos in order to satisfy their customers' need for greater bandwidth. Some cable companies are testing cable modems, which permit a customer to effect two-way data transmission over the customer's existing cable connection. The increased competition, together with the opportunity to fulfill their customers' demands for more services, have caused telcos to accelerate their efforts to provide their customers with faster and higher quality data transmission.

#### Technologies for Increased Bandwidth

Telcos are seeking cost-effective technology to accommodate high speed data transmission over copper wires. Some of these technologies are described below:

ISDN. In the early 1980s, telcos introduced Integrated Service Digital Network ("ISDN") technology, which provides digital transmission over copper wire at rates up to 144 Kbps. Telcos have only recently begun to offer ISDN technology on a broad basis. Using ISDN technology, a customer can download a one megabyte file in approximately one minute. Although this is several times faster than a voiceband modem, the market penetration of existing ISDN technology has been limited because ISDN requires two sets of twisted-pair copper wires, its equipment and installation costs are relatively high, and it does not allow simultaneous POTS and data transmission on those wires.

T-1. T-1 (E-1 in countries outside the U.S.) is a multiplexing format that allows digital conversion of an analog line. Once converted, a T-1 digital line can deliver data at speeds up to 1.544 megabits per second ("Mbps") (2.048 Mbps for E-1). A customer can download a one megabyte file using a T-1 line in approximately 5 seconds. However, T-1 service cannot use the existing copper wire networks without expensive and time consuming modifications, including installation of repeaters every 3,000 to 5,000 feet to regenerate the signal as it passes along the line. T-1 also requires two sets of twisted-pair copper wires and does not allow simultaneous POTS and data transmission on those wires.

HDSL. In 1992, telcos introduced High bit-rate Digital Subscriber Line ("HDSL") technology, which reduces the costs of installing T-1 service. HDSL increases the distance of T-1 transmission over copper wires to approximately 12,000 feet, which reduces the need for repeaters. As a result, some telcos are deploying HDSL technology in their local access networks. However, HDSL still requires two sets of twisted-pair copper wires and does not allow simultaneous POTS and data transmission on those wires.

ADSL. Telcos are currently considering deployment of Asymmetric Digital Subscriber Line ("ADSL") technology, which uses digital signal processing technology to expand the useable bandwidth of copper telephone wire. ADSL was initially created in the late 1980s by Bellcore, the research entity jointly created and funded by the Regional Bell Operating Companies ("RBOCs"). ADSL technology allows non-repeated transmission of data at a distance of up to 18,000 feet over telcos' existing copper networks at a rate of up to 8 Mbps downstream to the customer and at a rate of up to 640 Kbps upstream from the customer, with the speed of transmission decreasing as distance increases. A typical ADSL application is expected to allow a customer to download a one megabyte file

in approximately two seconds. In addition, ADSL allows simultaneous POTS and high speed digital data transmission on a single set of twisted-pair copper wires.

#### THE AWARE SOLUTION

Aware is developing software, chipsets and modems incorporating ADSL technology that will provide high speed data transmission over telcos' extensive installed bases of copper wire networks. The Company's technology and products are intended to permit telcos to upgrade the last mile of their networks in a flexible and cost-effective way, compared to more costly alternatives such as complete replacement of copper wires with fiber optic cable into customers' premises. The Company's initial ADSL product, the ADSL Internet Access Modem, is designed to enable telcos to achieve much higher transmission speeds using the existing copper wires that make the final connection between their central offices and their customers.

The Company designs and develops products utilizing its proprietary software to implement ADSL that it believes have advantages over its competitors' ADSL products. The ADSL products developed by Aware incorporate proprietary software and algorithms based on digital signal processing technology as well as application specific integrated circuits ("ASICs"). In contrast to the approach taken by some competing developers of ADSL technology, Aware's approach is to maintain a high level of functionality in the software component of the product as opposed to the ASIC. The Company believes that this approach allows it to engineer improvements in its technology quickly and efficiently, rather than having to design and produce a new ASIC each time an improvement is made. The Company's ADSL technology enables data communications protocols, such as Frame Relay, TCP/IP and ATM, to operate at higher transmission rates. The Company has chosen to use the multi-carrier Discrete Multi-Tone ("DMT") modulation technique for ADSL, rather than the single-carrier Carrierless Amplitude Phase ("CAP") modulation technique. The Company believes that its ADSL/DMT technology allows it to offer software and products that transmit data at a higher rate and with greater reliability than software and products using the CAP technique. As a result of its collaboration with ADI, a chipset incorporating the Company's ADSL technology is currently available for testing by telcos.

#### STRATEGY

The Company's objective is to be the leading supplier of last mile technologies for high speed, interactive networks. The Company's strategy to achieve this objective encompasses the following elements:

**Encourage Adoption of the Company's ADSL Technology.** The Company has entered into development agreements with leading OEMs of telecommunications infrastructure equipment to permit incorporation of the Company's ADSL technology into OEMs' systems. The Company intends to partner with these and other OEMs to encourage telcos to adopt the Company's ADSL technology. The Company plans to introduce its technology to the marketplace by selling its ADSL products to telcos and telco suppliers, including GTE Corporation ("GTE") and the RBOCs, for evaluation purposes. By participating in trials of ADSL technology conducted by telcos and their suppliers, the Company hopes to demonstrate the superiority of its ADSL technology and to encourage broad deployment of systems using the Company's products.

**Offer Products Throughout the Distribution Chain.** The Company intends to incorporate its core ADSL technology into multiple product offerings. The Company currently offers a high speed ADSL Internet Access Modem and separately licenses software and hardware interfaces for ADSL systems. The Company developed the ADSL Chipset with ADI and will receive royalty payments from ADI upon the sale, if any, of the ADSL Chipset. The Company also intends to offer board and system level products that incorporate the Company's ADSL technology and the ADSL Chipset. The Company believes that, by offering multiple products, it can participate at various points of sale in the

distribution chain and offer solutions for a wide range of customers, including OEMs, telcos, businesses and home users.

**Leverage DMT Technology Leadership in ADSL.** The Company believes that, as a result of its significant investment in telecommunications technologies over the last decade, it has a lead over its competitors in the development of products and services incorporating ADSL technology. The Company has developed expertise in its ADSL applications using DMT multi-carrier technology. The Company intends to continue to use its experience in digital communications systems and software design to develop additional solutions for last mile communications. The Company believes that its expertise in this area gives it a competitive advantage by reducing product development costs and shortening the time-to-market of its products and services and those of its OEM customers.

**Continue to Emphasize Software Solutions.** Telecommunications chipsets today are built using a combination of ASICs and programmable devices, a development made possible using digital signal processing technology. The Company has expertise in digital signal processing technology, which allows it to develop software that efficiently implements complex mathematical algorithms. The Company intends to continue to maintain a high level of functionality in the software component of products it develops. By adopting an approach in which many critical functions are contained in the software and programmable devices rather than in the ASIC, the Company believes it can respond more rapidly to changes in the marketplace and offer OEMs and telcos products that are customized for their specific needs.

**Develop Technologies Using DWMT.** The Company intends to continue to develop new technologies that increase the speed of data transmission over copper wires. The Company has invented and patented its own core technology in multi-carrier modulation, called Discrete Wavelet Multi-Tone ("DWMT"), which the Company believes will allow it to develop products that transmit data at higher speeds than products using DMT technology. The Company is applying its DWMT technology to develop new products addressing emerging technologies, such as Symmetrical Digital Subscriber Line ("SDSL") and Very high speed Digital Subscriber Line ("VDSL").

**Develop Solutions for Cable Networks.** With the deregulation of the telecommunications industry, cable companies have started testing upgrades to their hybrid fiber coaxial cable ("HFC") networks to provide two-way communications. While existing cable networks are not well suited for two-way communication, the Company believes that, using its DWMT technology, it may be able to offer cable companies and telcos products that provide cost-effective, high speed, two-way communications on HFC networks. The Company has an agreement with a subsidiary of DSC Communications Corporation ("DSC") to develop telephony modems for HFC networks.

## TELECOMMUNICATIONS PRODUCTS

### Existing ADSL Products

**Modems.** The Company developed and markets the ADSL Internet Access Modem, which contains the ADSL Chipset and software and hardware interfaces developed by the Company. In a typical configuration, the Company's ADSL Internet Access Modem is designed to receive data at speeds of up to 4.4 Mbps and send it at speeds of up to 440 Kbps at a distance of up to 12,000 feet over standard copper wire. To date, the Company has manufactured and sold only eight technical evaluation models of the ADSL Internet Access Modem for trial use by OEMs and telcos. This technical evaluation model was designed to demonstrate technical feasibility and will not be suitable for mass production without additional redesign to reduce the power requirements, size and cost of the model.

**Chipsets.** The Company and ADI developed the ADSL Chipset, which ADI markets. The Company will receive a royalty from ADI on any sales of the ADSL Chipset. The ADSL Chipset uses a combination of ASICs, digital signal processors and proprietary software developed by the Company to provide all the functions necessary in a modem. The ADSL Chipset meets the performance objectives

of the DMT multi-carrier modulation technique chosen by the American National Standards Institute ("ANSI") as the standard for ADSL.

**Software and Hardware Interfaces.** The Company develops software and hardware interfaces for the ADSL Chipset which can be used to connect the chipset with PCs, network and central office equipment and other telephony and data communications devices. The interfaces are custom developed by the Company for OEMs' systems to incorporate ADSL technology.

#### Telecommunications Product Development

In addition to modems, chipsets, and software and hardware interfaces, the Company intends to continue to develop products that it plans to market and sell throughout the product development and distribution chain.

**Board-Level Products.** Aware plans to manufacture board-level products for installation into ADSL systems offered by OEMs. The Company's board-level products will combine the ADSL Chipset with appropriate software and hardware interfaces developed by the Company. At the present time, the Company has no agreements to manufacture board-level products, except in connection with equipment trials, and has not manufactured any products in any substantial quantity.

**System-Level Products.** The Company intends to continue development of its ADSL Internet Access Modem and other system-level products and offer them directly to telcos and through OEMs. The Company's system-level products will consist of a complete turnkey system designed to integrate ADSL technology with data communications technology to enable customers to use ADSL throughout their network. At present, the Company does not have the manufacturing capability to provide system-level products, if such products were developed, in any substantial quantity. See "-- Manufacturing."

**Advanced ADSL, SDSL, VDSL and HFC.** The Company plans to offer new generations of advanced ADSL products, as well as chipsets, interfaces, modems, boards and systems incorporating SDSL, VDSL and HFC technology. The Company is currently in the process of developing an SDSL product with RelTec Corporation, a leading telco supplier. The Company has entered into an agreement with ADI under which the Company granted ADI a perpetual, worldwide, exclusive license to make, use and sell chipsets that incorporate VDSL and HFC software that the Company may develop. The Company has also agreed that, if it develops and sells ADSL technology that implements DWMT, it would license such technology to ADI on substantially the same terms as those for the Company's ADSL technology. See "-- Relationship with ADI."

#### ADSL EVALUATIONS AND TRIALS

Telcos typically put new products through a rigorous approval process before deploying them on a broad basis. The approval process usually involves a number of different phases, including (i) laboratory evaluation, in which the product is tested against relevant industry standards; (ii) technical trial, in which the product is tested in the field with a small number of users; (iii) marketing trial, in which the product is tested in the field with a larger number of users and telcos begin to train their personnel to install and maintain the product; (iv) initial commercial deployment, in which telcos make the product available to selected customers for selected applications; and (v) commercial deployment, in which telcos make the product available to a substantial number of customers.

A number of telcos are evaluating and testing the Company's ADSL products as part of their approval process. For example, GTE started a technical trial of the Company's products earlier this year in its laboratories and in a field trial in the Dallas area. GTE's technical trial, which is ongoing, includes small to midsize businesses, residential customers and GTE employees. Several other telcos have begun laboratory evaluations of the Company's ADSL products. Although the Company believes that its ADSL technology is competitive, there can be no assurance that it will be reviewed favorably by any of these telcos, or that ADSL will emerge as a technology in which the telcos wish to invest.

Moreover, neither GTE nor any other telco has given the Company information as to the possible timing of its approval process. See "Risk Factors -- Dependence on Acceptance of ADSL Technology" and "-- Reliance on Telcos."

#### RELATIONSHIP WITH ADI

ADI produces broadband chipsets incorporating the Company's ADSL technology pursuant to an agreement entered into between ADI and the Company in 1993. The Company's relationship with ADI enables the Company to take advantage of ADI's ASIC and digital signal processor and analog integrated circuit manufacturing capabilities. Pursuant to its agreement with ADI, the Company received development funding from ADI to create software, which it licensed to ADI for ADI's digital signal processors. The Company receives a royalty from ADI for every ADSL Chipset sold by ADI. In 1994 and 1995, the Company and ADI entered into additional agreements to expand their relationship to include the development and marketing of chipsets for HFC and VDSL data communications. In 1995, development funding from ADI accounted for approximately 23% of the Company's total revenue. As of June 1, 1996, the Company had not received any revenue from sales of ADSL Chipsets.

The relationship between ADI and the Company is an exclusive arrangement, under which neither party may enter into competing agreements with third parties. In order to maintain the exclusivity provisions of the ADI agreement, ADI is obligated to make certain minimum royalty payments to the Company. The Company has agreed with ADI that if ADI can show that the royalty paid to the Company does not allow ADI to compete in the marketplace, the Company will engage in good faith negotiations to reduce the royalty. Any such reduction could have a material adverse effect on the Company's business, financial condition and results of operations. Even if the Company were permitted to license its technology to other parties, the Company has agreed that it will not grant licenses to other parties under terms more favorable than those given to ADI. The Company has also agreed that, if it develops and sells ADSL technology that implements DWMT technology, it would license such technology to ADI on substantially the same terms as those for the Company's ADSL technology. In addition, the Company has agreed with ADI that if the Company's HFC or VDSL technology becomes an industry standard, the Company will license such technology on fair, equitable and non-discriminatory terms.

Chipsets manufactured pursuant to the agreements with ADI, including the ADSL Chipset, will be sold by ADI. Therefore, the Company's ability to achieve its business objectives will depend on ADI's ability and desire to deliver chipsets to the marketplace. See "Risk Factors -- Substantial Dependence on Analog Devices, Inc." Jerald G. Fishman, ADI's President and Chief Operating Officer, is a director of the Company. See "Management."

#### STRATEGIC RELATIONSHIPS AND CUSTOMERS

In an effort to facilitate the deployment of its products and technology, the Company has entered into the strategic development relationships described below.

DSC. Pursuant to a development agreement with the Company, DSC is developing a product called Mediaspan, which incorporates the Company's proprietary DWMT technology to permit telephony over an HFC network. A prototype of this product was publicly demonstrated at a trade show by the Company and DSC in May 1996. The Company is licensing certain software and board-level designs to DSC for Mediaspan in return for software license fees.

RelTec Corporation. RelTec Corporation ("RelTec") and the Company are negotiating an agreement pursuant to which they plan to develop an SDSL product incorporating chipsets from ADI and custom software from the Company that is based upon the Company's proprietary DWMT technology. The Company expects to receive from RelTec development funding to create the software and software license fees when RelTec sells the SDSL product. The Company also plans to develop ADSL board-level products with RelTec. There can be no assurance, however, that the Company and

RelTec will reach an agreement or that, if an agreement is reached, they will be successful in their development efforts.

Broadband Technologies, Inc. The Company has an agreement with Broadband Technologies, Inc. ("BBT") to develop a prototype for upstream VDSL transmissions, based upon the Company's DWTM technology. The Company and ADI are developing a VDSL chipset for BBT to use in its fiber-to-the-curb systems. BBT may terminate the agreement at any time.

The Company's strategy is to maintain and strengthen its existing relationships with OEMs that supply telcos and to establish new relationships with additional OEMs of this type and with leading LAN and WAN data and telecommunications systems manufacturers and equipment providers. Through existing and future relationships, the Company's strategy is to encourage OEMs to integrate the Company's technology into their systems and assist the Company in obtaining market share for its technology. However, there can be no assurance that the Company will successfully maintain its existing relationships or develop new relationships, and the failure by the Company to maintain and develop successful relationships with a sufficient number of OEMs could have a material adverse effect on the Company's business, financial condition and results of operations.

In addition to partnering with OEMs, the Company intends to sell its products directly to telcos such as GTE and the RBOCs and through telecommunications providers such as Westell Technologies, Inc.

#### LAST MILE TECHNOLOGY

Telcos' copper wire networks have several limitations that make high speed data transmission difficult. A significant portion of these networks is old and has been implemented and repaired over many years. Consequently, these networks consist of several different grades of wire. Telco wiring is also unshielded, making data transmission susceptible to interference from noise, including sources such as motors, lightning, broadcast radio and POTS. In addition, telco wiring has a basic transmission property that causes the signal quality to degrade rapidly as the frequency increases or the distance travelled by the signal increases.

#### ADSL Technology

ADSL is a method for expanding the useable bandwidth of copper wire. Typically, ADSL systems divide a one megahertz (MHz) bandwidth on copper wire into three segments: (i) the 0 to 4 kilohertz (KHz) range is used for POTS, (ii) the 25 KHz to 100 KHz range is used to transmit data upstream and (iii) the 100 KHz to 1 MHz range is used to transmit information downstream (see Figure 1). The ANSI specification for ADSL calls for operation rates of 1.5 to 8 Mbps downstream and 64 to 640 Kbps upstream when operating over existing copper wires at a distance of up to 18,000 feet.

[Figure 1 showing how ADSL systems divide a 1MHz bandwidth on copper wire into three segments.]

## DMT versus CAP

There are two primary modulation techniques for transmitting the data signals involved in ADSL: DMT, which the Company uses, and CAP. DMT is a multi-carrier modulation technique that was chosen by ANSI as the telecommunications industry standard for ADSL. CAP is a single-carrier modulation technique developed by AT&T Paradyne Corp. The fundamental difference between CAP and DMT is that CAP treats each of the upstream and downstream frequency ranges as a single element over which as many information bits as possible are transmitted. In contrast, DMT divides the upstream and downstream bands into groups of different smaller subchannel frequency ranges (approximately 4 KHz each) into which a much smaller number of bits are coded and transmitted simultaneously (see Figure 2).

The Company believes that DMT technology is better able than CAP technology to address the inherent problems of the telcos' copper wire networks. Because of its multiple small frequency bands, DMT is able to adjust and adapt the movement of information to both extract more throughput from a wire and to avoid sending information into frequency ranges that are not useable. Since CAP treats the entire frequency range as a single element, it does not have the ability to balance as easily the use of the frequency spectrum to match efficiently the performance of a given wire. DMT-based systems have greater flexibility than CAP-based systems because even if a system is unable to achieve the full rated speed, DMT-based modems can adapt and operate at a speed where information can move reliably.

[Figure 2 showing how CAP treats each of the upstream and downstream frequency ranges as a single element, while DMT divides the upstream and downstream bands into a number of smaller subchannels.]

## DWTM Technology

In addition to its DMT technology, the Company has invented a proprietary technology based on wavelet mathematics called DWTM. The Company believes that, as a result of its research and development of DWTM technology, it is a leader in commercialization of wavelets for signal processing and telecommunications applications.

Multi-carrier systems divide a frequency range into the desired number of subchannels by using a mathematical numerical process. Because of basic limits of the form of mathematics and the limits of time and computerization speeds, the process of creating isolated subchannels is imperfect. These imperfections inhibit modems from achieving theoretical performance limits. The subchannelization method used in creating DMT modems utilizes a technique called a Fourier transform. This technique has been used in the telecommunications industry since the 1960s, but has become more practical for high speed, high volume use as digital signal processors have improved. The wavelet transform yields significantly better subchannelization than the Fourier transform. Because this technique more closely

approximates ideal subchannelization, the performance of a wavelet-based DWMT system can produce performance superior to a non-wavelet DMT system operating in a noisy environment.

#### DWMT Application to SDSL, VDSL, HFC

Although Aware's ADSL Internet Access Modem uses DMT technology, the Company intends to apply DWMT technology to new products using SDSL, VDSL and HFC applications. The Company is seeking to incorporate DWMT techniques into industry standards body recommendations. The following is a brief description of possible applications using SDSL, VDSL and HFC:

**SDSL.** Symmetric Digital Subscriber Line technology is similar to ADSL but allows two-way data transmission at the same rates. The Company is developing an SDSL application using its DWMT technology. SDSL provides up to 2 Mbps of data in both directions on single twisted-pair copper wire at distances up to 18,000 feet while allowing simultaneous POTS. The Company expects that this SDSL application can be used for LAN interconnecting and enhanced telephony applications.

**VDSL.** The Company believes that Very high-speed Digital Subscriber Line technology will be the next generation of high-speed user access, critical to the implementation of fiber-to-the-neighborhood and fiber-to-the-curb architectures. These architectures involve the deployment of an access node that utilizes fiber optic cable from a telco's central office to the access node, thus bringing fiber closer to the user. The final connection to the user is new or existing copper wire or new coaxial cable. VDSL is being designed with the objective of providing performance up to six times faster than ADSL but over a shorter distance. The goal of VDSL is to enable telcos to provide a combination of digital TV, data dial-tone and regular telephony service on a single twisted-pair of copper wire. The Company is using DWMT to develop the upstream portion of a VDSL system.

**HFC.** By using the frequency band from 5 to 40 MHz for upstream transmission and the frequency band from 450 to 750 MHz for downstream transmission, it is possible to provide two-way services such as telephony and data communications on existing HFC networks. Each of these frequency bands is typically divided into smaller bands, 1 to 2 MHz wide. The Company's HFC technology, called WaveTel HFC, is based upon DWMT and will provide up to 8 Mbps transmission over a 2 MHz band. HFC telephony and cable modem technology enables cable companies to re-use their existing network to provide two-way services. New HFC networks are also being installed by telcos so that they can offer television services as well as telephone and data services.

#### HFC MARKET

Cable companies are also seeking to meet customers' demands for higher speed data transmission. Like telcos, cable companies possess substantial installed infrastructures. Ninety percent of homes in the U.S. now have access to cable and sixty-five percent of homes in the U.S. subscribe to the services offered by cable companies. The cable companies' HFC networks are capable of carrying more data downstream than existing copper wire networks but have limitations with upstream transmissions. Rather than establishing a dedicated link to each home or office, customers on a cable network share a portion of the bandwidth. Consequently, this architecture causes bottlenecks when multiple end-users attempt simultaneously to use available upstream bandwidth. As a result, the cable companies' networks require new technologies to meet customer demand for high speed two-way data transmission.

In an effort to address this problem, cable company suppliers are working to improve HFC technology, which would permit two-way broadband digital communications over typical cable networks. HFC technology uses digital signal processing to allow efficient sharing of the upstream bandwidth so that a cable line can be used for two-way transmissions. New HFC networks are also being installed by telcos so that they can offer television service as well as telephone and data dial-tone services.

The Company is using its expertise in digital communications and digital signal processing technology to develop products for use on HFC networks that increase the speed and reliability of data



communications over these networks. In particular, the Company is developing a product using its proprietary DWT technology designed to work with DSC's equipment to enable data and telephone service over HFC networks.

#### OTHER PRODUCTS AND TECHNOLOGY

The Company also develops data and video compression products. Since 1988, the Company has developed expertise, trade secrets and intellectual property in the field of wavelet transform-based data compression and has obtained several patents in this area. The Company's wavelet compression technology enables digital image, video and certain types of data to be compressed to between 1% and 10% of their original size. Using wavelet compression, the decompressed data are not bit for bit identical to the original data. A risk with this technique is that, as the original data get smaller, a larger amount of error is introduced into the decompressed data. However, compressed data can be transmitted across networks faster and storage costs are reduced. The Company's wavelet compression technology uses progressive transmission, which allows a user to begin displaying immediately a low resolution version of an image as it is being transmitted across a network.

In 1993, the Company began an effort to produce commercially marketable wavelet data compression software products. The Company currently offers five software-based compression products and has an agreement with ADI to produce a wavelet video compression ASIC. The Company's compression products include the following: AccuPress for Multimedia (which is a general purpose compression product); AccuPress for Remote Sensing (which is designed for compression of satellite-based remote sensing imagery); AccuPress for Radiology (which is used to compress digital radiographs and other types of medical imagery); SeisPact (which companies in the oil and gas industry can use to store and handle large amounts of seismic data); and WSQ by Aware (which compresses digital fingerprint data for use by law enforcement agencies such as the FBI).

#### SALES AND MARKETING

The Company's telecommunications products are complex, requiring the Company's sales people to have a high degree of technical sophistication in order to market the products effectively. The Company believes that technology selections involving the Company's products are frequently made at senior levels within a prospective customer's organization. Consequently, the Company has implemented a sales and marketing strategy that relies primarily on presentations by senior management to key employees of telcos and OEMs. As ADSL technologies are adopted more broadly, the Company expects to hire additional employees in sales and marketing to support the efforts of senior management.

#### COMPETITION

The markets for the Company's products are intensely competitive and the Company expects competition to increase in the immediate future, especially in the emerging ADSL market. The Company intends to compete on the basis of technology, price, the timing of product delivery, product features, quality, reliability and customer satisfaction. The Company currently competes, or expects to compete in the future, with the following categories of companies: (i) other vendors of DMT-based ADSL technology, such as Amati Communications Corporation ("Amati") and Orckit Communications Limited; (ii) vendors of alternative ADSL technologies, such as AT&T Paradyne Corp., which is currently marketing its CAP-based ADSL technology; (iii) the RBOCs, which as a result of the Telecommunications Act are no longer prohibited from manufacturing telecommunications equipment; and (iv) OEMs and other systems integrators, such as US Robotics Corp., Ericsson, Inc., Motorola, Inc. and Alcatel Network Systems, Inc.

The Company's success will depend on telcos' willingness to invest in broadband digital services based on its ADSL technology. The Company expects that its ADSL products will compete not only with other products that increase the efficiency of digital transmission over copper wire, such as ISDN

for Internet Access, but also with other broadband transmission technologies, such as HFC, coaxial cable, fiber optic cable, digital broadcast satellite and other wireless technologies. Many telcos have adopted policies that favor the deployment of fiber optic technologies. To the extent that telcos choose to install fiber optic and other transmission media between central offices and end users, the Company's business, financial condition and results of operations will be materially adversely affected.

In the HFC market, the Company is attempting to sell its products to system integrators such as Tellabs, Northern Telecom Ltd., Scientific-Atlanta, Inc. and General Instrument Corporation. The Company believes that these companies have developed or are developing proprietary modulation schemes using in-house technology that may be competitive with the Company's technology. Although the Company believes that its DWMT technology will offer more robust communications than these proprietary modulation schemes, the Company has not manufactured any marketable products based on its DWMT technology and there can be no assurance that the Company will be able to do so or that a market for such products will develop.

The markets for the Company's wavelet image compression technology are competitive, and are expected to become increasingly so in the near future. In addition, the Company's WSQ product is an implementation of an open standard and is therefore subject to competition.

Many of the Company's competitors and potential competitors, including AT&T Paradyne Corp. and the RBOCs, have significantly greater financial, technological, manufacturing, marketing and personnel resources than the Company. There can be no assurance that the Company will be able to compete successfully or that competition will not have a material adverse effect on the Company's business, financial condition and results of operations. See "Risk Factors -- Dependence on Acceptance of ADSL Technology," "-- Reliance on Telcos," "-- Rapid Technological Change; Dependence on New Products," "-- Competition" and "Business -- Last Mile Technology."

#### INTELLECTUAL PROPERTY

In the field of telecommunications technology, the Company holds three patents for applying wavelet mathematics to communications systems. The Company has five pending patent applications that pertain to the application of multi-carrier technology to broadband communications. The Company also holds six patents for image compression and processing, three patents for video compression, one patent for audio compression and one patent for certain optical applications.

Although the Company has patented certain of its technology, the Company relies primarily on know-how and trade secrets to protect its intellectual property. The Company attempts to protect its trade secrets and other proprietary information through agreements with its customers, suppliers, employees and consultants, and through other security measures. Each of the Company's employees is required to sign a nondisclosure and noncompetition agreement. Although the Company intends to protect its rights vigorously, there can be no assurance that these measures will be successful. In addition, the laws of certain countries in which products incorporating the Company's technology may be developed, manufactured or sold may not protect the Company's products and intellectual property rights to the same extent as the laws of the United States.

While the Company's ability to compete may be affected by its ability to protect its intellectual property, the Company believes that, because of the rapid pace of technological change in the telecommunications industry, its technical expertise and ability to introduce new products on a timely basis will be more important in maintaining its competitive position than protection of its existing intellectual property and that patent, trade secret and copyright protections are important but must be supported by other factors such as the expanding knowledge, ability and experience of the Company's personnel, new technology and products and product enhancements. Although the Company continues to implement protective measures and intends to defend vigorously its intellectual property rights, there can be no assurance that these measures will be successful.

Many participants in the telecommunications industry have an increasing number of patents and have frequently demonstrated a readiness to commence litigation based on allegations of patent and other intellectual property infringement. Third parties may assert exclusive patent, copyright and other intellectual property rights to technologies that are important to the Company. The Company has received letters from two companies, Amati and Telebit Corporation ("Telebit"), each asserting ownership of certain U.S. and foreign patents, claiming that the Company's ADSL technology would infringe such patents, and offering the Company the opportunity to enter into a license agreement with respect to such patents. The Company has been informed that ADI has received similar letters. The Company has reviewed the Amati and Telebit patents and has received an opinion of its patent counsel, based upon the Company's oral description of its technology, to the effect that the Company's ADSL Internet Access Modem which it intends to sell does not infringe any valid claim of any of the Amati and Telebit patents. Based upon this opinion, the Company believes that it does not require a license under the Amati or Telebit patents in order to conduct its proposed business.

Despite this opinion, there can be no assurance that a court to which the issue is submitted would not find that the Company's products infringe the Amati or Telebit patents, nor that Amati or Telebit will not continue to assert infringement. If the Company is found to have infringed any of such patents, the Company could be subject to substantial damages and/or an injunction preventing it from conducting its proposed business, and the Company's business could be materially and adversely affected. The Company has also received notice from Amati of the pendency of various patent applications which Amati considers to be pertinent to the design and operation of ADSL modems. Unless and until a patent actually issues, there can be no infringement, and the Company has not examined any such patent applications or received an opinion of patent counsel with respect thereto. Although Amati and Telebit have offered to license their patents and their patent applications to the Company, there can be no assurance that any license would be available on acceptable terms should the Company choose to pursue such license or be found to infringe such patents. In addition, there can be no assurance that other third parties will not assert infringement claims against the Company in the future, that these assertions or those of Amati and Telebit, will not result in protracted and costly litigation, or that the Company would prevail in any such litigation or be able to license any valid patents from third parties on commercially reasonable terms. Further, such litigation, regardless of its outcome, could result in substantial costs to and diversion of effort by the Company. Litigation may also be necessary to enforce the Company's intellectual property rights. Any infringement claim or other litigation against or by the Company could have a material adverse effect on the Company's business, financial condition and results of operations. See "Risk Factors -- Proprietary Technology; Risk of Third-Party Claims of Infringement."

#### MANUFACTURING

The Company does its own assembly and testing of its ADSL products, of which only a limited number have been manufactured to date. The Company obtains ADSL Chipsets directly from ADI and other parts needed for its ADSL products from a variety of suppliers. The Company's manufacturing capacity is very limited and the Company intends to use a combination of its internal manufacturing capacity and third party manufacturers to assemble and test its products. The Company expects that third party manufacturers will obtain product parts directly from the Company and from suppliers chosen by the Company. Other than the ADSL Chipset, which is available through ADI, the Company believes that other parts necessary for its ADSL products are available from a large number of suppliers and that there exist many qualified manufacturers to assemble and test the Company's products.

#### GOVERNMENT REGULATION

The telecommunications industry, including most of the Company's customers, is subject to regulation by federal and state agencies, including the Federal Communications Commission ("FCC") and various state public utility and service commissions. While such regulation does not necessarily affect the Company directly, the effects of such regulations on the Company's customers may, in turn, adversely affect the Company's business and results of operations. For example, FCC regulatory

policies affecting the availability of telco services and other terms on which telcos conduct their business may impede the Company's plans for deployment of its technology.

In February 1996, the Telecommunications Act was enacted. A primary factor in passage of the Telecommunications Act was the desire to deregulate and foster competition in the telecommunications markets. While the Company believes deregulation and increased competition, in general, will be favorable to its operations and business plan, the effect of the Telecommunications Act on the telecommunications industry is unclear. The Company's strategy depends, in part, on the RBOCs and other leading telcos remaining in a dominant position as consumers of ADSL equipment from the Company or its OEMs. If the product market for ADSL equipment or other such products becomes more fragmented as a result of deregulation, then the Company could experience a material adverse effect on its business, financial condition or results of operations.

In addition, the Company's business and operating results may also be adversely affected by the imposition of certain tariffs, duties and other import restrictions on components that the Company or its OEM customers obtains from non-domestic suppliers or by the imposition of export restrictions on products sold internationally and incorporating the Company's technology. Internationally, governments of the United Kingdom, Canada, Australia and numerous other countries actively promote and create competition in the telecommunications industry. Changes in current or future laws or regulations, in the U.S. or elsewhere, could materially and adversely affect the Company's business, financial condition or results of operations.

#### RESEARCH AND DEVELOPMENT

The Company believes that its future success depends on its ability to adapt to the rapidly changing telecommunications environment and to meet its customers' needs. The timely development and introduction of new products is essential to maintain the Company's competitive position. The Company develops most of its products in-house and, at June 1, 1996, had a research and development staff of 21 employees, including nine employees holding doctorate degrees in areas related to digital signal processing and digital communications theory. The Company is focusing its current development efforts primarily on improvements of its ADSL technology as well as on products incorporating DWMT technology for SDSL, VDSL and HFC applications. See "-- Telecommunications Products -- Telecommunications Product Development."

#### EMPLOYEES

As of June 1, 1996, Aware had a total of 32 employees, including 21 in research and development, 6 in sales and marketing, and 5 in administration. The Company believes that its future success will depend in large part on the continued service of its technical and senior management personnel and upon the Company's continuing ability to attract and retain highly qualified technical and managerial personnel. Competition for highly qualified personnel is intense, and there can be no assurance that the Company will be able to retain its key managerial and technical employees or that it will be able to attract and retain additional highly qualified technical and managerial personnel in the future. None of the Company's employees is represented by a labor union. The Company considers its employee relations to be good.

#### FACILITIES

The Company is located in an 11,000 square foot leased facility in Bedford, Massachusetts under a lease that expires in 1998. Aware believes that its existing facilities are adequate to meet its current requirements and that suitable space will be available as needed.

#### LITIGATION

There are no pending legal proceedings to which the Company is a party or to which any of its properties are subject which, either individually or in the aggregate, are expected by the Company to have a material adverse effect on its business, financial position or results of operations.

## MANAGEMENT

## EXECUTIVE OFFICERS AND DIRECTORS

The following table sets forth certain information with respect to the executive officers and directors of the Company as of June 14, 1996:

NAME	AGE	POSITION
Charles K. Stewart(1)(2).....	49	Chairman of the Board of Directors
James C. Bender(1).....	43	President, Chief Executive Officer and Director
Michael A. Tzannes, Ph.D.....	35	Senior Vice President, Telecommunications
David C. Hunter.....	40	Senior Vice President, Product Development
Richard P. Moberg, C.P.A.....	41	Chief Financial Officer and Treasurer
Edmund C. Reiter, Ph.D.....	32	Vice President, Advanced Products
John K. Kerr(1)(2)(3).....	58	Director
Jerald G. Fishman.....	51	Director
John S. Stafford, Jr.(3).....	58	Director

- 
- (1) Member of the Executive Committee  
 (2) Member of the Audit Committee  
 (3) Member of the Compensation Committee

Charles K. Stewart has been a director of the Company since 1988 and Chairman of the Board of Directors since April 1995. Mr. Stewart previously served as Chairman of the Board of Directors from 1988 to 1990 and from March 1994 to November 1994. From 1975 to December 1993, he traded options, futures and securities on the Chicago Board of Options Exchange and has been involved in private venture capital transactions since 1984. Mr. Stewart received an M.B.A. from Northwestern University and a B.A. from Yale University.

James C. Bender has been President, Chief Executive Officer and a director of the Company since October 1994. From April 1992 to February 1994, Mr. Bender served as President and Chief Executive Officer of Logcraft, Inc., a network server company. From 1986 to April 1992, Mr. Bender served as Logcraft's President and Chief Operating Officer. Mr. Bender received an M.B.A. from the Harvard Graduate School of Business Administration and a B.S. from Lowell Technological Institute.

Michael A. Tzannes, Ph.D. has been the Company's Senior Vice President, Telecommunications since April 1996. Dr. Tzannes served as the Company's Vice President, Telecommunications from December 1992 to April 1996, as a Senior Member of the Company's Technical Staff from January 1991 to November 1992 and as a consultant to the Company from October 1990 to December 1990. From 1986 to 1990, he was a Staff Engineer at Signatron, Inc., a telecommunications technology and systems developer. Dr. Tzannes received a Ph.D. in electrical engineering from Tufts University, an M.S. from the University of Michigan at Ann Arbor and a B.S. from the University of Patras, Greece.

David C. Hunter joined the Company in May 1996 as Senior Vice President, Product Development. From 1982 to April 1996, Mr. Hunter served as Vice President, Research and Development of I.D.E. Corporation ("IDEA"), a manufacturer of data communications equipment. Mr. Hunter was a founder and a director of IDEA. Mr. Hunter received an M.B.A. with high distinction from the Harvard Graduate School of Business Administration and a B.S. with distinction from Cornell University.

Richard P. Moberg, C.P.A. joined the Company in June 1996 as Chief Financial Officer and Treasurer. From December 1990 to June 1996, Mr. Moberg held a number of positions at Lotus Development Corporation, a computer software developer, including Corporate Controller from June 1995 to June 1996, Assistant Corporate Controller from May 1993 to June 1995 and Director of Financial Services from December 1990 to May 1993. Mr. Moberg received an M.B.A. from Bentley College and a B.B.A. in accounting from the University of Massachusetts at Amherst.

Edmund C. Reiter, Ph.D. has been the Company's Vice President, Advanced Products since August 1995. Prior to that, he served as the Company's Manager of Product Development for still image compression products from June 1994 to August 1995, as a Senior Member of the Company's Technical Staff from November 1993 to June 1994, and as a Member of the Technical Staff from December 1992 to November 1993. Dr. Reiter served as Senior Scientist at New England Research, Inc. from January 1991 to October 1992. Dr. Reiter received a B.S. from Boston College and a Ph.D. from the Massachusetts Institute of Technology.

John K. Kerr has been a director of the Company since 1990. Mr. Kerr previously served as a director of the Company from 1988 to 1989 and as the Chairman of the Board of Directors from November 1992 to March 1994. From June 1992 to November 1994, Mr. Kerr served as the Company's Assistant Vice President of Marketing. Mr. Kerr has been General Partner of Grove Investment Partners, a private investment partnership, since 1990. Mr. Kerr received an M.A. and a B.A. from Baylor University.

Jerald G. Fishman has been a director of the Company since May 1996 and President, Chief Operating Officer and a director of ADI since November 1991. Mr. Fishman joined ADI in 1971 and held a variety of management positions in marketing, operations and strategic planning, including Group Vice President from 1982 to 1988 and Executive Vice President from 1988 to November 1991. Mr. Fishman received a B.S. in electrical engineering from the City College of New York, an M.S. in electrical engineering from Northeastern University, an M.B.A. from Boston University and a J.D. from Suffolk Law School.

John S. Stafford, Jr. has been a director of the Company since 1988. Mr. Stafford has been a Member of the Chicago Board of Options Exchange since 1975, where he trades financial futures, options and equity instruments. Mr. Stafford received an M.B.A. from the University of North Carolina and a B.A. from Davidson College.

The Board of Directors is divided into three classes, one class of which is elected each year at the annual meeting of stockholders to hold office for a term of three years. Each director holds office until his successor has been duly elected and qualified. Messrs. Bender and Fishman serve in the class whose terms expire in 1997; Mr. Kerr serves in the class whose terms expire in 1998; and Messrs. Stafford and Stewart serve in the class whose terms expire in 1999. The Company has agreed to use its best efforts to cause Mr. Bender to be elected to the Company's Board of Directors. See "-- Employment Agreement." Executive officers are elected annually by the Board of Directors and serve at the discretion of the Board or until their respective successors have been duly elected and qualified. Except for Mr. Bender, no executive officer of the Company has an employment agreement with the Company. There are no family relationships among the directors and executive officers of the Company.

The Board of Directors has established an Executive Committee, which has all of the powers of the Board of Directors except the power to: (i) change the number of directors or fill vacancies on the Board of Directors; (ii) elect or fill vacancies in the offices of President, Treasurer or Clerk; (iii) remove any officer or director; (iv) amend the By-Laws of the Company; (v) change the principal office of the Company; (vi) authorize the payment of any dividend or distribution to shareholders of the Company; (vii) authorize the reacquisition of capital stock for value; and (viii) authorize a merger. The Board of Directors has established a Compensation Committee, which provides recommendations concerning salaries and incentive compensation for senior management of the Company and administers the Company's stock option plans. See "-- Stock Option Plans." The Board of Directors has also established an Audit Committee, which reviews the results and scope of the annual audit of the Company's financial statements conducted by the Company's independent accountants, the scope of other services provided by the Company's independent accountants, proposed changes in the Company's financial and accounting standards and principles, and the Company's policies and procedures with respect to its internal accounting, auditing and financial controls. The Audit Committee also makes recommendations to the Board of Directors on the engagement of the independent accountants, as well as other matters which may come before the Audit Committee or at the direction of the Board of Directors.

## COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The Company's Compensation Committee is currently composed of Messrs. Kerr and Stafford. In fiscal 1995, the Company did not have a Compensation Committee and the compensation of the Company's executive officers was determined by the Board of Directors. William N. Sick, Jr. served on the Board of Directors throughout 1995. Howard L. Resnikoff, Ph.D., a director of the Company from inception to April 1995, served as Chairman of the Board of Directors from November 1994 to April 1995 and as President from inception to October 1994. Mr. Bender, the Company's President and Chief Executive Officer, served on the Board of Directors throughout 1995 and participated in the deliberations of the Board of Directors concerning the compensation of the Company's executive officers other than himself. In 1995, no other officer or employee of the Company participated in any such deliberations. No interlocking relationship has existed between the Company's Board of Directors or Compensation Committee and the board of directors or compensation committee of any other company since January 1, 1995.

In June 1994, Mr. Sick purchased 770 shares of Series E Preferred Stock for \$100,100. In December 1992, in connection with the issuance of its Series D Convertible Preferred Stock ("Series D Stock") the Company entered into a Secured Non-Recourse Adjustable Rate Promissory Note and Pledge Agreement with Dr. Resnikoff in the principal amount of \$344,000. The note was issued to permit Dr. Resnikoff to acquire shares of Series D Stock and was secured by a pledge of the 3,440 shares so acquired and additional collateral. In March 1995, the Company accepted the shares of Series D Stock as payment for the principal and accrued interest on the note, and cancelled the note. See "Certain Transactions."

## DIRECTOR COMPENSATION

Each non-employee director of the Company is reimbursed for expenses incurred in attending meetings of the Board of Directors. Directors who are employees of the Company are not paid any separate fees for serving as directors. On May 23, 1996, the Company granted Messrs. Stewart and Fishman nonstatutory options under the 1996 Option Plan to purchase 330,000 and 150,000 shares of Common Stock, respectively, at an exercise price of \$8.25 per share. The options vest in equal monthly installments over a period of three years, commencing June 1, 1996. For information regarding certain options granted to Mr. Bender, see "-- Stock Option Plans -- Option Grants During 1995" and "-- Employment Agreement."

## EXECUTIVE COMPENSATION

## SUMMARY OF CASH AND OTHER COMPENSATION

The following table provides certain summary information concerning compensation earned for services rendered in all capacities to the Company in the fiscal year ended December 31, 1995 by the Company's President and Chief Executive Officer and the other executive officer whose salary during such fiscal year was in excess of \$100,000 (collectively, the "Named Executive Officers").

SUMMARY COMPENSATION TABLE

NAME AND PRINCIPAL POSITION	ANNUAL COMPENSATION	LONG-TERM COMPENSATION AWARDS(1)
	SALARY(\$)	SECURITIES UNDERLYING OPTIONS(#)
James C. Bender.....	\$179,013	500,000
President and Chief Executive Officer		
Michael A. Tzannes, Ph.D.....	\$103,815	220,000
Senior Vice President, Telecommunications		

(1) Represents stock options granted under the Company's 1990 Incentive and Nonstatutory Stock Option Plan. In fiscal 1995, the Company did not make any restricted stock awards, grant any stock appreciation rights or make any long-term incentive plan payouts. Other compensation in the form of perquisites and other personal benefits has been omitted because the aggregate amount of such perquisites and other personal benefits constituted less than \$50,000 or 10% of the executive's total annual salary.

## STOCK OPTION PLANS

## 1990 INCENTIVE AND NONSTATUTORY STOCK OPTION PLAN

In January 1990, the Board of Directors adopted, and the stockholders approved, the 1990 Incentive and Nonstatutory Stock Option Plan (as amended to date, the "1990 Option Plan"). The 1990 Option Plan authorizes the issuance of options to purchase an aggregate of 2,873,002 shares of Common Stock. As of June 1, 1996, options to purchase 1,045,557 shares of Common Stock had been exercised, options to purchase 1,729,158 shares of Common Stock were outstanding under the 1990 Option Plan at a weighted average exercise price of \$1.29 per share and 98,287 shares of Common Stock were available for future option grants. The Board of Directors does not intend to grant further options under the 1990 Option Plan. The 1990 Option Plan will terminate in January 2000 unless earlier terminated by the Board of Directors. Under the 1990 Option Plan, the Board of Directors has granted (i) options to purchase Common Stock intended to qualify as incentive stock options ("Incentive Options"), as defined in Section 422 of the Internal Revenue Code of 1986, as amended (the "Code") and (ii) options that do not so qualify ("Nonstatutory Options").

## 1996 STOCK OPTION PLAN

In May 1996, the Board of Directors adopted, and the stockholders approved, the Aware, Inc. 1996 Stock Option Plan (the "1996 Option Plan"), authorizing the issuance of options to purchase an aggregate of 3,000,000 shares of Common Stock. As of June 1, 1996, options to purchase 1,378,000 shares of Common Stock at an exercise price of \$8.25 per share were outstanding under the 1996 Option Plan and 1,622,000 shares of Common Stock were available for future option grants. The 1996 Option Plan is administered by the Compensation Committee (the "Committee"), none of the members of which is an officer or employee of the Company. All members of the Committee are "disinterested persons" as that term is defined under rules promulgated by the Securities and Exchange Commission. The Committee selects the individuals to whom options will be granted and determines the option exercise price and other terms of each option, subject to the provisions of the 1996 Option Plan. The 1996 Option Plan authorizes the grant of both Incentive Options and Nonstatutory Options. Incentive Options and Nonstatutory Options may be granted under the 1996 Option Plan to employees of the Company or a subsidiary, including directors and officers who are employees of the Company or a subsidiary. Nonstatutory Options may also be granted under the 1996 Option Plan to directors of the Company or a subsidiary who are not employees of the Company or a subsidiary and to consultants and other persons who render services to the Company or a subsidiary.

Under the terms of the 1996 Option Plan, each director of the Company who is not an employee of the Company or any subsidiary (a "Non-Employee Director") shall, at the first meeting of the Board of Directors following each annual meeting of stockholders, commencing with the first meeting of the Board of Directors following the Company's annual meeting of stockholders in 1997, be automatically granted a Nonstatutory Option (a "Director Option") to purchase that number of shares of Common Stock determined by dividing \$100,000 by the fair market value of the Common Stock on the date of grant. No Director Option shall be granted prior to the first meeting of the Board of Directors following the annual meeting of stockholders in 1999 to any individual who was or became a director of the Company, and was granted an option to purchase Common Stock of the Company, after December 31, 1995 and before the first meeting of the Board of Directors following the annual meeting of stockholders in 1997. Each Director Option shall have a term of six years and shall vest in 12 equal consecutive quarterly installments, the first to vest on the last day of the month following the month in which the grant occurs. Each Director Option will become fully exercisable upon the occurrence of a sale or merger with a change in control (as defined in the 1996 Option Plan). In the event that a director's position as such terminates or is terminated by reason of his death, disability, resignation (other than resignation at the request of the Board of Directors) or removal as director, or his refusal to accept the Company's nomination for reelection, any Director Option held by such director shall cease to vest upon such director's termination and shall expire 60 days after termination. In all other cases, Director Options shall continue to vest and shall expire on the sixth anniversary of the date of



grant. The provisions of the 1996 Option Plan relating to Director Options may be modified or abrogated at any time if the Board of Directors determines that such provisions are unnecessary for compliance or are in conflict with Rule 16b-3 under the Exchange Act.

Shares of Common Stock issuable upon exercise of options granted under the 1996 Option Plan to executive officers, directors and beneficial owners of more than ten percent of the Common Stock may not be sold or transferred by such officer, director or beneficial owner for a period of six months following the date of grant.

#### OPTION GRANTS DURING 1995

The following table sets forth for each of the Named Executive Officers certain information concerning stock options granted during fiscal 1995.

#### OPTION GRANTS IN LAST FISCAL YEAR

NAME	NUMBER OF SHARES UNDERLYING OPTIONS GRANTED (#)(2)	INDIVIDUAL GRANTS			POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATE OF STOCK PRICE APPRECIATION FOR OPTION TERM(1)	
		PERCENT OF TOTAL OPTIONS GRANTED TO EMPLOYEES IN FISCAL YEAR	EXERCISE OR BASE PRICE (\$/SHARE)(3)	EXPIRATION DATE	5%(\$)	10%(\$)
James C. Bender.....	300,000(4)	26.3%	\$ 1.30	November 1, 2002	\$158,769	\$370,000
	200,000	17.5	1.30	August 9, 2003	124,138	297,333
Michael A. Tzannes,						
Ph.D.....	90,000	7.9	1.30	February 1, 2005	73,581	186,467
	100,000	8.8	1.30	August 9, 2005	81,756	207,187
	30,000	2.6	1.30	December 11, 2005	24,527	62,156

(1) Amounts reported in this column represent hypothetical values that may be realized upon exercise of the options immediately prior to the expiration of their term, assuming the specified compounded rates of appreciation of the Company's Common Stock over the term of the options. These numbers are calculated based on rules promulgated by the Securities and Exchange Commission and do not represent the Company's estimate of future stock price growth. Actual gains, if any, on stock option exercises and Common Stock holdings are dependent on the timing of such exercise and the future performance of the Company's Common Stock. There can be no assurance that the rates of appreciation assumed in this table can be achieved or that the amounts reflected will be received by the Named Executive Officers. This table does not take into account any appreciation in the price of the Common Stock from the date of grant to the current date. The values shown are net of the option exercise price, but do not include deductions for taxes or other expenses associated with the exercise.

(2) Generally, the options vest in equal monthly installments over periods of three years, commencing on the first day of the month following the month in which the options were granted. The option granted to Mr. Bender to purchase 300,000 shares of Common Stock was exercisable for 74,997 shares of Common Stock on August 1, 1995; the remaining 225,003 shares vest in equal monthly installments over a period of 27 months, commencing on September 1, 1995. This option becomes exercisable in full upon a change in control of the Company.

(3) All options were granted at fair market value as determined by the Board of Directors of the Company on the date of grant. The Board of Directors determined the market value of the Common Stock based on various factors, including the illiquid nature of an investment in the Company's Common Stock, the Company's historical financial performance and the Company's future prospects.

(4) Represents an option granted in 1995 upon surrender of an option granted in 1994 to purchase 300,000 shares of Common Stock. See "-- Employment Agreement."

In May 1996, the Company granted Mr. Bender, Dr. Tzannes and Mr. Hunter Nonstatutory Options under the 1996 Option Plan to purchase 110,000, 50,000 and 284,000 shares of Common Stock, respectively, at an exercise price of \$8.25 per share. The Company also granted Messrs. Hunter and Reiter Incentive Options under the 1996 Option Plan to purchase 36,000 and 20,000 shares of Common Stock, respectively, at an exercise price of \$8.25 per share. In June 1996, the Company granted Mr. Moberg Nonstatutory Options and Incentive Options under the 1996 Option Plan to purchase 39,000 and 36,000 shares of Common Stock, respectively, at an exercise price of \$8.25 per share. In general, the options vest in equal monthly installments over periods of three years. The options held by Messrs. Hunter and Moberg provide that they shall become exercisable in full upon a change in control of the Company. See "-- Employment Agreement."

#### FISCAL YEAR-END OPTION VALUES

The following table sets forth certain information with respect to (i) the number of unexercised options held by the Named Executive Officers as of December 31, 1995, and (ii) the value of unexercised in-the-money options (options for which the fair market value of the Common Stock exceeds the exercise price) as of December 31, 1995. Neither Named Executive Officer exercised any options during the fiscal year ended December 31, 1995.

#### FISCAL YEAR-END OPTION VALUES

NAME	NUMBER OF SHARES OF COMMON STOCK UNDERLYING UNEXERCISED OPTIONS AT DECEMBER 31, 1995(#)		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT DECEMBER 31, 1995(\$)(1)	
	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
James C. Bender.....	311,105	688,895	\$3,017,719	\$ 6,682,282
Michael A. Tzannes, Ph.D.....	88,360	191,640	867,498	1,859,003

(1) There was no public trading market for the Common Stock on December 31, 1995. Accordingly, solely for purposes of this table, the values in this column have been calculated on the basis of an assumed initial public offering price of \$11.00 (rather than a determination of the fair market value of the Common Stock on December 31, 1995), less the aggregate exercise price of the options.

#### 1996 EMPLOYEE STOCK PURCHASE PLAN

In May 1996, the Company adopted the Aware, Inc. Employee Stock Purchase Plan (the "Stock Purchase Plan"), under which options to purchase up to 100,000 shares of Common Stock may be granted to employees of the Company. The Stock Purchase Plan is administered by the Compensation Committee. During each six month offering period under the Stock Purchase Plan, participating employees will be entitled to purchase shares through payroll deductions of up to six percent of the employees' respective base pay. The maximum number of shares which an employee may purchase in an offering period is twice the number obtained by dividing the amount of the employee's compensation withheld during the offering period (plus any amounts carried over from earlier offering periods) by 85% of the fair market value of the Common Stock on the first day of the offering period. During each offering period, the price at which employees will be able to purchase shares of Common Stock will be 85% of the last trading price of the Common Stock as reported on the Nasdaq National Market on the date that the offering period commences or the date the offering period concludes, whichever is lower.

Each employee of the Company is eligible to participate in the Stock Purchase Plan on the first day of the offering period commencing after the employee completes six months of continuous service with the Company, except that no employee will be granted an option under the Stock Purchase Plan if (i) immediately after the grant, the employee owns or has options to purchase stock possessing five percent or more of the total combined voting power or value of all classes of stock of the Company or

any subsidiary, (ii) the option would permit the employee to purchase more than \$25,000 (determined in accordance with the fair market value of such stock at the time the option is granted) of Common Stock in a calendar year, or (iii) the employee is an officer of the Company who is a "highly compensated employee" under Section 414(q) of the Code. Upon termination of employment for any reason other than death, the employee is no longer eligible to purchase shares of Common Stock under the Stock Purchase Plan. Upon the death of an employee, the employee's beneficiary may elect to use the employee's accumulated payroll deductions to purchase shares of Common Stock under the Stock Purchase Plan at the end of the offering period.

A participant who is an officer or director of the Company and who elects either to withdraw from participation or not to exercise an option will not be eligible for the grant any options under the Stock Purchase Plan for a period of six months. Officers and directors and their beneficiaries may not transfer shares of Common Stock purchased under the Stock Purchase Plan for a period of six months following the end of the offering period; other employees and their beneficiaries may not transfer such shares for a period of three months following the end of the offering period.

#### 401(K) PLAN

The Company maintains the Aware Employee 401(k) Savings Plan (the "401(k) Plan"), qualified under Section 401(k) of the Code. All employees of the Company who have attained the age of twenty-one and have completed six consecutive months of service are eligible to participate in the 401(k) Plan. The 401(k) Plan provides that each participant may contribute to the 401(k) Plan up to 15% of the participant's annual pre-tax compensation, but not more than an annual limit prescribed by law, which limit is \$9,500 in 1996. The percentage elected by certain highly compensated participants may be required to be lower. The Company may, but is not required to, elect to make contributions to the 401(k) Plan for the benefit of the participants. Amounts contributed to the 401(k) Plan by employee participants and earnings on these contributions vest 20% after two years of service to the Company and an additional 20% each year thereafter until contributions are fully vested.

#### EMPLOYMENT AGREEMENT

On October 27, 1994, Mr. Bender entered into an employment agreement with the Company, pursuant to which he agreed to serve as the President and Chief Executive Officer of the Company for a term expiring December 31, 1997. Under the agreement, the term of Mr. Bender's employment will be extended for up to ten one-year periods, the first to commence on January 1, 1998, until the Company gives Mr. Bender one year's notice of non-renewal. The Company also agreed to use its best efforts to cause Mr. Bender to be elected to the Board of Directors. The agreement provides that Mr. Bender shall receive an annual salary of \$180,000 and bonuses at the discretion of the Board of Directors. Mr. Bender is entitled to participate in the Company's insurance and other employee benefit programs on the same basis as all other employees. Mr. Bender agreed to be bound by the terms of the Company's standard employee agreement concerning inventions, confidentiality and non-competition. In the event of termination as a result of death or disability, the Company will continue Mr. Bender's compensation and benefits for a period of six months thereafter. The Company may terminate Mr. Bender's employment for cause upon ten days' notice and an opportunity to be heard at a meeting of the Board of Directors or the Executive Committee; for purposes of the agreement, "cause" means negligent acts or omissions that have been or will be the sole or primary cause of material harm to the Company, conviction of a crime involving moral turpitude or conviction of a crime the principal victim of which is the Company. In the event that the Company terminates Mr. Bender's employment without cause or in the event of a change in control of the Company (as defined in the agreement), the Company will pay Mr. Bender a severance payment upon such termination equal to the salary he would have earned through the expiration of his employment, such payment not to be less than \$180,000 nor more than \$270,000.

The Company agreed to grant Mr. Bender on November 1, 1994 an incentive option to purchase 230,769 shares of Common Stock at an exercise price of \$1.30 per share and nonstatutory options to

purchase 269,231 and 300,000 shares of Common Stock at exercise prices of \$1.30 and \$2.00 per share, respectively. The first two options vest in equal monthly installments over periods of three years ending October 1997. The third option (the "Performance Option") vested at the rate of 50 shares for each \$1,000 of pre-tax profit realized by the Company during the period from January 1, 1995 to December 31, 1997. Each option expires on the eighth anniversary of the date of grant.

On February 13, 1995, the Board of Directors of the Company voted to reduce the exercise price of the Performance Option option from \$2.00 per share to \$1.30 per share, a price which the Board determined to be the fair market value of the Common Stock at that time. The Board also voted to amend the Performance Option to provide that fifty percent of the shares subject to the Performance Option would vest regardless of profit earned if Mr. Bender were still employed by the Company on January 15, 1998. On July 24, 1995, the Board voted that upon Mr. Bender's surrender of the Performance Option, the Company would cancel the Performance Option and issue a new nonstatutory option to purchase 300,000 shares of Common Stock at an exercise price of \$1.30 per share, which option would vest in equal monthly installments over a period of three years, commencing December 1, 1994. Mr. Bender thereafter surrendered the Performance Option and the Company issued the replacement option.

## CERTAIN TRANSACTIONS

## ADI AGREEMENTS

In 1993, the Company entered into a Development Contract and a License Agreement with ADI to produce broadband chipsets. The Development Contract was amended in June 1994 and September 1995. In 1995, the Company received \$250,000 from ADI in development funding to implement software for ADI's digital signal processors, and \$125,000 in advance royalties for ADSL Chipsets sold by ADI. In 1994 and 1993, the Company received \$300,000 and \$250,000, respectively, in development funding from ADI. Jerald G. Fishman, ADI's President and Chief Operating Officer, is a director of the Company. See "Risk Factors -- Substantial Dependence on Analog Devices, Inc."

## LOANS FROM STOCKHOLDERS

In 1994, the Company borrowed \$90,000 from Novon, L.P., then the holder of more than five percent of the Company's outstanding voting stock, and \$20,000 from Charles K. Stewart, then a director of the Company and the general partner of Novon, L.P., each at an interest rate of 10% per year. The Company repaid the loans in 1994, together with interest in the amounts of approximately \$1,550 and \$750 to Novon, L.P. and Mr. Stewart, respectively.

## SALES OF SERIES D PREFERRED STOCK

In June and July 1994, Richard Naegele, James S. Stafford and John S. Stafford III, each a holder of more than five percent of the Company's outstanding voting stock, purchased 4,420, 3,500 and 3,500 shares of Series E Preferred Stock, respectively, for consideration of \$574,000, \$455,000 and \$455,000, respectively.

## REPURCHASE OF SERIES D SHARES

In December 1992, in connection with the issuance of its Series D Convertible Preferred Stock ("Series D Stock") the Company entered into Secured Non-Recourse Adjustable Rate Promissory Note and Pledge Agreements with each of Howard L. Resnikoff and John Huffman, then an officer of the Company, in the respective principal amounts of \$344,000 and \$66,000. The notes were issued to permit Dr. Resnikoff and Mr. Huffman to acquire 3,440 and 660 shares of Series D Stock, respectively, and were secured, in the case of Dr. Resnikoff, by a pledge of the 3,440 shares so acquired and additional collateral, and, in the case of Mr. Huffman, the 660 shares so acquired. In March 1995, the Company accepted the shares of Series D Stock as payment for the principal and accrued interest on the notes, and cancelled the notes.

The Company believes that all of the foregoing transactions were made on terms no less favorable to the Company than would have been obtained from unaffiliated third parties. On or before the closing of this offering, the Company intends to adopt a policy whereby all future transactions between the Company and its directors, officers and affiliates will be on terms no less favorable to the Company than could be obtained from unaffiliated third parties and will be approved by a majority of the disinterested members of the Company's Board of Directors.

## PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to beneficial ownership of the Common Stock as of June 1, 1996, and as adjusted to reflect the sale of the Common Stock offered hereby, by (i) each person known by the Company to be the beneficial owner of more than five percent of the Common Stock; (ii) each of the Company's directors; (iii) each of the Named Executive Officers; and (iv) the Company's directors and executive officers as a group.

NAMES AND ADDRESSES OF BENEFICIAL OWNER	SHARES BENEFICIALLY OWNED(1)	PERCENTAGE OF SHARES BENEFICIALLY OWNED(2)	
		PRIOR TO THIS OFFERING	AFTER THIS OFFERING
Richard J. Naegele..... 401 S. LaSalle Street Suite 1502 Chicago, Illinois 60605	2,084,695	13.9%	11.3%
John S. Stafford, Jr..... 440 S. LaSalle Street Suite 3904 Chicago, Illinois 60605	1,748,783	11.7	9.5
Charles K. Stewart(3)..... 401 S. LaSalle Street Suite 1502 Chicago, Illinois 60605	1,193,693	7.9	6.5
Howard L. Resnikoff..... P.O. Box 812127 Wellesley, Massachusetts 02181	1,036,261	6.9	5.6
John K. Kerr(4)..... 336 Essex Road Kenilworth, Illinois 60043	896,293	6.0	4.9
James Stafford(5)..... 440 S. LaSalle Street Suite 3904 Chicago, Illinois 60605	874,391	5.8	4.8
John S. Stafford III(6)..... 440 S. LaSalle Street Suite 3904 Chicago, Illinois 60605	874,391	5.8	4.8
James C. Bender(7).....	554,176	3.6	2.9
Michael A. Tzannes(8).....	147,368	*	*
Jerald G. Fishman(9).....	12,510	*	*
All directors and executive officers as a group (9 persons)(10).....	4,627,840	29.2	24.1

\* Less than one percent.

(1) The number of shares beneficially owned by each stockholder is determined in accordance with the rules promulgated by the Securities and Exchange Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the person has sole or shared voting power or investment power and also any shares which the person has the right to acquire within 60 days after June 1, 1996 through the exercise of any stock option or other right. The inclusion herein of such shares, however, does not constitute an admission that the named stockholder is a direct or indirect beneficial owner of such shares. To the Company's knowledge, each person named in the table has sole voting power and investment power (or shares such power with his or her

spouse) with respect to all shares of Common Stock shown as beneficially owned by such person, except as otherwise indicated. Solely for purposes of computing the percentage of shares beneficially owned by a person, shares of Common Stock which the person has the right to acquire within 60 days of June 1, 1996 are deemed outstanding.

- (2) Percentage ownership is based on (i) 14,982,397 shares of Common Stock outstanding before this offering, and (ii) 18,382,397 shares of Common Stock outstanding after this offering.
- (3) Includes 71,688 shares subject to options exercisable within 60 days of June 1, 1996; 242,431 shares held in trust for Mr. Stewart's children; and 80,575 shares held as trustee of the Dawson Family Trust. Does not include 299,970 shares subject to options not exercisable within 60 days of June 1, 1996.
- (4) Includes 324,193 shares held by Grove Investment Partners, of which Mr. Kerr is a general partner.
- (5) Includes 202,052 shares held in a trust for the benefit of James Stafford.
- (6) Includes 202,052 shares held in a trust for the benefit of John S. Stafford III.
- (7) Represents shares subject to stock options exercisable within 60 days of June 1, 1996. Does not include 555,824 shares subject to options not exercisable within 60 days of June 1, 1996.
- (8) Represents shares subject to stock options exercisable within 60 days of June 1, 1996. Does not include 182,632 shares subject to options not exercisable within 60 days of June 1, 1996.
- (9) Represents shares subject to stock options exercisable within 60 days of June 1, 1996. Does not include 137,490 shares subject to options not exercisable within 60 days of June 1, 1996.
- (10) Includes 845,617 shares subject to options exercisable within 60 days of June 1, 1996. Does not include 1,560,899 shares subject to options not exercisable within 60 days of June 1, 1996.

## DESCRIPTION OF CAPITAL STOCK

Following the closing of the sale of the shares of Common Stock offered hereby, the authorized capital stock of the Company will consist of 30,000,000 shares of common stock, \$0.01 par value per share ("Common Stock"), and 1,000,000 shares of preferred stock, \$1.00 par value per share ("Preferred Stock"). Pursuant to the provisions of the Company's Articles of Organization, as of the closing of this offering, each issued and outstanding share of Series C Convertible Preferred Stock, Series D Convertible Preferred Stock and Series E Convertible Preferred Stock will automatically convert into 100 shares of Common Stock.

## COMMON STOCK

As of June 1, 1996, assuming conversion into shares of Common Stock of all of the issued and outstanding shares of Series C Convertible Preferred Stock, Series D Convertible Preferred Stock and Series E Convertible Preferred Stock, there were outstanding 14,982,397 shares of Common Stock held of record by 99 persons. Upon the closing of this offering, there will be outstanding 18,382,397 shares of Common Stock, assuming no exercise of the Underwriters' over-allotment option and no exercise of options to purchase an aggregate of 3,107,158 shares of Common Stock outstanding as of June 1, 1996.

Holdings of Common Stock are entitled to one vote per share held of record on all matters submitted to a vote by the stockholders of the Company. Subject to preferences that may be applicable to the holders of outstanding shares of Preferred Stock, if any, the holders of Common Stock are entitled to receive such dividends when and as declared by the Board of Directors out of funds legally available therefor. In the event of any liquidation, dissolution or winding up of the affairs of the Company, and subject to the rights of the holders of outstanding shares of Preferred Stock, if any, the remaining assets of the Company available to stockholders shall be distributed equally per share to the holders of shares of Common Stock irrespective of class. Holders of shares of Common Stock have no cumulative voting rights nor any preemptive, subscription, redemption or conversion rights. There are no redemption or sinking fund provisions applicable to the Common Stock. All outstanding shares of Common Stock are validly issued, fully paid and nonassessable, and the shares of Common Stock offered hereby will be, when issued and paid for, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of Common Stock are subject to, and may be adversely affected by, the rights of holders of shares of Preferred Stock which the Company may designate and issue in the future.

## PREFERRED STOCK

On or before the closing of this offering, the Company's Articles of Organization will authorize the issuance of 1,000,000 shares of undesignated Preferred Stock, \$1.00 par value per share. The Board of Directors will be authorized, subject to any limitations prescribed by Massachusetts law, to issue shares of Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each such series, to establish or alter the voting powers, designations, preferences and relative, participating, optional or other rights, or the qualifications, limitations or restrictions thereof, and to increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares of such series then outstanding) the number of shares of any such series without any further vote or action by the stockholders. The Board of Directors will be authorized to issue Preferred Stock with voting, conversion and other rights and preferences that could adversely affect the voting power or other rights of the holders of Common Stock. Although the Company has no current plans to issue any such shares, the issuance of Preferred Stock or of rights to purchase Preferred Stock could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, a majority of the outstanding voting stock of the Company. See "Risk Factors -- Effect of Certain Charter and By-Law Provisions and Anti-Takeover Provisions; Possible Issuances of Preferred Stock."



MASSACHUSETTS LAW AND CERTAIN PROVISIONS OF THE COMPANY'S ARTICLES OF ORGANIZATION AND BY-LAWS

Certain Anti-takeover Provisions. After the closing of this offering, the Company will be subject to the provisions of Chapter 110F of the Massachusetts General Laws, an anti-takeover law. In general, this statute prohibits a Massachusetts corporation with more than 200 stockholders of record from engaging in a "business combination" with "interested stockholders" for a period of three years after the date of the transaction in which the person becomes an interested stockholder, unless (i) prior to such date, the board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder, (ii) the interested stockholder acquires 90% of the outstanding voting stock of the corporation (excluding shares held by certain affiliates of the corporation) at the time the stockholder becomes an interested stockholder or (iii) the business combination is approved by both the board of directors and holders of two-thirds of the outstanding voting stock of the corporation (excluding shares held by the interested stockholder). A "business combination" includes a merger, consolidation, certain stock or asset sales, and certain other specified transactions involving the corporation or any direct or indirect majority-owned subsidiary of the corporation resulting in a financial benefit to the interested stockholder. Generally, an "interested stockholder" is (i) a person who, alone or together with affiliates and associates, owns five percent or more of the corporation's voting stock, (ii) an affiliate or associate of the corporation who at any time within the three year period preceding the date of the transaction owned five percent or more of the corporation's voting stock, or (iii) the affiliates and associates of any such affiliate or associate of the corporation. A person is not an "interested stockholder" if its ownership of shares in excess of the five percent limitation is the result of action taken solely by the Company, provided, however, that such a person will become an "interested stockholder" if the person thereafter acquires additional shares of voting stock, except as a result of further corporate action not caused, directly or indirectly, by such person. The Company may at any time elect not to be governed by Chapter 110F by amending its Articles of Organization and By-Laws by a vote of a majority of the stockholders entitled to vote, but such an amendment would not be effective for 12 months and would not apply to a business combination with any person who became an interested stockholder prior to the adoption of the amendment.

In addition, Massachusetts General Laws Chapter 110D, entitled "Regulation of Control Share Acquisitions," provides, in general, that any stockholder of a Massachusetts corporation with more than 200 stockholders of record who acquires voting stock of such corporation in a "control share acquisition" may not vote the shares so acquired (or shares acquired within 90 days before or after the "control share acquisition") unless a majority of the other stockholders of such corporation entitled to vote so authorize. In general, a "control share acquisition" includes the acquisition by any person of beneficial ownership of shares which, when added to all other shares of such corporation beneficially owned by such person, would entitle such person to vote (i) between 20% and 33 1/3%, (ii) between 33 1/3% and 50% or (iii) more than 50% of the outstanding voting stock of such corporation. A "control share acquisition" generally does not include, among other transactions, the acquisition of shares directly from the issuing corporation. On or before the closing of this offering, the Company intends to amend its By-Laws to opt out of the provisions of Chapter 110D.

Massachusetts General Laws Chapter 156B, Section 50A, requires that publicly held Massachusetts corporations that have not "opted out" of Section 50A have a classified board of directors consisting of three classes as nearly equal in size as possible. Section 50A also provides that directors who are so classified shall be subject to removal by the stockholders only for cause. The Company's Articles of Organization reflect the requirements of Section 50A.

On or before the closing of this offering, the Company's Articles of Organization will authorize the issuance of 1,000,000 shares of undesignated Preferred Stock, the terms of which may be fixed from time to time by the Board of Directors, without further stockholder approval.

The Company's By-Laws provide that, after the Company has a class of voting stock registered under the Exchange Act, a special meeting of stockholders may be called by the President, the Board of Directors or by the holders of 35% or more of the outstanding voting stock of the Company. Certain other provisions of the Company's By-Laws, its Articles of Organization and Massachusetts law may also make more difficult or discourage a proxy contest or the acquisition of control by a holder of a substantial block of the Company's Common Stock or the removal of the incumbent Board of Directors and could also have the effect of discouraging a third party from making a tender offer or otherwise attempting to obtain control of the Company, even though such an attempt might be beneficial to the Company and its stockholders. In addition, because such provisions also have the effect of discouraging accumulations of large blocks of Common Stock by purchasers whose objective is to have such Common Stock repurchased by the Company at a premium, such provisions could tend to reduce the temporary fluctuations in the market price of the Company's Common Stock that are caused by such accumulations. Accordingly, stockholders could be deprived of certain opportunities to sell their Common Stock at a temporarily higher market price.

Reference is made to the full text of the foregoing statutes, the Company's Articles of Organization and its By-Laws for their entire terms. The partial summary contained in this Prospectus is not intended to be complete. See "Risk Factors -- Effect of Certain Charter and By-Law Provisions and Anti-Takeover Provisions; Possible Issuances of Preferred Stock."

Elimination of Monetary Liability for Officers and Directors. The Company's Articles of Organization also incorporate certain provisions permitted under the Massachusetts General Laws relating to the liability of directors. The provisions eliminate to the maximum extent permitted by Chapter 156B of the Massachusetts General Laws a director's personal liability to the Company for monetary damages arising out of a breach of the director's fiduciary duty as a director of the Company, except in circumstances involving certain wrongful acts, such as the breach of a director's duty of loyalty or acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law or authorization of distributions in violation of the Articles of Organization or in violation of Chapter 156B or of loans to officers or directors of the Company or any transaction from which the director derived an improper personal benefit. These provisions do not prevent recourse against directors through equitable remedies such as injunctive relief.

Indemnification of Officers and Directors. The Company's By-Laws contain provisions to indemnify each of the directors and officers of the Company (as well as the former directors and officers) to the fullest extent permitted by Massachusetts law against any and all claims and liabilities to which he may be or become subject by reason of his being or having been an officer or director of the Company, or by reason of his alleged acts or omissions as an officer or director of the Company, except in relation to such matters as to which such officer or director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office. The By-Laws further provide that the Company shall indemnify and reimburse each such officer and director against and for any and all legal and other expenses reasonably incurred by him in connection with any such claims and liabilities, actual or threatened, whether or not, at or prior to the time when so indemnified, held harmless and reimbursed, he had ceased being an officer or director of the Company, except in relation to such matters as to which such officer or director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office; provided that the Company prior to such final adjudication may compromise and settle any such claims and liabilities and pay such expenses, if such settlement or payment or both appears, in the judgment of a majority of the Board of Directors, to be for the best interest of the Company, evidenced by a resolution to that effect after receipt by the Company of a written opinion of counsel for the Company that such officer or director has not been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office in connection with the matters involved in such compromise, settlement and payment.

The Company has entered into separate indemnification agreements with each current director and a former director of the Company. Pursuant to these agreements, the Company has agreed to

indemnify each director to the fullest extent permitted by law from claims to which he may become subject by reason of his service or actions as a director or officer of the Company, except as to matters as to which he shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office. The agreements also contain provisions regarding reimbursement of expenses incurred in connection with such claims.

These agreements and the indemnification provisions of the Company's By-Laws may have the practical effect in certain cases of eliminating the ability of stockholders to collect monetary damages from directors. The Company believes that these indemnification provisions will assist the Company in attracting and retaining qualified individuals to serve as directors or officers. At present, the Company is not aware of any pending or threatened litigation or proceeding involving any director, officer or person serving at the request of the Company in any capacity that might result in a claim for such indemnification.

#### TRANSFER AGENT AND REGISTRAR

The Transfer Agent and Registrar for the Company's Common Stock is State Street Bank and Trust Company.

#### SHARES ELIGIBLE FOR FUTURE SALE

Upon the closing of this offering, the Company will have 18,382,397 shares of Common Stock outstanding, assuming no exercise of the Underwriters' over-allotment option or of options outstanding as of June 1, 1996. Of these shares, the 3,400,000 shares sold in this offering will be freely tradable without restriction or further registration under the Act, except that any shares purchased by "affiliates" of the Company, as that term is defined in Rule 144 under the Securities Act ("Affiliates"), may generally only be sold in compliance with the limitations of Rule 144 described below.

#### SALES OF RESTRICTED SECURITIES

The remaining 14,982,397 shares of Common Shares outstanding upon the closing of this offering are deemed "Restricted Securities" under Rule 144, of which 13,647,310 shares are subject to the lock-up agreements described below (the "Lock-up Agreements"). On the effective date of the Registration Statement of which this Prospectus forms a part (the "Effective Date"), 360,158 shares of Common Stock will be eligible for immediate sale under Rule 144(k) promulgated under the Securities Act. Beginning 90 days after the Effective Date, an additional 969,609 Restricted Securities will first become eligible for sale in the public market pursuant to Rule 144 or Rule 701 under the Securities Act. Beginning 180 days after the Effective Date, 13,538,968 shares will first become eligible for sale in the public market.

In general, under Rule 144 as currently in effect, beginning 90 days after the date of this Prospectus, a person (or persons whose shares are aggregated), including an Affiliate, who has beneficially owned Restricted Securities for at least two years, is entitled to sell within any three month period a number of shares that does not exceed the greater of (i) one percent of the then outstanding shares of Common Stock (approximately 183,824 shares immediately after this offering) or (ii) the average weekly trading volume of the Common Stock on the Nasdaq National Market during the four calendar weeks preceding the date on which notice of the sale is filed under Rule 144, provided certain requirements concerning availability of public information, manner of sale and notice of sale are satisfied. In addition, Affiliates must comply with the restrictions and requirements of Rule 144, other than the two-year holding period requirement, in order to sell shares of Common Stock which are not Restricted Securities. Under Rule 144(k), a person who is not an Affiliate and has not been an Affiliate for at least three months prior to the sale and who has beneficially owned Restricted Securities for at least three years may resell such shares without compliance with the foregoing requirements. In meeting the two-year and three-year holding periods described above, a holder of Restricted Securities may under certain circumstances include the holding period of a prior owner.

The two-year and three-year periods described above do not begin until the full purchase price or other consideration is paid by the person acquiring the Restricted Securities from the Company or an Affiliate.

The Securities and Exchange Commission has proposed certain amendments to Rule 144 that would reduce by one year the holding period for shares subject to Rule 144 to become eligible for sale in the public market. This proposal, if adopted, would substantially increase the number of shares of Common Stock eligible for immediate resale following the expiration of the Lock-up Agreements. No assurance can be given concerning whether or when the proposal will be adopted by the Securities and Exchange Commission.

#### OPTIONS

As of June 1, 1996, there were outstanding options to purchase 3,107,158 shares of Common Stock. The holders of outstanding options to purchase 2,346,658 shares of Common Stock have entered into Lock-up Agreements, the terms of which are described below.

Any director, officer or employee of or consultant to the Company who has been granted options to purchase shares or who has purchased shares pursuant to a written compensatory benefit plan or written contract relating to the compensation of such person prior to the Effective Date pursuant to Rule 701 may be entitled to rely on the resale provisions of Rule 701, which permit non-Affiliates to sell their Rule 701 shares under Rule 144 without having to comply with the public information, holding period, volume limitation or notice provisions of Rule 144 and permits Affiliates to sell their Rule 701 shares under Rule 144 without having to comply with the Rule 144 holding period restrictions, in each case commencing 90 days after the Effective Date.

The Company intends to file, approximately 90 days after the Effective Date, registration statements on Form S-8 under the Securities Act to register approximately 5,774,715 shares of Common Stock issued pursuant to the exercise of options granted under the Company's stock option plans (including certain shares for which an exemption under Rule 144 or Rule 701 would also be available) or issuable upon the exercise of outstanding stock options and options that may be granted pursuant to the Company's stock option plans and 100,000 shares issuable pursuant to the Company's employee stock purchase plan. The Company has agreed with the Underwriters that it will not file any registration statements on Form S-8 until 90 days after the Effective Date. Shares covered by such registration statements will thereupon be eligible for sale in the public market to the extent applicable.

#### LOCK-UP AGREEMENTS

All directors and executive officers of the Company and certain stockholders of the Company, which in the aggregate hold 13,647,310 shares of Common Stock and options to purchase 2,346,658 shares of Common Stock, have agreed, pursuant to the Lock-up Agreements, that they will not, directly or indirectly, without the prior written consent of Robertson, Stephens & Company LLC, sell, offer, contract to sell, pledge, grant any option to purchase or otherwise dispose of any of shares of Common Stock or any securities convertible into or exchangeable for, or any rights to purchase or acquire, shares of Common Stock beneficially owned by them for a period of 180 days from the Effective Date, otherwise than (a) as a bona fide gift or gifts or (b) as a distribution to such person's limited partners or shareholders, provided that any such transferee agrees to be bound by the Lock-up Agreement. Robertson, Stephens & Company LLC, in its discretion, may waive the foregoing restrictions in whole or in part, with or without a public announcement of such action.

Prior to this offering, there has been no public market for the Common Stock of the Company. Future sales of substantial amounts of Common Stock in the public market could adversely affect the market price of the Common Stock. See "Risk Factors -- Shares Eligible for Future Sale."

## UNDERWRITING

The Underwriters named below, acting through their representatives, Robertson, Stephens & Company LLC and Furman Selz LLC (the "Representatives"), have severally agreed with the Company, subject to the terms and conditions of the Underwriting Agreement, to purchase from the Company the numbers of shares of Common Stock set forth opposite their respective names below. The Underwriters are committed to purchase and pay for all of such shares if any are purchased.

UNDERWRITER -----	NUMBER OF SHARES -----
Robertson, Stephens & Company LLC.....	
Furman Selz LLC.....	
 Total.....	 ----- 3,400,000 =====

The Representatives have advised the Company that the Underwriters propose to offer the shares of Common Stock to the public at the initial public offering price set forth on the cover page of this Prospectus and to certain dealers at such price less a concession of not in excess of \$                      per share, of which \$                      may be reallocated to other dealers. After the initial public offering, the public offering price, concession and reallocation to dealers may be reduced by the Representatives. No such reduction shall change the amount of proceeds to be received by the Company as set forth on the cover page of this Prospectus.

The Company has granted to the Underwriters an option, exercisable during the 30-day period after the date of this Prospectus, to purchase up to 510,000 additional shares of Common Stock, at the same price per share as the Company will receive for the 3,400,000 shares that the Underwriters have agreed to purchase. To the extent that the Underwriters exercise such option, each of the Underwriters will have a firm commitment to purchase approximately the same percentage of such additional shares that the number of shares of Common Stock to be purchased by it shown in the above table represents as a percentage of the 3,400,000 shares offered hereby. If purchased, such additional shares will be sold by the Underwriters on the same terms as those on which the 3,400,000 shares are being sold.

The Underwriting Agreement contains covenants of indemnity between the Underwriters and the Company against certain civil liabilities, including liabilities under the Securities Act.

Pursuant to the terms of lock-up agreements, all executive officers and directors and certain other securityholders of the Company have agreed that, for a period of 180 days from the Effective Date, they will not, directly or indirectly, sell, offer, contract to sell, pledge, grant any option to purchase or otherwise dispose of any shares of Common Stock or any securities convertible into or exchangeable for, or any rights to purchase or acquire, shares of Common Stock beneficially owned by them, without the prior written consent of Robertson, Stephens & Company LLC, which may, in its sole discretion and at any time without notice, release all or any portion of the securities subject to lock-up agreements. See "Shares Eligible for Future Sale." The Company has also agreed not to offer, sell, contract to sell or otherwise dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or any options or warrants to purchase Common Stock other than options issued under the Company's Option Plans and Stock Purchase Plan for a period of 180 days from the Effective Date, except with the prior written consent of Robertson, Stephens & Company LLC.

The Underwriters will not make sales to accounts over which they exercise discretionary authority (i) in excess of 5% of the number of shares of Common Stock offered hereby and (ii) unless they obtain specific written consent from the customer.

Robert J. Nowlin, a stockholder of the Company, is a Managing Director of Robertson, Stephens & Company LLC, one of the Representatives of the Underwriters. Robertson, Stephens & Company LLC is a subsidiary of Robertson, Stephens & Company Group, L.L.C., which is the managing member of both Robertson, Stephens & Company LLC and Robertson, Stephens & Company Private Equity Group, L.L.C. Robertson, Stephens & Company Private Equity Group, L.L.C. is the sole general partner of Bayview Investors, Ltd., another stockholder of the Company. Mr. Nowlin and Bayview Investors, Ltd. own 192,199 and 342,400 shares of Common Stock of the Company, respectively.

Prior to this offering, there has been no public market for the Common Stock of the Company. Consequently, the initial public offering price for the Common Stock will be determined through negotiations between the Company and the Representatives. Among the factors to be considered in such negotiations will be the history of, and the prospects for, the Company's business and the industry in which it competes, an assessment of the Company's management, its past and present operations, the prospects for earnings of the Company, the present state of the Company's development, the general condition of the securities market at the time of the offering, the market prices and earnings of similar securities of comparable companies at the time of the offering, the current state of the economy as a whole and other factors deemed relevant.

## LEGAL MATTERS

The validity of the Common Stock offered hereby will be passed upon for the Company by Foley, Hoag & Eliot LLP, Boston, Massachusetts. The statements in this Prospectus under the captions "Risk Factors -- Proprietary Technology; Risk of Third-Party Claims of Infringement" and "Business -- Intellectual Property" and other references herein to patent matters have been reviewed and will be passed upon by Cesari and McKenna, Boston, Massachusetts, special patent counsel to the Company. Certain legal matters in connection with this offering will be passed upon for the Underwriters by Testa, Hurwitz & Thibault, LLP, Boston, Massachusetts.

## EXPERTS

The balance sheets as of December 31, 1994 and 1995 and the statements of operations, stockholders' equity and cash flows for the years ended December 31, 1994 and December 31, 1995, included in this Prospectus, have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report appearing herein and are included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing. The statements of operations, stockholders' equity and cash flows for the year ended December 31, 1993, included in this Prospectus, have been so included in reliance on the report of Price Waterhouse LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

## CHANGES IN INDEPENDENT ACCOUNTANTS

In 1996, the Company's Board of Directors authorized the Company to retain Deloitte & Touche LLP as its independent accountants and replaced DiBenedetto & Company, P.A. The financial statements for December 31, 1994 and 1995 were audited by Deloitte & Touche LLP. DiBenedetto & Company, P.A. had been retained to audit the Company's financial statements as of and for the year ended December 31, 1994. The report of DiBenedetto & Company, P.A. for the year ended December 31, 1994, which is not included herein, contained no adverse opinion or disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope or application of accounting principles. During the year ended December 31, 1994 and through the date of replacement, there were no disagreements with DiBenedetto & Company, P.A. on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure or "reportable events" as described in Item 304 of Regulation S-K.

Price Waterhouse LLP was retained to audit the Company's financial statements for the year ended December 31, 1993. On January 10, 1995, the Company replaced Price Waterhouse LLP with DiBenedetto & Company, P.A. The report of Price Waterhouse LLP for the year ended December 31, 1993, which is included herein, contained no adverse opinion or disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope or application of accounting principles. During the year ended December 31, 1993 and through the date of replacement, there were no disagreements with Price Waterhouse LLP on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure or "reportable events" as described in Item 304 of Regulation S-K.

## ADDITIONAL INFORMATION

The Company has filed with the Securities and Exchange Commission, Washington, D.C. 20549 a Registration Statement on Form S-1 under the Securities Act with respect to the Common Stock offered hereby. This Prospectus does not contain all of the information set forth in the Registration Statement and the exhibits and schedules to the Registration Statement. For further information with respect to the Company and the Common Stock offered hereby, reference is made to the Registration Statement and the exhibits and schedules filed as a part of the Registration Statement. Statements contained in this Prospectus concerning the contents of any contract or any other document referred to are not necessarily complete; reference is made in each instance to the copy of such contract or document filed as an exhibit to the Registration Statement. Each such statement is qualified in all

respects by such reference to such exhibit. The Registration Statement, including the exhibits and schedules thereto, may be inspected and copied at the public reference facilities maintained by the Securities and Exchange Commission at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549 and at the Regional Offices of the Securities and Exchange Commission at Suite 1400, 500 West Madison Street, Chicago, Illinois 60661 and 7 World Trade Center, Thirteenth Floor, New York, New York 10048. Copies also may be obtained from the Public Reference Section of the Commission at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington D.C. 20549, at prescribed rates.



## AWARE, INC.

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## INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Stockholders  
Aware, Inc.:

We have audited the accompanying balance sheets of Aware, Inc. as of December 31, 1995 and 1994 and the related statements of operations, changes in stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the financial position of Aware, Inc. as of December 31, 1995 and 1994, and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

/s/ Deloitte & Touche LLP

Boston, Massachusetts

April 26, 1996

(June 6, 1996 as to Note 9)

## REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and  
Stockholders of Aware, Inc.

In our opinion, the accompanying statements of operations, of stockholders' equity and of cash flows for the year ended December 31, 1993 present fairly, in all material respects, the results of operations and cash flows of Aware, Inc. for the year ended December 31, 1993, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for the opinion expressed above. We have not audited the financial statements of Aware, Inc. for any period subsequent to December 31, 1993.

/s/ PRICE WATERHOUSE LLP  
Price Waterhouse LLP

Boston, Massachusetts  
February 1, 1994

## AWARE, INC.

## BALANCE SHEETS

ASSETS	DECEMBER 31,		MARCH 31, 1996 (UNAUDITED)	PRO FORMA MARCH 31, 1996 (UNAUDITED)
	1994	1995		
CURRENT ASSETS:				
Cash and cash equivalents.....	\$ 2,566,128	\$ 2,153,681	\$ 2,047,038	\$ 2,047,038
Accounts receivable (less allowance for doubtful accounts of \$0, \$5,300 and \$10,300 in 1994, 1995 and 1996, respectively).....	594,996	500,828	803,067	803,067
Unbilled accounts receivable.....	304,101	116,261	40,521	40,521
Inventories.....	21,669	39,713	96,751	96,751
Prepaid expenses.....	73,542	14,471	11,259	11,259
Total current assets.....	3,560,436	2,824,954	2,998,636	2,998,636
PROPERTY AND EQUIPMENT -- Net.....	369,975	403,405	352,049	352,049
TOTAL ASSETS.....	\$ 3,930,411	\$ 3,228,359	\$ 3,350,685	\$ 3,350,685
LIABILITIES AND STOCKHOLDERS' EQUITY				
CURRENT LIABILITIES:				
Accounts payable.....	\$ 96,762	\$ 111,519	\$ 102,877	\$ 102,877
Accrued expenses.....	84,667	65,404	83,972	83,972
Accrued compensation.....	199,901	67,887	113,209	113,209
Accrued professional fees.....	19,894	14,000	31,594	31,594
Accrued rent.....	192,979	--	--	--
Deferred revenue.....	89,720	50,000	50,000	50,000
Total current liabilities.....	683,923	308,810	381,652	381,652
COMMITMENTS AND CONTINGENCIES (Note 5)				
STOCKHOLDERS' EQUITY:				
Preferred stock, \$1.00 par value; no shares authorized; 1,000,000 shares authorized and no shares outstanding pro forma.....	--	--	--	--
Preferred stock, \$1.00 par value:				
Series B convertible preferred stock, 15,875 shares authorized, issued, and outstanding in 1994, 1995 and 1996 (none outstanding pro forma in 1996); liquidation preference of \$1,587,500.....	15,875	15,875	15,875	--
Series C convertible preferred stock, 13,525 shares authorized, issued, and outstanding in 1994, 1995 and 1996 (none outstanding pro forma in 1996); liquidation preference of \$1,352,500.....	13,525	13,525	13,525	--
Series D convertible preferred stock, 74,800 shares authorized, 73,266 issued in 1994, 69,166 in 1995 and 1996 (none outstanding pro forma in 1996); liquidation preference of \$6,916,600.....	73,266	69,166	69,166	--
Series E convertible preferred stock, 45,000 shares authorized, 29,432 shares issued and outstanding in 1994, 1995 and 1996 (none outstanding pro forma in 1996); liquidation preference of \$3,826,160.....	29,432	29,432	29,432	--
Common stock, \$.01 par value; 30,000,000 shares authorized; issued and outstanding, 1,150,093, 1,166,960 and 1,173,370 in 1994, 1995 and 1996, respectively (13,973,145 shares pro forma in 1996).....	11,501	11,670	11,734	139,732
Additional paid-in capital.....	13,792,091	13,807,945	13,816,214	13,816,214
Accumulated deficit.....	(10,232,140)	(10,575,102)	(10,533,951)	(10,533,951)
Notes receivable for issued stock.....	3,703,550	3,372,511	3,421,995	3,421,995
Treasury stock at cost.....	(457,062)	--	--	--
	--	(452,962)	(452,962)	(452,962)
Total stockholders' equity.....	3,246,488	2,919,549	2,969,033	2,969,033
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY.....	\$ 3,930,411	\$ 3,228,359	\$ 3,350,685	\$ 3,350,685

See notes to financial statements.

See notes to financial statements.

## AWARE, INC

## STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

	CONVERTIBLE PREFERRED STOCK				COMMON STOCK	ADDITIONAL PAID-IN CAPITAL
	SERIES B	SERIES C	SERIES D	SERIES E		
BALANCE AT JANUARY 1, 1993.....	\$15,875	\$13,525	\$73,266	\$ --	\$11,376	\$10,020,302
Exercise of common stock options, 2,500 shares.....	--	--	--	--	25	2,350
Accrued interest on notes receivable for stock issuances.....	--	--	--	--	--	--
Net loss.....	--	--	--	--	--	--
BALANCE AT DECEMBER 31, 1993.....	15,875	13,525	73,266	--	11,401	10,022,652
Sale of 29,432 shares of Series E convertible preferred stock, net of issuance costs of \$36,689.....	--	--	--	29,432	--	3,760,039
Exercise of common stock options, 10,000 shares.....	--	--	--	--	100	9,400
Accrued interest on notes receivable for stock issuances.....	--	--	--	--	--	--
Net loss.....	--	--	--	--	--	--
BALANCE AT DECEMBER 31, 1994.....	15,875	13,525	73,266	29,432	11,501	13,792,091
Exercise of common stock options, 16,867 shares.....	--	--	--	--	169	15,854
Repurchase of Series D preferred stock, 4,100 shares.....	--	--	(4,100 )	--	--	--
Net loss.....	--	--	--	--	--	--
BALANCE AT DECEMBER 31, 1995.....	15,875	13,525	69,166	29,432	11,670	13,807,945
Issuance of common stock (Unaudited).....	--	--	--	--	64	8,269
Net income (Unaudited).....	--	--	--	--	--	--
BALANCE AT MARCH 31, 1996 (Unaudited).....	15,875	13,525	69,166	29,432	11,734	13,816,214
Pro forma adjustments (Unaudited).....	(15,875 )	(13,525 )	(69,166 )	(29,432 )	127,998	--
PRO FORMA BALANCE AT MARCH 31, 1996 (Unaudited).....	\$ -- =====	\$ -- =====	\$ -- =====	\$ -- =====	\$139,732 =====	\$13,816,214 =====
	ACCUMULATED	NOTES RECEIVABLE FOR	TREASURY	TOTAL STOCKHOLDERS'		
	DEFICIT	ISSUED STOCK	STOCK	EQUITY		
<						
BALANCE AT JANUARY 1, 1993.....	\$(8,227,624 )	\$ (410,000)	\$ --	\$ 1,496,720		
Exercise of common stock options, 2,500 shares.....	--	--	--	2,375		
Accrued interest on notes receivable for stock issuances.....	--	(21,649)	--	(21,649 )		
Net loss.....	(992,167 )	--	--	(992,167 )		
BALANCE AT DECEMBER 31, 1993.....	(9,219,791 )	(431,649)	--	485,279		
Sale of 29,432 shares of Series E convertible preferred stock, net of issuance costs of \$36,689.....	--	--	--	3,789,471		
Exercise of common stock options, 10,000 shares.....	--	--	--	9,500		
Accrued interest on notes receivable for stock issuances.....	--	(25,413)	--	(25,413 )		
Net loss.....	(1,012,349 )	--	--	(1,012,349 )		
BALANCE AT DECEMBER 31, 1994.....	(10,232,140 )	(457,062)	--	3,246,488		
Exercise of common stock options, 16,867 shares.....	--	--	--	16,023		
Repurchase of Series D preferred stock, 4,100 shares.....	--	457,062	(452,962 )	--		
Net loss.....	(342,962 )	--	--	(342,962 )		
BALANCE AT DECEMBER 31, 1995.....	(10,575,102 )	--	(452,962 )	2,919,549		
Issuance of common stock (Unaudited).....	--	--	--	8,333		
Net income (Unaudited).....	41,151	--	--	41,151		
BALANCE AT MARCH 31, 1996 (Unaudited).....	(10,533,951 )	--	(452,962 )	2,969,033		
Pro forma adjustments (Unaudited).....	--	--	--	--		
PRO FORMA BALANCE AT MARCH 31, 1996 (Unaudited).....	\$(10,533,951) =====	\$ -- =====	\$(452,962) =====	\$ 2,969,033 =====		

See notes to financial statements.

## AWARE, INC.

## STATEMENTS OF CASH FLOWS

	YEAR ENDED DECEMBER 31,			THREE MONTHS ENDED MARCH 31,	
	1993	1994	1995	1995	1996
				(UNAUDITED)	
CASH FLOWS FROM OPERATING ACTIVITIES:					
Net income (loss).....	\$(992,167)	\$(1,012,349)	\$ (342,962)	\$ (87,213)	\$ 41,151
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:					
Depreciation and amortization.....	263,614	206,140	200,701	60,000	57,457
Increase (decrease) in cash from:					
Short-term investments.....	201,642	--	--	--	--
Accounts receivable.....	(135,047)	(326,756)	94,168	282,773	(302,239)
Unbilled accounts receivable.....	19,493	(55,603)	187,840	131,730	75,740
Inventories.....	(46,740)	25,071	(18,044)	(259)	(57,038)
Prepaid expenses.....	53,934	(49,385)	59,071	29,221	3,212
Accounts payable.....	40,256	(115,045)	14,757	(31,790)	(8,642)
Accrued expenses.....	(24,339)	314,595	(350,150)	(137,195)	81,484
Deferred revenue.....	98,128	(8,408)	(39,720)	(39,720)	--
Notes receivable from officers.....	(21,649)	--	--	--	--
Net cash provided by (used in) operating activities.....	(542,875)	(1,021,740)	(194,339)	207,547	(108,875)
CASH FLOWS FROM INVESTING ACTIVITIES -- Purchases of property and equipment.....					
	(85,158)	(371,658)	(234,131)	(12,271)	(6,101)
CASH FLOWS FROM FINANCING ACTIVITIES:					
Proceeds from stockholders' loans.....	--	150,000	--	--	--
Repayment of stockholders' loans.....	--	(150,000)	--	--	--
Proceeds from issuance of preferred stock, net of issuance costs.....	--	3,764,058	--	--	--
Proceeds from issuance of common stock.....	2,375	9,500	16,023	95	8,333
Repayment of capital lease obligations.....	(1,339)	--	--	--	--
Net cash provided by financing activities.....	1,036	3,773,558	16,023	95	8,333
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS....	(626,997)	2,380,160	(412,447)	195,371	(106,643)
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD.....	812,965	185,968	2,566,128	2,566,128	2,153,681
CASH AND CASH EQUIVALENTS, END OF PERIOD.....	\$ 185,968	\$ 2,566,128	\$2,153,681	\$2,761,499	\$2,047,038
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION -- Cash paid for interest.....					
	\$ 127	\$ 4,359	\$ 877	\$ --	\$ --
SUPPLEMENTAL NONCASH DISCLOSURES:					
Increase in notes receivable for accrued interest.....	\$ --	\$ 25,413	\$ --	\$ --	\$ --
Repurchase of Series D preferred shares for cancelation of notes.....	\$ --	\$ --	\$ 457,062	\$ --	\$ --

See notes to financial statements.

## AWARE, INC.

NOTES TO FINANCIAL STATEMENTS  
(INFORMATION PERTAINING TO THE PERIODS ENDED  
MARCH 31, 1996 AND MARCH 31, 1995 IS UNAUDITED)

## 1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Aware, Inc. (the "Company") designs, develops and markets telecommunications software, chipsets and modems which incorporate ADSL technology and increase the speed of data communications over conventional copper telephone lines. The Company's products and services are designed to allow telephone companies to utilize their installed bases of dedicated copper lines to provide both residential and business customers with interactive data transmission at speeds much higher than currently available. The Company also offers video compression products. The Company was in the development stage at December 31, 1994; during the year ended December 31, 1995 the Company completed its development activities and commenced its planned principal operations.

The Company is dependent on Analog Devices, Inc. ("ADI") for the manufacture and sale of chipsets based on the Company's broadband technology. The relationship between ADI and the Company is an exclusive arrangement, under which neither party may enter into competing agreements with third parties.

Use of Estimates -- The preparation of the Company's financial statements in conformity with generally accepted accounting principles necessarily requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the balance sheet date. Estimates include reserves for doubtful accounts, useful lives of fixed assets and accrued liabilities. Actual results may differ from these estimates.

Fair Value of Financial Instruments -- Statement of Financial Accounting Standards ("SFAS") No. 107, "Disclosures About Fair Value of Financial Instruments," requires disclosure of the fair value of certain financial instruments. The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value because of their short-term nature.

Cash and Cash Equivalents -- Cash equivalents consist primarily of overnight repurchase agreements and money market investments purchased with remaining maturities of three months or less.

Allowance for Doubtful Accounts -- Accounts are charged to bad debt expense as they are deemed uncollectible based on a review of the accounts at each balance sheet date. Bad debt expense was \$0, \$5,300 and \$5,000 for 1994, 1995 and the three months ended March 31, 1996, respectively.

Inventories -- Inventories are stated at the lower of cost or market with cost being determined by the first-in, first-out ("FIFO") method.

Property and Equipment -- Property and equipment are stated at cost. Depreciation and amortization of property and equipment is provided using the straight-line method over the estimated useful lives of the assets (3 to 5 years).

Revenue Recognition -- Product revenue is recognized upon shipment. Also included in product revenue is sales of product licenses that are recognized when a definitive agreement is reached and no contingent factors are present and royalty revenue which is recognized based upon billing schedules when no right of return exists.

Research and development revenue is comprised of revenue from government and commercial research and development contracts. Revenue on government contracts is generally recognized when services are performed. Certain long-term contracts are accounted for using the percentage-of-completion method, whereby revenue and profit are recognized throughout the performance period of the contract based on the ratio that incurred costs bear to estimated total costs to complete. Losses, if



## AWARE, INC.

NOTES TO FINANCIAL STATEMENTS  
(INFORMATION PERTAINING TO THE PERIODS ENDED  
MARCH 31, 1996 AND MARCH 31, 1995 IS UNAUDITED) -- (CONTINUED)

any, on contracts are provided for in the period in which the losses are first identified. Revenue on commercial contracts is generally recognized as research is performed under the terms of the respective agreements.

Unbilled accounts receivable are stated at estimated realizable value. These amounts will be billable to customers based on the terms of contracts which include achievement of milestones or completion of the contract.

Deferred revenue consists of customer prepayments which will be recorded as revenue as earned.

Income Taxes -- The Company accounts for income taxes under SFAS No. 109, "Accounting for Income Taxes." This Statement requires the Company to compute deferred income taxes based on the differences between the financial statement and tax basis of assets and liabilities using enacted rates in effect in the years in which the differences are expected to reverse.

Capitalization of Software Costs -- The Company capitalizes certain internally generated software development costs after technological feasibility of the product has been established. Capitalized software costs also include amounts paid for purchased software which has reached technological feasibility. Such costs are amortized, on a product-by-product basis, on a straight-line basis over their useful economic lives (generally two to four years), or the ratio of current gross revenue to total gross current and future revenue, whichever is greater. There were no capitalized software costs at December 31, 1994 and 1995 or March 31, 1996.

Concentration of Risk -- At December 31, 1994 and 1995, the Company had bank cash balances, including money market investments, in excess of federally insured deposit limits of approximately \$2,582,000 and \$2,079,000, respectively.

Concentration of credit risk with respect to accounts receivable is limited to \$250,000 with one customer at December 31, 1995 and \$177,000, \$125,000 and \$112,000 with three customers at December 31, 1994.

Recently Issued Accounting Standards -- The Financial Accounting Standards Board ("FASB") has issued SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of." The Company adopted this standard on January 1, 1996. This Statement establishes accounting standards for the impairment of long-lived assets, certain identifiable intangibles, and goodwill related to those assets to be held and used and for long-lived assets and certain identifiable intangibles to be disposed of. Adoption did not have a material effect on the Company's financial position or results of operations.

Recently Issued Accounting Standards (Continued) -- In November 1995, the FASB issued SFAS No. 123, "Accounting for Stock-Based Compensation." The Company adopted this standard on January 1, 1996. As permitted by SFAS No. 123, the Company intends to continue to apply Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and will make the pro forma disclosures required by SFAS No. 123. Adoption did not have a material effect on the Company's financial position or results of operations.

Pro Forma Income Per Common Share -- Pro forma net income (loss) per common share is based on the weighted average number of common and dilutive common equivalent shares (common stock options and convertible preferred stock) outstanding (see Note 4). Common equivalent shares are not included in the per share calculations where the effect of their inclusion would be antidilutive, except in accordance with Securities and Exchange Commission Staff Accounting Bulletin No. 83. The Bulletin requires all common shares issued and options to purchase shares of common stock granted by

## AWARE, INC.

NOTES TO FINANCIAL STATEMENTS  
(INFORMATION PERTAINING TO THE PERIODS ENDED  
MARCH 31, 1996 AND MARCH 31, 1995 IS UNAUDITED) -- (CONTINUED)

the Company during the twelve-month period prior to the filing of a proposed initial public offering be included in the calculation as if they were outstanding for all periods.

Pro Forma Balance Sheet Information -- The unaudited pro forma balance sheet information is adjusted to give effect to the conversion of all outstanding convertible preferred stock (see Note 4) that would happen immediately prior to the effectiveness of a registration statement.

Interim Results (Unaudited) -- The accompanying balance sheet at March 31, 1996, the statement of stockholders' equity for the three months ended March 31, 1996 and the statements of operations and cash flows for the three months ended March 31, 1995 and 1996 are unaudited. In the opinion of management, these statements have been prepared on the same basis as the audited financial statements and include all adjustments, consisting only of normal recurring adjustments, necessary for the fair statement of financial data for such periods.

## 2. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following at December 31:

	DECEMBER 31,		MARCH 31,
	1994	1995	1996
Computer equipment.....	\$1,462,535	\$1,556,790	\$1,563,674
Office equipment.....	39,546	88,390	85,744
Furniture and fixtures.....	45,207	106,499	106,499
Purchased software.....	103,060	117,638	119,041
Leasehold improvements.....	105,750	14,702	14,702
Total.....	1,756,098	1,884,019	1,889,660
Less accumulated depreciation and amortization.....	(1,386,123)	(1,480,614)	(1,537,611)
Net.....	\$ 369,975	\$ 403,405	\$ 352,049

## 3. INCOME TAXES

Deferred income tax assets are attributable to the following:

	DECEMBER 31,		MARCH 31,
	1994	1995	1996
Depreciation.....	\$ 133,000	\$ 75,000	\$ 77,000
Accrued expenses.....	67,000	28,000	31,000
Deferred revenues.....	37,000	21,000	21,000
Federal net operating loss carryforwards.....	3,130,000	3,383,000	3,383,000
State net operating loss carryforwards.....	643,000	587,000	590,000
Research and development tax credit carryforwards.....	561,000	576,000	576,000
Total.....	4,571,000	4,670,000	4,678,000
Valuation allowance.....	(4,571,000)	(4,670,000)	(4,678,000)
	\$ --	\$ --	\$ --

A valuation allowance is provided against temporary deductible differences, net operating loss carryforwards and tax credits which are not likely to be realized. During 1994, 1995 and through March 31, 1996, the net valuation allowance was changed to fully reserve gross deferred tax assets.

## AWARE, INC.

NOTES TO FINANCIAL STATEMENTS  
(INFORMATION PERTAINING TO THE PERIODS ENDED  
MARCH 31, 1996 AND MARCH 31, 1995 IS UNAUDITED) -- (CONTINUED)

At December 31, 1995, the Company had available federal net operating loss carryforwards of approximately \$9,664,000 which expire in 2003 through 2010, and research and development tax credit carryforwards of approximately \$576,000 which expire in 2003 through 2010.

#### 4. STOCKHOLDERS' EQUITY

Common Stock -- In May 1994, the Company increased its authorized common stock to 18,650,000 shares from 13,650,000 shares.

Convertible Preferred Stock -- At the option of the holder at any time, or at the discretion of the Board of Directors at any time after the Company has earned a cumulative profit of at least \$5,000,000, each share of Series B, C, D, and E preferred stock shall be automatically converted into common stock. The Company has reserved 13,209,775 shares of common stock for possible conversion of preferred stock.

Each preferred stockholder is entitled to 100 votes for each share of preferred stock held.

If common stock dividends are declared, the preferred stockholders shall receive dividends at 100 times the amount paid on each common share.

The Series E preferred stockholders have liquidation preference and are entitled to receive a distribution of \$130 per share prior to any distributions to the Series B, C, and D preferred stockholders and the common stockholders. In order of preference, the Series D, C, and B preferred stockholders, as separate groups, are entitled to receive a distribution of \$100 per share prior to any distributions to the common stockholders.

In the event of a public offering, pursuant to an effective registration under the Securities Act of 1933, covering the offer and sale of common stock for the account of the Company to the public for not less than \$1.00 per share with an aggregate offering price of not less than \$7,500,000, each share of Series B, C, D and E preferred stock shall automatically be converted into shares of common stock.

Notes Receivable for Stock Issuances -- In December 1992, the Company issued 4,100 shares of Series D preferred stock to two officers of the Company in exchange for notes receivable totaling \$410,000. Interest was payable quarterly at the applicable federal rate (approximately 5.3% at December 31, 1994). At December 31, 1994, unpaid interest on the notes amounted to \$47,062. The notes were secured by the related Series D preferred stock. Upon the resignation of the two officers from the Company in March 1995, the Company accepted the Series D preferred stock in payment of the notes and unpaid interest thereon.

Stock Option Plan -- In January 1990, the Company adopted an Incentive and Nonstatutory Stock Option Plan (the "Plan"). At the discretion of the Board of Directors, options granted may be either incentive stock options or nonqualified stock options. Under the Plan, the Company may grant options to purchase up to 2,873,002 shares of common stock.

The stock options are exercisable over a period determined by the Board of Directors, not to exceed ten years from the date of grant, except for stock options granted to directors, which must be exercised within eight years from the date of grant. Unexercised incentive stock options lapse upon termination of employment. The exercise price shall be determined by the Board of Directors, except that the exercise price of any incentive stock option shall not be less than the fair market value of the shares, as determined by the Board of Directors at the date of grant (not less than 110% of such value in the case of holders of 10% or more of the total combined voting power of all classes of the Company's stock).

## AWARE, INC.

NOTES TO FINANCIAL STATEMENTS  
(INFORMATION PERTAINING TO THE PERIODS ENDED  
MARCH 31, 1996 AND MARCH 31, 1995 IS UNAUDITED) -- (CONTINUED)

In 1994, upon resolution by the Board of Directors and by agreement of the option holders, the Company canceled incentive stock options and nonqualified options previously issued at \$2.00 per share and reissued replacement options with the same terms and vesting schedule at \$1.30 per share.

A summary of activity of the Plan is as follows:

	INCENTIVE STOCK OPTIONS		NONQUALIFIED STOCK OPTIONS	
	NUMBER OF SHARES	OPTION PRICE	NUMBER OF SHARES	OPTION PRICE
Options outstanding at January 1, 1993.....	459,261	\$ .95	977,687	\$ .95
Options granted.....	169,500	\$ .95-\$2.00	--	\$ --
Options canceled.....	(70,500)	\$ .95	--	--
Options exercised.....	(2,500)	\$ .95	--	--
Options outstanding at December 31, 1993...	555,761	\$ .95-\$2.00	977,687	\$ .95
Options granted.....	418,769	\$1.30-\$2.00	719,231	\$1.30-\$2.00
Options canceled.....	(174,500)	\$ .95-\$2.00	(5,000)	\$ .95
Options exercised.....	(10,000)	\$ .95	--	--
Options outstanding at December 31, 1994...	790,030	\$ .95-\$1.30	1,691,918	\$ .95-\$2.00
Options granted.....	619,750	\$ 1.30	520,000	\$ 1.30
Options canceled.....	(491,311)	\$ .95-\$1.30	(356,020)	\$ .95-\$2.00
Options exercised.....	(200)	\$ .95	(16,667)	\$ .95
Options outstanding at December 31, 1995...	918,269	\$ .95-\$1.30	1,839,231	\$ .95-\$1.43
Options granted.....	--	--	--	--
Options canceled.....	(9,590)	\$ 1.30	--	--
Options exercised.....	(6,410)	\$ 1.30	--	--
Options outstanding at March 31, 1996.....	902,269	\$ .95-\$1.30	1,839,231	\$ .95-\$1.43
Options exercisable at March 31, 1996.....	346,474	\$ .95-\$1.30	1,336,325	\$ .95-\$1.43

At March 31, 1996, 95,197 shares of common stock were available for future grant under the Plan, and 2,836,697 shares of common stock remained reserved for the exercise of options under the Plan.

#### 5. COMMITMENTS AND CONTINGENCIES

Lease Commitments -- During December 1994, management of the Company decided to relocate its office and research facilities and initiated negotiations to terminate its lease. In March 1995, the Company completed negotiations to terminate the lease effective May 31, 1995. The Company's cost to terminate the lease of approximately \$180,000 was included in rent expense in 1994.

The Company entered into a new three-year noncancelable operating lease for its office and research facilities commencing June 1, 1995. The new lease provides that the Company pay a base monthly rental of \$10,500 plus, as additional rent, a proportionate annual share of the building common expenses and real estate taxes in excess of a specified amount.

Rental expense approximated \$312,000, \$494,000 and \$283,000 in 1993, 1994 and 1995, respectively, and \$120,000 and \$31,000 for the three months ended March 31, 1995 and 1996, respectively.

## AWARE, INC.

NOTES TO FINANCIAL STATEMENTS  
(INFORMATION PERTAINING TO THE PERIODS ENDED  
MARCH 31, 1996 AND MARCH 31, 1995 IS UNAUDITED) -- (CONTINUED)

Future annual minimum lease payments under the leases are as follows:

1996.....	\$ 94,100
1997.....	125,500
1998.....	52,300

Litigation -- There are no pending legal proceedings to which the Company is a party or to which any of its properties are subject which, either individually or in the aggregate, are expected by the Company to have a material adverse effect on its business, financial position or results of operations.

#### 6. TRANSACTIONS WITH RELATED PARTIES

Consulting Agreements -- The Company pays consulting fees for scientific research and development services provided by certain stockholders. The total charges from related parties approximated \$26,000, \$27,000 and \$66,000 in 1993, 1994 and 1995, respectively, and \$11,000 and \$4,000 for the three months ended March 31, 1995 and 1996, respectively. There were no amounts due to related parties at December 31, 1995 and 1994 or March 31, 1996.

Loans from Stockholders -- During 1994, certain stockholders made short-term loans totaling \$150,000 to the Company, at an interest rate of 10%. The Company repaid the loans in 1994. No such loans were made during 1995.

#### 7. MAJOR CUSTOMERS

In 1993, the Company derived approximately 44% and 12% of total revenue from two separate customers and in 1994, the Company derived approximately 38% and 10% of total revenue from two separate customers. In 1995, the Company derived approximately 23%, 18% and 10% of total revenue from three separate customers.

#### 8. EMPLOYEE BENEFIT PLAN

In 1994, the Company established a qualified 401(k) Retirement Plan (the "Plan") under which employees are allowed to contribute certain percentages of their pay, up to the maximum allowed under Section 401(k) of the Internal Revenue Code. Company contributions to the Plan are at the discretion of the Board of Directors. There were no Company contributions in 1995 and 1994.

#### 9. SUBSEQUENT EVENTS

On May 23, 1996, the Company adopted a new 1996 Stock Option Plan with 3,000,000 shares authorized. Additionally, the Company adopted an Employee Stock Purchase Plan with 100,000 shares authorized. The Company granted options for 1,378,000 shares at \$8.25 per share under the new 1996 Stock Option Plan.

On June 6, 1996, the stockholders of the Company approved the filing of amended and restated articles of organization that authorize an additional 11,350,000 shares of \$.01 par value common stock and 1,000,000 shares of \$1.00 par value preferred stock.

[BACK COVER -- LOGO]

Aware designs, develops and markets telecommunications software, chipsets and modems which incorporate ADSL technology and increase the speed of data communications over conventional copper telephone lines. The Company's products and services are designed to allow telephone companies to utilize their installed bases of dedicated copper lines to provide both residential and business customers with interactive data transmission at speeds much higher than currently available.

3 SECONDS DOWNLOAD TIME

28.8 KBPS

[Picture showing computer screen with incomplete image]

3 SECONDS DOWNLOAD TIME

4.4 MBPS

[Picture showing computer screen with image]

The Aware ADSL Internet Access Modem is designed to download data at a rate of up to 4.4 Mbps over a distance of 12,000 feet. The screen simulations above illustrate the difference in performance between this data rate and the data rate available from a conventional 28.8 modem.

## PART II

## INFORMATION NOT REQUIRED IN PROSPECTUS

## ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the various expenses in connection with the issuance and distribution of the securities being registered, other than underwriting discounts and commissions. All amounts shown are estimates except the Securities and Exchange Commission registration fee, the Nasdaq Stock Market, Inc. listing fee and the National Association of Securities Dealers, Inc. filing fee.

Registration fee (Securities and Exchange Commission).....	\$ 16,179
Nasdaq listing fee.....	50,000
NASD filing fee.....	5,192
Printing and engraving expenses.....	*
Transfer agent fees.....	*
Accounting fees and expenses.....	*
Legal fees and expenses.....	*
Excess director and officer insurance premium.....	*
Blue Sky fees and expenses (including related legal fees).....	20,000
Miscellaneous.....	*
Total.....	\$800,000..
	=====

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 \* To be provided by amendment.

## ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 13(b)(1 1/2) of Chapter 156B of the of the Massachusetts General Laws provides that the articles of organization of a Massachusetts corporation may state a provision eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director notwithstanding any provision of law imposing such liability, provided, however, that such a provision shall not eliminate or limit the liability of a director (i) for any breach of a director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 61 or 62 of Chapter 156B of the Massachusetts General Laws, relating to liability for unauthorized distributions and loans to insiders, respectively, or (iv) for any transaction from which the director derived an improper personal benefit. Article 6 of the Company's Articles of Organization, as amended to date (the "Articles of Organization"), provides that the personal liability of the Company's directors is eliminated to the fullest extent permitted by law, including without limitation the provisions of Chapter 156B, Section 13(b)(1 1/2) of the General Laws.

Section 67 of Chapter 156B of the Massachusetts General Laws authorizes Massachusetts corporations to indemnify directors, officers, employees and agents of the corporation, and persons serving at the request of the corporation as directors, officers, employees and agents of another organization, or who serve at its request in any capacity with respect to an employee benefit plan, to whatever extent shall be specified in or authorized by the articles of organization, a by-law adopted by the stockholders or a vote adopted by a majority of the shares of stock entitled to vote on the election of directors, provided that no indemnification may be provided for any person with respect to any matter as to which he or she shall have been adjudicated in any proceeding not to have acted in good faith in the reasonable belief that his or her action was in the best interests of the corporation or, to the extent that such matter relates to service with respect to an employee benefit plan, in the best interests of the participants or beneficiaries of such employee benefit plan.

Section 5.8 of the Company's By-Laws, as amended to date (the "By-Laws"), provides that the Company shall indemnify each of its directors and officers (as well as any former director or officer) to the fullest extent permitted by law against any and all claims and liabilities to which he may be or

become subject by reason of his being or having been an officer or director of the Company or by reason of his alleged acts or omissions as an officer or director of the Company, except in relation to such matters as to which such officer or director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office. Section 5.8 further provides that the Company shall indemnify and reimburse each such officer and director against and for any and all legal and other expenses reasonably incurred by him in connection with any such claims and liabilities, actual or threatened, whether or not, at or prior to the time when so indemnified, held harmless and reimbursed, he had ceased being an officer or director of the Company, except in relation to such matters as to which such officer or director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office; provided that the Company prior to such final adjudication may compromise and settle any such claims and liabilities and pay such expenses, if such settlement or payment or both appears, in the judgment of a majority of the Board of Directors, to be for the best interest of the Company, evidenced by a resolution to that effect after receipt by the Company of a written opinion of counsel for the Company that such officer or director has not been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office in connection with the matters involved in such compromise, settlement and payment.

Section 5.8 of the By-Laws further provides that the right of indemnification provided thereby shall not be exclusive of any rights to which any officer or director may otherwise be lawfully entitled, and may be incorporated into individual indemnification agreements between the Company and any officer or director.

The Company has entered into separate indemnification agreements with each current director and a former director of the Company. Pursuant to these agreements, the Company has agreed to indemnify each director to the fullest extent permitted by law from claims to which he may become subject by reason of his service or actions as a director or officer of the Company, except as to matters as to which he shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office. The agreements also contain provisions regarding reimbursement of expenses incurred in connection with such claims.

Section 8 of the Underwriting Agreement provides that, under certain circumstances, the Underwriters are obligated to indemnify the directors and officers of the Company against certain liabilities, including liabilities under the Securities Act. Reference is made to the form of Underwriting Agreement filed as Exhibit 1.1 hereto.

The effect of these provisions would be to permit indemnification by the Company for, among other liabilities, liabilities arising out of the Securities Act of 1933 (the "Securities Act").

Section 67 of Chapter 156B of the Massachusetts General Laws also authorizes Massachusetts corporations to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or other agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or other agent of another organization, or with respect to an employee benefit plan, against any liability incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify him or her against such liability. The Company intends to purchase a general liability insurance policy which covers certain liabilities of directors and officers of the Company arising out of claims based on acts or omissions in their capacities as directors or officers.

#### ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

The following information is furnished with regard to all securities issued by the Company within the past three years which were not registered under the Securities Act.

(a) Between November 30, 1994 and April 11, 1996, the Company issued and sold a total of 1,042,529 shares of Common Stock pursuant to the exercise of options under the Company's 1990 Incentive and Non-Statutory Stock Option Plan, for an aggregate consideration of \$1,044,969.



(b) Between June 14, 1994 and October 26, 1994, the Company issued and sold a total of 29,432 shares of Series E Convertible Preferred Stock, \$1.00 par value per share, for an aggregate consideration of \$3,826,160.

The issuances described above were made in reliance upon the exemption from registration set forth in Section 4(2) of the Securities Act relating to sales by an issuer not involving any public offering. None of the foregoing transactions involved a distribution or public offering. No underwriters were engaged in connection with the foregoing issuances of securities, and no underwriting discounts or commissions were paid.

#### ITEM 16. EXHIBITS AND FINANCIAL SCHEDULES.

##### (A) EXHIBITS

- 1.1 Form of Underwriting Agreement
- 3.1 Form of Amended and Restated Articles of Organization (to be filed with the Secretary of State of the Commonwealth of Massachusetts on or before the closing of this offering)
- \*3.2 Form of Amended and Restated Articles of Organization (to be filed with the Secretary of State of the Commonwealth of Massachusetts after the closing of this offering)
- 3.3 Amended and Restated By-Laws
- \*4.1 Specimen certificate for the Common Stock
- \*5.1 Opinion of Foley, Hoag & Eliot LLP
- 10.1 Form of Lock-Up Agreement, with schedule of substantially identical documents
- 10.2 1990 Incentive and Non-Statutory Stock Option Plan
- 10.3 1996 Stock Option Plan
- 10.4 1996 Employee Stock Purchase Plan
- \*\*10.5 License Agreement with Analog Devices, Inc., dated September 25, 1993, together with appendices thereto
- 10.6 Development Contract with Analog Devices, Inc., dated September 25, 1993, together with amendments thereto
- \*\*10.7 Agreement with DSC Telecom L.P., dated March 6, 1996
- \*\*10.8 License Agreement and Development Contract with Westell, Inc., dated as of September 5, 1994
- \*\*10.9 Development Agreement -- Low Cost DMT ADSL, among Aware, Inc., Analog Devices, Inc., Westell International Inc. and Westell, Inc., dated as of May 12, 1995
- \*\*10.10 Technology Agreement with Broadband Technologies, Inc., dated June 10, 1996
- 10.11 Lease Agreement dated April 3, 1995, with respect to real property located at One Oak Park, Bedford, Massachusetts, between R.W. Connelly as lessor and the Company as lessee
- 10.12 Employment Agreement of James C. Bender
- 10.13 Form of Director Indemnification Agreement
- 11.1 Computation of Pro Forma Net Income Per Common Share
- 23.1 Consent of Deloitte & Touche LLP
- 23.2 Consent of Price Waterhouse LLP

- \*23.3 Consent of Foley, Hoag & Eliot LLP (included in Exhibit 5.1)
- 23.4 Consent of Cesari and McKenna
- 24.1 Power of Attorney (contained on the signature page of this Registration Statement)
- 99.1 Letter from Price Waterhouse LLP as to change in independent accountants
- 99.2 Letter from DiBenedetto & Company, P.A. as to change in independent accountants

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 \* To be filed by amendment.

\*\* Filed under application for confidential treatment.

#### (B) FINANCIAL STATEMENT SCHEDULES

All schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

#### ITEM 17. UNDERTAKINGS.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the "Securities Act") may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions contained in the Articles of Organization and By-Laws of the registrant and the laws of the Commonwealth of Massachusetts, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

## SIGNATURES

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT OF 1933, THE COMPANY HAS DULY CAUSED THIS REGISTRATION STATEMENT TO BE SIGNED ON ITS BEHALF BY THE UNDERSIGNED, THEREUNTO DULY AUTHORIZED, IN THE CITY OF BOSTON, MASSACHUSETTS ON JUNE 25, 1996.

AWARE, INC.

By /s/ JAMES C. BENDER

-----  
James C. Bender  
President and Chief Executive  
Officer

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS THAT EACH INDIVIDUAL WHOSE SIGNATURE APPEARS BELOW HEREBY CONSTITUTES AND APPOINTS JAMES C. BENDER, MICHAEL A. TZANNES AND ROBERT L. BIRNBAUM AND EACH OF THEM, HIS TRUE AND LAWFUL ATTORNEYS-IN-FACT AND AGENTS WITH FULL POWER OF SUBSTITUTION, FOR HIM AND IN HIS NAME, PLACE AND STEAD, IN ANY AND ALL CAPACITIES, TO SIGN ANY AND ALL PRE- OR POST-EFFECTIVE AMENDMENTS TO THIS REGISTRATION STATEMENT, ANY SUBSEQUENT REGISTRATION STATEMENT FOR THE SAME OFFERING WHICH MAY BE FILED UNDER RULE 462(B) UNDER THE SECURITIES ACT OF 1933 ("A RULE 462(B) REGISTRATION STATEMENT") AND ANY AND ALL PRE- OR POST-EFFECTIVE AMENDMENTS THERETO, AND TO FILE THE SAME, WITH ALL EXHIBITS THERETO, AND ALL DOCUMENTS IN CONNECTION THEREWITH, WITH THE SECURITIES AND EXCHANGE COMMISSION, GRANTING UNTO SAID ATTORNEYS-IN-FACT AND AGENTS, AND EACH OF THEM, FULL POWER AND AUTHORITY TO DO AND PERFORM EACH AND EVERY ACT AND THING WHICH THEY, OR ANY OF THEM, MAY DEEM NECESSARY OR ADVISABLE TO BE DONE IN CONNECTION WITH THIS REGISTRATION STATEMENT OR ANY RULE 462(B) REGISTRATION STATEMENT, AS FULLY TO ALL INTENTS AND PURPOSES AS HE MIGHT OR COULD DO IN PERSON, HEREBY RATIFYING AND CONFIRMING ALL THAT SAID ATTORNEYS-IN-FACT AND AGENTS OR ANY OF THEM, OR ANY SUBSTITUTE OR SUBSTITUTES FOR ANY OR ALL OF THEM, MAY LAWFULLY DO OR CAUSE TO BE DONE BY VIRTUE HEREOF.

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT OF 1933, THIS REGISTRATION STATEMENT HAS BEEN SIGNED BY THE FOLLOWING PERSONS IN THE CAPACITIES AND ON THE DATES INDICATED.

SIGNATURE	TITLE	DATE
/s/ JAMES C. BENDER	President, Chief Executive Officer and Director	June 25, 1996
James C. Bender	(Principal Executive Officer)	
/s/ RICHARD P. MOBERG	Treasurer and Chief Financial Officer	June 25, 1996
Richard P. Moberg	(Principal Financial and Accounting Officer)	
/s/ CHARLES K. STEWART	Chairman of the Board	June 25, 1996
Charles K. Stewart		
/s/ JERALD G. FISHMAN	Director	June 25, 1996
Jerald G. Fishman		
/s/ JOHN K. KERR	Director	June 25, 1996
John K. Kerr		
/s/ JOHN S. STAFFORD, JR.	Director	June 25, 1996
John S. Stafford, Jr.		

## EXHIBIT INDEX

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 \* To be filed by amendment.

\*\* Filed under application for confidential treatment.

3,400,000 SHARES(1)

AWARE, INC.

COMMON STOCK

UNDERWRITING AGREEMENT

July \_\_, 1996

ROBERTSON, STEPHENS & COMPANY LLC

FURMAN SELZ LLC

As Representatives of the several Underwriters

c/o Robertson, Stephens & Company LLC

555 California Street

Suite 2600

San Francisco, California 94104

Ladies/Gentlemen:

Aware, Inc., a Commonwealth of Massachusetts corporation (the "Company"), addresses you as the Representatives of each of the persons, firms and corporations listed in Schedule A hereto (herein collectively called the "Underwriters") and hereby confirms its agreement with the several Underwriters as follows:

1. Description of Shares. The Company proposes to issue and sell 3,400,000 shares of its authorized and unissued Common Stock, \$.01 par value per share, (the "Firm Shares") to the several Underwriters. The Company also proposes to grant to the Underwriters an option to purchase up to 510,000 additional shares of the Company's Common Stock, \$.01 par value per share, (the "Option Shares"), as provided in Section 7 hereof. As used in this Agreement, the term "Shares" shall include the Firm Shares and the Option Shares. All shares of Common Stock, \$.01 par value per share, of the Company to be outstanding after giving effect to the sales contemplated hereby, including the Shares, are hereinafter referred to as "Common Stock."

2. Representations, Warranties and Agreements of the Company.

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(1) Plus an option to purchase up to 510,000 additional shares from the Company to cover over-allotments.

The Company represents and warrants to and agrees with each Underwriter that:

(a) A registration statement on Form S-1 (File No. 333-\_\_\_\_\_) with respect to the Shares, including a prospectus subject to completion, has been prepared by the Company in conformity with the requirements of the Securities Act of 1933, as amended (the "Act"), and the applicable rules and regulations (the "Rules and Regulations") of the Securities and Exchange Commission (the "Commission") under the Act and has been filed with the Commission; such amendments to such registration statement, such amended prospectuses subject to completion and such abbreviated registration statements pursuant to Rule 462(b) of the Rules and Regulations as may have been required prior to the date hereof have been similarly prepared and filed with the Commission; and the Company will file such additional amendments to such registration statement, such amended prospectuses subject to completion and such abbreviated registration statements as may hereafter be required. Copies of such registration statement and amendments of each related prospectus subject to completion (the "Preliminary Prospectuses") and of any abbreviated registration statement pursuant to Rule 462(b) of the Rules and Regulations have been delivered to you and, to the extent applicable, were identical to the electronically transmitted copies thereof filed with the Commission pursuant to the Commission's Electronic Data Gathering, Analysis and Retrieval System ("EDGAR"), except to the extent permitted by Regulation S-T.

If the registration statement relating to the Shares has been declared effective under the Act by the Commission, the Company will prepare and promptly file with the Commission the information omitted from the registration statement pursuant to Rule 430A(a) or, if Robertson, Stephens & Company LLC, on behalf of the several Underwriters, shall agree to the utilization of Rule 434 of the Rules and Regulations, the information required to be included in any term sheet filed pursuant to Rule 434(b) or (c), as applicable, of the Rules and Regulations pursuant to subparagraph (1), (4) or (7) of Rule 424(b) of the Rules and Regulations or as part of a post-effective amendment to the registration statement (including a final form of prospectus). If the registration statement relating to the Shares has not been declared effective under the Act by the Commission, the Company will prepare and promptly file an amendment to the registration statement, including a final form of prospectus, or, if Robertson, Stephens & Company LLC, on behalf of the several Underwriters, shall agree to the utilization of Rule 434 of the Rules and Regulations, the information required to be included in any term sheet filed pursuant to Rule 434(b) or (c), as applicable, of the Rules and Regulations. The term "Registration Statement" as used in this Agreement shall mean such registration statement, including financial statements, schedules and exhibits, in the form in which it became or becomes, as the case may be, effective (including, if the Company omitted information from the registration statement pursuant to Rule 430A(a) or files a term sheet pursuant to Rule 434 of the Rules and Regulations, the information deemed to be a part of the registration statement at the time it became effective pursuant to Rule 430A(b) or Rule 434(d) of the Rules and Regulations) and, in the event of any amendment thereto or the filing of any abbreviated registration statement pursuant to Rule 462(b) of the Rules and Regulations relating thereto after the effective date of such registration statement, shall also mean (from and after the effectiveness of such amendment or the filing of such abbreviated registration statement) such registration statement as so amended, together with any such abbreviated registration statement. The term "Prospectus" as

used in this Agreement shall mean the prospectus relating to the Shares as included in such Registration Statement at the time it becomes effective (including, if the Company omitted information from the Registration Statement pursuant to Rule 430A(a) of the Rules and Regulations, the information deemed to be a part of the Registration Statement at the time it became effective pursuant to Rule 430A(b) of the Rules and Regulations), provided, however, that if in reliance on Rule 434 of the Rules and Regulations and with the consent of Robertson, Stephens & Company LLC, on behalf of the several Underwriters, the Company shall have provided to the Underwriters a term sheet pursuant to Rule 434(b) or (c), as applicable, prior to the time that a confirmation is sent or given for purposes of Section 2(10)(a) of the Act, the term "Prospectus" shall mean the "prospectus subject to completion" (as defined in Rule 434(g) of the Rules and Regulations) last provided to the Underwriters by the Company and circulated by the Underwriters to all prospective purchasers of the Shares (including the information deemed to be a part of the Registration Statement at the time it became effective pursuant to Rule 434(d) of the Rules and Regulations). Notwithstanding the foregoing, if any revised prospectus shall be provided to the Underwriters by the Company for use in connection with the offering of the Shares that differs from the prospectus referred to in the immediately preceding sentence (whether or not such revised prospectus is required to be filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations), the term "Prospectus" shall refer to such revised prospectus from and after the time it is first provided to the Underwriters for such use. If in reliance on Rule 434 of the Rules and Regulations and with the consent of Robertson, Stephens & Company LLC, on behalf of the several Underwriters, the Company shall have provided to the Underwriters a term sheet pursuant to Rule 434(b) or (c), as applicable, prior to the time that a confirmation is sent or given for purposes of Section 2(10)(a) of the Act, the Prospectus and the term sheet, together, will not be materially different from the prospectus in the Registration Statement. For purposes of this Agreement, all references to the Registration Statement, any Preliminary Prospectus, the Prospectus, or any amendment or supplement to any of the foregoing shall be deemed to include the respective copies thereof filed with the Commission pursuant to EDGAR.

(b) The Commission has not issued any order preventing or suspending the use of any Preliminary Prospectus or instituted proceedings for that purpose, and each such Preliminary Prospectus has conformed in all material respects to the requirements of the Act and the Rules and Regulations and, as of its date, has not included any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and at the time the Registration Statement became or becomes, as the case may be, effective and at all times subsequent thereto up to and on the Closing Date (hereinafter defined) and on any later date on which Option Shares are to be purchased, (i) the Registration Statement and the Prospectus, and any amendments or supplements thereto, contained and will contain all material information required to be included therein by the Act and the Rules and Regulations and will in all material respects conform to the requirements of the Act and the Rules and Regulations, (ii) the Registration Statement, and any amendments or supplements thereto, did not and will not include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and (iii) the Prospectus, and any amendments or supplements thereto, did not and will not include any untrue statement of a material fact or omit to state a

material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that none of the representations and warranties contained in this subparagraph (b) shall apply to information contained in or omitted from the Registration Statement or Prospectus, or any amendment or supplement thereto, in reliance upon, and in conformity with, written information relating to any Underwriter furnished to the Company by such Underwriter specifically for use in the preparation thereof.

(c) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation with full power and authority (corporate and other) to own, lease and operate its properties and conduct its business as described in the Prospectus; the Company is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction in which the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified or be in good standing would not have a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company; no proceeding has been instituted in any such jurisdiction, revoking, limiting or curtailing, or seeking to revoke, limit or curtail, such power and authority or qualification; the Company is in possession of and operating in compliance with all authorizations, licenses, certificates, consents, orders and permits from state, federal and other regulatory authorities which are material to the conduct of its business, all of which are valid and in full force and effect (collectively, a "Material Adverse Effect"); the Company is not in violation of its charter or bylaws or in default in the performance or observance of any obligation, agreement, covenant or condition contained in any bond, debenture, note or other evidence of indebtedness, or in any lease, contract, indenture, mortgage, deed of trust, loan agreement, joint venture or other agreement or instrument to which the Company is a party or by which its properties may be bound except for any such violation or default that has been waived or that would not have a Material Adverse Effect; and the Company is not in violation of any law, order, rule, regulation, writ, injunction, judgment or decree of any court, government or governmental agency or body, domestic or foreign, having jurisdiction over the Company or over its properties of which it has knowledge except for any such violation that would not have a Material Adverse Effect. The Company does not own or control, directly or indirectly, any corporation, association or other entity.

(d) The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and is a valid and binding agreement on the part of the Company, enforceable in accordance with its terms, except as rights to indemnification hereunder may be limited by applicable law and except as the enforcement hereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally or by general equitable principles; the performance of this Agreement and the consummation of the transactions herein contemplated will not result in a material breach or violation of any of the terms and provisions of, or constitute a default under, (i) any bond, debenture, note or other evidence of indebtedness, or under any lease, contract, indenture, mortgage, deed of trust, loan agreement, joint venture or other agreement or instrument to which the Company is a party or by which it or its properties



may be bound, (ii) the charter or bylaws of the Company, or (iii) any law, order, rule, regulation, writ, injunction, judgment or decree of any court, government or governmental agency or body, domestic or foreign, having jurisdiction over the Company or over its properties. No consent, approval, authorization or order of or qualification with any court, government or governmental agency or body, domestic or foreign, having jurisdiction over the Company or over its properties is required for the execution and delivery of this Agreement and the consummation by the Company of the transactions herein contemplated, except such as may be required under the Act, under the Securities and Exchange Act of 1934, as amended (the "Exchange Act") or under state or other securities or Blue Sky laws, all of which requirements have been satisfied in all material respects.

(e) There is no action, suit, claim or proceeding pending or, to the best of the Company's knowledge, threatened against the Company, or any of its officers or any of its properties, assets or rights before any court, government or governmental agency or body, domestic or foreign, having jurisdiction over the Company or over its officers or properties or otherwise which (i) might result in any material adverse change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company or might materially and adversely affect its properties, assets or rights, (ii) might prevent consummation of the transactions contemplated hereby or (iii) is required to be disclosed in the Registration Statement or Prospectus and is not so disclosed; and there are no agreements, contracts, leases or documents of the Company of a character required to be described or referred to in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement by the Act or the Rules and Regulations which have not been accurately described in all material respects in the Registration Statement or Prospectus or filed as exhibits to the Registration Statement.

(f) All outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, were not issued in violation of or subject to any preemptive rights or other rights to subscribe for or purchase securities, and the authorized and outstanding capital stock of the Company is as set forth in the Prospectus under the caption "Capitalization" and conforms in all material respects to the statements relating thereto contained in the Registration Statement and the Prospectus (and such statements correctly state the substance of the instruments defining the capitalization of the Company); the Firm Shares and the Option Shares to be purchased from the Company hereunder have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company against payment therefor in accordance with the terms of this Agreement, will be duly and validly issued and fully paid and nonassessable, and will be sold free and clear of any pledge, lien, security interest, encumbrance, claim or equitable interest arising out of action taken by the Company; and no preemptive right, co-sale right, registration right, right of first refusal or other similar right of shareholders exists with respect to any of the Firm Shares or Option Shares to be purchased from the Company hereunder or the issuance and sale thereof other than those that have been expressly waived or complied with prior to the date hereof and those that will automatically expire upon the consummation of the transactions contemplated on the Closing Date. No further approval or authorization of any shareholder, the Board of

Directors of the Company or others is required for the issuance and sale or transfer of the Shares to you except as may be required under the Act, under the Exchange Act or under state or other securities or Blue Sky laws. Except as disclosed in or contemplated by the Prospectus and the financial statements of the Company, and the related notes thereto, included in the Prospectus, the Company has no outstanding options to purchase, or any preemptive rights or other rights to subscribe for or to purchase, any securities or obligations convertible into, or any contracts or commitments to issue or sell, shares of its capital stock or any such options, rights, convertible securities or obligations. The description of the Company's stock option, stock purchase and other stock plans or arrangements, and the options or other rights granted and exercised thereunder, set forth in the Prospectus accurately and fairly presents the information required to be shown with respect to such plans, arrangements, options and rights.

(g) Each of (i) Deloitte & Touche LLP, which has examined the financial statements of the Company, together with the related schedules and notes, as of December 31, 1995 and 1994 and for each of the years in the two (2) years ended December 31, 1995 filed with the Commission as a part of the Registration Statement, which are included in the Prospectus, and (ii) Price Waterhouse LLP, which has examined the financial statements of the Company, together with related schedules and notes, as of December 31, 1993 and for the year ended December 31, 1993, a portion of which have been filed with the Registration Statement, which are included in the Prospectus, are independent accountants within the meaning of the Act and the Rules and Regulations; the audited financial statements of the Company, together with the related schedules and notes, and the unaudited financial information, forming part of the Registration Statement and Prospectus, fairly present the financial position and the results of operations of the Company at the respective dates and for the respective periods to which they apply; and all audited financial statements of the Company, together with the related schedules and notes, and the unaudited financial information, filed with the Commission as part of the Registration Statement, have been prepared in accordance with generally accepted accounting principles consistently applied throughout the periods involved except as may be otherwise stated therein and the unaudited financial statements filed with the Commission as part of the Registration Statement have been prepared on a basis substantially consistent with the audited financial statements and include all adjustments, consisting of only normal recurring adjustments, necessary for a fair presentation of the financial position and results of operations of the Company at March 31, 1996 and for the three months ended March 31, 1995 and 1996. The selected and summary financial and statistical data included in the Registration Statement present fairly the information shown therein and have been compiled on a basis substantially consistent with the audited financial statements presented therein. No other financial statements or schedules are required to be included in the Registration Statement.

(h) Subsequent to the respective dates as of which information is given in the Registration Statement and Prospectus, there has not been (i) any material adverse change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company, (ii) any transaction that is material to the Company, except transactions entered into in the ordinary course of business, (iii) any obligation, direct or contingent, that is material to the Company, incurred by the Company, except obligations incurred in the ordinary course of business, (iv) any change in the capital stock or outstanding indebtedness of the Company that is

material to the Company and has not been disclosed in the Registration Statement and Prospectus, (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company, or (vi) any loss or damage (whether or not insured) to the property of the Company which has been sustained or will have been sustained and which has a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company.

(i) Except as set forth in the Registration Statement and Prospectus, (i) the Company has good and marketable title to all properties and assets described in the Registration Statement and Prospectus as owned by it, free and clear of any pledge, lien, security interest, encumbrance, claim or equitable interest, other than such as would not have a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company, (ii) the agreements to which the Company is a party described in the Registration Statement and Prospectus are valid agreements, enforceable by the Company, except as the enforcement thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally or by general equitable principles and, to the best of the Company's knowledge, the other contracting party or parties thereto are not in material breach or material default under any of such agreements, and (iii) the Company has valid and enforceable leases for all properties described in the Registration Statement and Prospectus as leased by it, except as the enforcement thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally or by general equitable principles. Except as set forth in the Registration Statement and Prospectus, the Company owns, leases or has the legal right to use all such properties as are necessary to its operations as now conducted or as proposed to be conducted.

(j) The Company has timely filed all necessary federal, state and foreign income and franchise tax returns and has paid all taxes shown thereon as due, and there is no tax deficiency that has been or, to the best of the Company's knowledge, might be asserted against the Company that might have a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company; and all tax liabilities are adequately provided for on the books of the Company.

(k) The Company maintains insurance with insurers of recognized financial responsibility of the types and in the amounts generally deemed adequate for its business and consistent with insurance coverage maintained by similar companies in similar businesses, including, but not limited to, insurance covering real and personal property owned or leased by the Company against theft, damage, destruction, acts of vandalism and all other risks customarily insured against, all of which insurance is in full force and effect; the Company has not been refused any insurance coverage sought or applied for; and the Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not materially and adversely affect the condition (financial or otherwise), earnings, operations, business or business prospects of the Company.

(l) To the best of Company's knowledge, no labor disturbance by the employees of the Company exists or is imminent; and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, subassemblers, value added resellers, subcontractors, original equipment manufacturers, authorized dealers or international distributors that might be expected to result in a material adverse change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company. No collective bargaining agreement exists with any of the Company's employees and, to the best of the Company's knowledge, no such agreement is imminent.

(m) Except as disclosed in the Prospectus, the Company has the right to use all trademarks, trade names, trade secrets, servicemarks, inventions, patent rights, mask works, copyrights, licenses, software code, audiovisual works, formats, algorithms and underlying data, approvals and governmental authorizations now used in, or which are necessary for fulfillment of its obligations or the conduct of its business as now conducted or proposed to be conducted as described in the Prospectus; the expiration of any trademarks, trade names, trade secrets, servicemarks, inventions, patent rights, mask works, copyrights, licenses, approvals or governmental authorizations would not have a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company; and, except as disclosed in the Prospectus, the Company has no knowledge of any infringement by it of trademark, trade name rights, patent rights, mask works, copyrights, licenses, trade secret, servicemarks or other similar rights of others, and there is no claim being made against the Company regarding trademark, trade name, patent, mask work, copyright, license, trade secret or other infringement or assertion of intellectual property rights which could have a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company. The Company has agreements in place with each employee, consultant or other person or party engaged by the Company sufficient to enable the Company to conduct its businesses as now conducted or proposed to be conducted as described in the Prospectus and providing for the assignment to the Company of all intellectual property rights in the work performed for the Company and the protection of the trade secrets and confidential information of the Company and of third parties. To the Company's knowledge, no person or entity has infringed any of the Company's patents, patent rights, trade names, trademarks or copyrights, which infringement is material to the business of the Company.

(n) The Common Stock has been approved for quotation on The Nasdaq National Market, subject to official notice of issuance.

(o) The Company has been advised concerning the Investment Company Act of 1940, as amended (the "1940 Act"), and the rules and regulations thereunder, and has in the past conducted, and intends in the future to conduct, its affairs in such a manner as to ensure that it will not become an "investment company" or a company "controlled" by an "investment company" within the meaning of the 1940 Act and such rules and regulations.

(p) The Company has not distributed and will not distribute prior to the later of (i) the Closing Date, or any date on which Option Shares are to be purchased, as the case may be, and (ii) completion of the distribution of the Shares, any offering material in connection with

the offering and sale of the Shares other than any Preliminary Prospectuses, the Prospectus, the Registration Statement and other materials, if any, permitted by the Act.

(q) The Company has not at any time during the last five (5) years (i) made any unlawful contribution to any candidate for foreign office or failed to disclose fully any contribution in violation of law, or (ii) made any payment to any federal or state governmental officer or official, or other person charged with similar public or quasi-public duties, other than payments required or permitted by the laws of the United States or any jurisdiction thereof.

(r) The Company has not taken and will not take, directly or indirectly, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Common Stock to facilitate the sale or resale of the Shares.

(s) Each executive officer and director of the Company and each beneficial owner of 1% or more of the shares of Common Stock has agreed in writing that such person will not, for a period of 180 days from the date that the Registration Statement is declared effective by the Commission (the "Lock-up Period"), sell, offer, contract to sell, pledge, grant any option to purchase or otherwise dispose of (collectively, a "Disposition") any shares of Common Stock, or any securities convertible into or exchangeable for, or any rights to purchase or acquire, Common Stock (collectively, "Securities") now owned or hereafter acquired directly by such person or with respect to which such person may be deemed to be beneficially owned by such person pursuant to the Rules and Regulations otherwise than (i) as a bona fide gift or gifts, provided the donee or donees thereof agree in writing to be bound by this restriction, (ii) as a distribution to limited partners or shareholders of such person, provided that the distributees thereof agree in writing to be bound by the terms of this restriction; or (iii) with the prior written consent of Robertson, Stephens & Company LLC. The foregoing restriction is expressly agreed to preclude the holder of the Securities from engaging in any hedging or other transaction which is designed to or reasonably expected to lead to or result in a Disposition of Securities during the Lock-up Period, even if such Securities would be disposed of by someone other than such holder. Such prohibited hedging or other transactions would include, without limitation, any short sale (whether or not against the box) or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any Securities or with respect to any security (other than a broad-based market basket or index) that includes, relates to or derives any significant part of its value from the Securities. Furthermore, such person has also agreed and consented to the entry of stop transfer instructions with the Company's transfer agent against the transfer of the Securities held by such person except in compliance with this restriction. The Company has provided to counsel for the Underwriters a complete and accurate list of all securityholders of the Company and the number and type of securities held by each securityholder. The Company has provided to counsel for the Underwriters true, accurate and complete copies of all of the agreements pursuant to which its officers, directors and shareholders have agreed to such or similar restrictions (the "Lock-up Agreements") presently in effect or effected hereby. The Company hereby represents and warrants that it will not release any of its officers, directors or other shareholders from any Lock-up Agreements currently existing or hereafter effected without the prior written consent of Robertson, Stephens & Company LLC.

(t) Except as set forth in the Registration Statement and Prospectus, (i) the Company is in compliance with all rules, laws and regulations relating to the use, treatment, storage and disposal of toxic substances and protection of health or the environment ("Environmental Laws") which are applicable to its business except for any such noncompliance that, separately or in the aggregate, would not have a Material Adverse Effect, (ii) the Company has received no notice from any governmental authority or third party of an asserted claim under Environmental Laws, which claim is required to be disclosed in the Registration Statement and the Prospectus, (iii) the Company will not be required to make future material capital expenditures to comply with Environmental Laws and (iv) no property which is owned, leased or occupied by the Company has been designated as a Superfund site pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Section 9601, et seq), or otherwise designated as a contaminated site under applicable state or local law.

(u) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(v) There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of the members of the families of any of them, except as disclosed in the Registration Statement and the Prospectus.

(w) The Company has complied with all provisions of Section 517.075, Florida Statutes relating to doing business with the Government of Cuba or with any person or affiliate located in Cuba.

3. Purchase, Sale and Delivery of Shares. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to sell to the Underwriters, and each Underwriter agrees, severally and not jointly, to purchase from the Company, at a purchase price of \$\_\_\_\_\_ per share, the respective number of Firm Shares as hereinafter set forth. The obligation of each Underwriter to the Company shall be to purchase from the Company that number of Firm Shares which is set forth opposite the name of such Underwriter in Schedule A hereto (subject to adjustment as provided in Section 10).

Delivery of definitive certificates for the Firm Shares to be purchased by the Underwriters pursuant to this Section 3 shall be made against payment of the purchase price therefor by the several Underwriters by certified or official bank check or checks drawn in next-day funds,

payable to the order of the Company (and the Company agrees not to deposit any such check in the bank on which it is drawn, and not to take any other action with the purpose or effect of receiving immediately available funds, until the business day following the date of its delivery to the Company, and, in the event of any breach of the foregoing, the Company shall reimburse the Underwriters for the interest lost and any other expenses borne by them by reason of such breach), at the offices of Foley, Hoag & Eliot LLP, One Post Office Square, Boston, Massachusetts 02109 (or at such other place as may be agreed upon among the Representatives and the Company), at 7:00 A.M., San Francisco time (a) on the third (3rd) full business day following the first day that Shares are traded, (b) if this Agreement is executed and delivered after 1:30 P.M., San Francisco time, on the fourth (4th) full business day following the day that this Agreement is executed and delivered or (c) at such other time and date not later than seven (7) full business days following the first day that Shares are traded as the Representatives and the Company may determine (or at such time and date to which payment and delivery shall have been postponed pursuant to Section 10 hereof), such time and date of payment and delivery being herein called the "Closing Date"; provided, however, that if the Company has not made available to the Representatives copies of the Prospectus within the time provided in Section 4(d) hereof, the Representatives may, in their sole discretion, postpone the Closing Date until no later than two (2) full business days following delivery of copies of the Prospectus to the Representatives. The certificates for the Firm Shares to be so delivered will be made available to you at such office or such other location including, without limitation, in New York City, as you may reasonably request for checking at least one (1) full business day prior to the Closing Date and will be in such names and denominations as you may request, such request to be made at least two (2) full business days prior to the Closing Date. If the Representatives so elect, delivery of the Firm Shares may be made by credit through full fast transfer to the accounts at The Depository Trust Company designated by the Representatives.

It is understood that you, individually, and not as the Representatives of the several Underwriters, may (but shall not be obligated to) make payment of the purchase price on behalf of any Underwriter or Underwriters whose check or checks shall not have been received by you prior to the Closing Date for the Firm Shares to be purchased by such Underwriter or Underwriters. Any such payment by you shall not relieve any such Underwriter or Underwriters of any of its or their obligations hereunder.

After the Registration Statement becomes effective, the several Underwriters intend to make an initial public offering (as such term is described in Section 11 hereof) of the Firm Shares at an initial public offering price of \$\_\_\_\_ per share. After the initial public offering, the several Underwriters may, in their discretion, vary the public offering price.

The information set forth in the last paragraph on the front cover page (insofar as such information relates to the Underwriters), under the last paragraph on page 2, concerning stabilization and over-allotment by the Underwriters, and under the \_\_\_\_ and \_\_\_\_ paragraphs under the caption "Underwriting" in any Preliminary Prospectus and in the final form of Prospectus filed pursuant to Rule 424(b) constitutes the only information furnished by the Underwriters to the Company for inclusion in any Preliminary Prospectus, the Prospectus or the Registration Statement, and you, on behalf of the respective Underwriters, represent and warrant

to the Company that the statements made therein do not include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

4. Further Agreements of the Company. The Company agrees with the several Underwriters that:

(a) The Company will use its best efforts to cause the Registration Statement and any amendment thereof, if not effective at the time and date that this Agreement is executed and delivered by the parties hereto, to become effective as promptly as possible; the Company will use its best efforts to cause any abbreviated registration statement pursuant to Rule 462(b) of the Rules and Regulations as may be required subsequent to the date the Registration Statement is declared effective to become effective as promptly as possible; the Company will notify you, promptly after it shall receive notice thereof, of the time when the Registration Statement, any subsequent amendment to the Registration Statement or any abbreviated registration statement has become effective or any supplement to the Prospectus has been filed; if the Company omitted information from the Registration Statement at the time it was originally declared effective in reliance upon Rule 430A(a) of the Rules and Regulations, the Company will provide evidence satisfactory to you that the Prospectus contains such information and has been filed, within the time period prescribed, with the Commission pursuant to subparagraph (1) or (4) of Rule 424(b) of the Rules and Regulations or as part of a post-effective amendment to such Registration Statement as originally declared effective which is declared effective by the Commission; if the Company files a term sheet pursuant to Rule 434 of the Rules and Regulations, the Company will provide evidence satisfactory to you that the Prospectus and term sheet meeting the requirements of Rule 434(b) or (c), as applicable, of the Rules and Regulations, have been filed, within the time period prescribed, with the Commission pursuant to subparagraph (7) of Rule 424(b) of the Rules and Regulations; if for any reason the filing of the final form of Prospectus is required under Rule 424(b)(3) of the Rules and Regulations, it will provide evidence satisfactory to you that the Prospectus contains such information and has been filed with the Commission within the time period prescribed; it will notify you promptly of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; promptly upon your request, it will prepare and file with the Commission any amendments or supplements to the Registration Statement or Prospectus which, in the opinion of counsel for the several Underwriters ("Underwriters' Counsel"), may be necessary or advisable in connection with the distribution of the Shares by the Underwriters; it will promptly prepare and file with the Commission, and promptly notify you of the filing of, any amendments or supplements to the Registration Statement or Prospectus which may be necessary to correct any statements or omissions, if, at any time when a prospectus relating to the Shares is required to be delivered under the Act, any event shall have occurred as a result of which the Prospectus or any other prospectus relating to the Shares as then in effect would include any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; in case any Underwriter is required to deliver a prospectus nine (9) months or more after the effective date of the Registration Statement in connection with the sale of the Shares, it will prepare promptly upon request, but at the expense of such Underwriter, such amendment or amendments



to the Registration Statement and such prospectus or prospectuses as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Act; and it will file no amendment or supplement to the Registration Statement or Prospectus which shall not previously have been submitted to you a reasonable time prior to the proposed filing thereof or to which you shall reasonably object in writing, subject, however, to compliance with the Act and the Rules and Regulations and the provisions of this Agreement.

(b) The Company will advise you, promptly after it shall receive notice or obtain knowledge, of the issuance of any stop order by the Commission suspending the effectiveness of the Registration Statement or of the initiation or threat of any proceeding for that purpose; and it will promptly use its best efforts to prevent the issuance of any stop order or to obtain its withdrawal at the earliest possible moment if such stop order should be issued.

(c) The Company will use its best efforts to qualify the Shares for offering and sale under the securities laws of such jurisdictions as you may designate and to continue such qualifications in effect for so long as may be required for purposes of the distribution of the Shares, except that the Company shall not be required in connection therewith or as a condition thereof to qualify as a foreign corporation or to execute a general consent to service of process in any jurisdiction in which it is not otherwise required to be so qualified or to so execute a general consent to service of process. In each jurisdiction in which the Shares shall have been qualified as above provided, the Company will make and file such statements and reports in each year as are or may be reasonably required by the laws of such jurisdiction.

(d) The Company will furnish to you, as soon as available, and, in the case of the Prospectus and any term sheet or abbreviated term sheet under Rule 434, in no event later than the first full business day following the first day that Shares are traded, copies of the Registration Statement (three of which will be signed and which will include all exhibits), each Preliminary Prospectus, the Prospectus and any amendments or supplements to such documents, including any prospectus prepared to permit compliance with Section 10(a)(3) of the Act, all in such quantities as you may from time to time reasonably request. Notwithstanding the foregoing, if Robertson, Stephens & Company LLC, on behalf of the several Underwriters, shall agree to the utilization of Rule 434 of the Rules and Regulations, the Company shall provide to you copies of a Preliminary Prospectus updated in all respects through the date specified by you in such quantities as you may from time to time reasonably request. To the extent applicable, such documents shall be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) The Company will make generally available to its securityholders as soon as practicable, but in any event not later than the forty-fifth (45th) day following the end of the fiscal quarter first occurring after the first anniversary of the effective date of the Registration Statement, an earnings statement (which will be in reasonable detail but need not be audited) complying with the provisions of Section 11(a) of the Act and covering a twelve (12) month period beginning after the effective date of the Registration Statement. To the extent applicable, such reports or documents shall be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(f) During a period of five (5) years after the date hereof, the Company will furnish to its shareholders as soon as practicable after the end of each respective period, annual reports (including financial statements audited by independent certified public accountants) and unaudited quarterly reports of operations for each of the first three quarters of the fiscal year, and will furnish to you, upon request (i) concurrently with furnishing such reports to its shareholders, statements of operations of the Company for each of the first three (3) quarters in the form furnished to the Company's shareholders, (ii) concurrently with furnishing to its shareholders, a balance sheet of the Company as of the end of such fiscal year, together with statements of operations, of shareholders' equity, and of cash flows of the Company for such fiscal year, accompanied by a copy of the certificate or report thereon of independent certified public accountants, (iii) as soon as they are available, copies of all reports (financial or other) mailed to shareholders, (iv) as soon as they are available, copies of all reports and financial statements furnished to or filed with the Commission, any securities exchange or the National Association of Securities Dealers, Inc. ("NASD"), (v) every material press release and every material news item or article in respect of the Company or its affairs which was generally released to shareholders or prepared by the Company, and (vi) any additional information of a public nature concerning the Company or its business which you may reasonably request. During such five (5) year period, if the Company shall have active subsidiaries, the foregoing financial statements shall be on a consolidated basis to the extent that the accounts of the Company and its subsidiaries are consolidated, and shall be accompanied by similar financial statements for any significant subsidiary which is not so consolidated.

(g) The Company will apply the net proceeds from the sale of the Shares being sold by it in the manner set forth under the caption "Use of Proceeds" in the Prospectus.

(h) The Company will maintain a transfer agent and, if necessary under the jurisdiction of incorporation of the Company, a registrar (which may be the same entity as the transfer agent) for its Common Stock.

(i) The Company will file Form SR in conformity with the requirements of the Act and the Rules and Regulations.

(j) If the transactions contemplated hereby are not consummated by reason of any failure, refusal or inability on the part of the Company to perform any agreement on its part to be performed hereunder or to fulfill any condition of the Underwriters' obligations hereunder, or if the Company shall terminate this Agreement pursuant to Section 11(a) hereof, or if the Underwriters shall terminate this Agreement pursuant to Section 11(b)(i), the Company will reimburse the several Underwriters for all out-of-pocket expenses (including fees and disbursements of Underwriters' Counsel) reasonably incurred by the Underwriters in investigating or preparing to market or marketing the Shares.

(k) If at any time during the ninety (90) day period after the Registration Statement becomes effective, any rumor, publication or event relating to or affecting the Company shall occur as a result of which in your opinion the market price of the Common Stock

has been or is likely to be materially affected (regardless of whether such rumor, publication or event necessitates a supplement to or amendment of the Prospectus), the Company will, after written notice from you advising the Company to the effect set forth above, forthwith prepare, consult with you concerning the substance of and disseminate a press release or other public statement, reasonably satisfactory to you, responding to or commenting on such rumor, publication or event.

(1) During the Lock-up Period, the Company will not, without the prior written consent of Robertson Stephens & Company LLC, effect the Disposition of, directly or indirectly, any Securities other than the sale of the Firm Shares and the Option Shares to be sold by the Company hereunder and the Company's issuance of options or Common Stock under the Company's presently authorized 1990 Incentive and Nonstatutory Stock Option Plan, the 1996 Stock Option Plan and the 1996 Stock Purchase Plan (collectively, the "Option Plans"),

(m) During a period of ninety (90) days from the effective date of the Registration Statement, the Company will not file a registration statement registering shares under the Option Plans or any other employee benefit plan.

5. Expenses.

(a) The Company agrees with each Underwriter that:

(i) The Company will pay and bear all costs and expenses in connection with the preparation, printing and filing of the Registration Statement (including financial statements, schedules and exhibits), Preliminary Prospectuses and the Prospectus and any amendments or supplements thereto; the printing of this Agreement, the Agreement Among Underwriters, the Selected Dealer Agreement, the Preliminary Blue Sky Survey and any Supplemental Blue Sky Survey, the Underwriters' Questionnaire and Power of Attorney, and any instruments related to any of the foregoing; the issuance and delivery of the Shares hereunder to the several Underwriters, including transfer taxes, if any, the cost of all certificates representing the Shares and transfer agents' and registrars' fees; the fees and disbursements of counsel for the Company; all fees and other charges of the Company's independent certified public accountants; the cost of furnishing to the several Underwriters copies of the Registration Statement (including appropriate exhibits), Preliminary Prospectus and the Prospectus, and any amendments or supplements to any of the foregoing; NASD filing fees and the cost of qualifying the Shares under the laws of such jurisdictions as you may designate (including filing fees and fees and disbursements of Underwriters' Counsel in connection with such NASD filings and Blue Sky qualifications); and all other expenses directly incurred by the Company in connection with the performance of its obligations hereunder.

(ii) In addition to its other obligations under Section 8(a) hereof, the Company agrees that, as an interim measure during the pendency of any claim, action, investigation, inquiry or other proceeding described in Section 8(a) hereof, it will

reimburse the Underwriters on a monthly basis for all reasonable legal or other expenses incurred in connection with investigating or defending any such claim, action, investigation, inquiry or other proceeding, notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Company's obligation to reimburse the Underwriters for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction. To the extent that any such interim reimbursement payment is so held to have been improper, the Underwriters shall promptly return such payment to the Company together with interest, compounded daily, determined on the basis of the prime rate (or other commercial lending rate for borrowers of the highest credit standing) listed from time to time in The Wall Street Journal which represents the base rate on corporate loans posted by a substantial majority of the nation's thirty (30) largest banks (the "Prime Rate"). Any such interim reimbursement payments which are not made to the Underwriters within thirty (30) days of a request for reimbursement shall bear interest at the Prime Rate from the date of such request.

(b) In addition to their other obligations under Section 8(b) hereof, the Underwriters severally and not jointly agree that, as an interim measure during the pendency of any claim, action, investigation, inquiry or other proceeding described in Section 8(b) hereof, they will reimburse the Company on a monthly basis for all reasonable legal or other expenses incurred in connection with investigating or defending any such claim, action, investigation, inquiry or other proceeding, notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Underwriters' obligation to reimburse the Company for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction. To the extent that any such interim reimbursement payment is so held to have been improper, the Company shall promptly return such payment to the Underwriters together with interest, compounded daily, determined on the basis of the Prime Rate. Any such interim reimbursement payments which are not made to the Company within thirty (30) days of a request for reimbursement shall bear interest at the Prime Rate from the date of such request.

(c) It is agreed that any controversy arising out of the operation of the interim reimbursement arrangements set forth in Sections 5(a)(ii) and 5(b) hereof, including the amounts of any requested reimbursement payments, the method of determining such amounts and the basis on which such amounts shall be apportioned among the reimbursing parties, shall be settled by arbitration conducted under the provisions of the Constitution and Rules of the Board of Governors of the New York Stock Exchange, Inc. or pursuant to the Code of Arbitration Procedure of the NASD. Any such arbitration must be commenced by service of a written demand for arbitration or a written notice of intention to arbitrate, therein electing the arbitration tribunal. In the event the party demanding arbitration does not make such designation of an arbitration tribunal in such demand or notice, then the party responding to said demand or notice is authorized to do so. Any such arbitration will be limited to the operation of the interim reimbursement provisions contained in Sections 5(a)(ii) and 5(b) hereof and will not resolve the ultimate propriety or enforceability of the obligation to indemnify for expenses which is created

by the provisions of Sections 8(a) and 8(b) hereof or the obligation to contribute to expenses which is created by the provisions of Section 8(d) hereof.

6. Conditions of Underwriters' Obligations. The obligations of the several Underwriters to purchase and pay for the Shares as provided herein shall be subject to the accuracy, as of the date hereof and the Closing Date and any later date on which Option Shares are to be purchased, as the case may be, of the representations and warranties of the Company herein, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) The Registration Statement shall have become effective not later than 2:00 P.M., San Francisco time, on the date following the date of this Agreement or such later date as shall be consented to in writing by you; and no stop order suspending the effectiveness thereof shall have been issued and no proceedings for that purpose shall have been initiated or, to the knowledge of the Company or any Underwriter, threatened by the Commission, and any request of the Commission for additional information (to be included in the Registration Statement or the Prospectus or otherwise) shall have been complied with to the satisfaction of Underwriters' Counsel.

(b) All corporate proceedings and other legal matters in connection with this Agreement, the form of Registration Statement and the Prospectus, and the registration, authorization, issue, sale and delivery of the Shares, shall have been reasonably satisfactory to Underwriters' Counsel, and such counsel shall have been furnished with such papers and information as they may reasonably have requested to enable them to pass upon the matters referred to in this Section.

(c) Subsequent to the execution and delivery of this Agreement and prior to the Closing Date, there shall not have been any change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company from that set forth in the Registration Statement or Prospectus, which, in your sole judgment, is material and adverse and that makes it, in your sole judgment, impracticable or inadvisable to proceed with the public offering of the Shares as contemplated by the Prospectus.

(d) You shall have received on the Closing Date and on any later date on which Option Shares are purchased, as the case may be, the following opinion of counsel for the Company, dated the Closing Date or such later date on which Option Shares are purchased, addressed to the Underwriters and with reproduced copies or signed counterparts thereof for each of the Underwriters, to the effect that:

(i) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation;

(ii) The Company has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Prospectus;

(iii) To such counsel's knowledge, the Company does not own or control, directly or indirectly, any corporation, association or other entity;

(iv) The authorized, issued and outstanding capital stock of the Company is as set forth in the Prospectus under the caption "Capitalization" as of the dates stated therein, the issued and outstanding shares of capital stock of the Company have been duly and validly issued and are fully paid and nonassessable, and, to such counsel's knowledge, will not have been issued in violation of or subject to any preemptive right, co-sale right, registration right, right of first refusal or other similar right;

(v) The Firm Shares or the Option Shares, as the case may be, to be issued by the Company pursuant to the terms of this Agreement have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms hereof, will be duly and validly issued and fully paid and nonassessable, and, to such counsel's knowledge after due inquiry, will not have been issued in violation of or subject to any preemptive right, co-sale right, registration right, right of first refusal or other similar right of shareholders pursuant to any agreement binding upon the Company;

(vi) The Company has the corporate power and authority to enter into this Agreement and to issue, sell and deliver to the Underwriters the Shares to be issued and sold by it hereunder;

(vii) This Agreement has been duly authorized by all necessary corporate action on the part of the Company and has been duly executed and delivered by the Company and, assuming due authorization, execution and delivery by you, is a valid and binding agreement of the Company, enforceable in accordance with its terms, except insofar as indemnification and contribution provisions may be limited by applicable law and except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting creditors' rights generally or by general equitable principles;

(viii) The Registration Statement has become effective under the Act and, to such counsel's knowledge, no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or threatened under the Act;

(ix) The Registration Statement and the Prospectus, and each amendment or supplement thereto (other than the financial statements (including notes thereto and supporting schedules) and financial data derived therefrom as to which such counsel need express no opinion), as of the effective date of the Registration Statement, complied as to form in all material respects with the requirements of the Act and the applicable Rules and Regulations;

(x) The information in the Prospectus under the caption "Description of Capital Stock," to the extent that it constitutes matters of law or legal conclusions, has been reviewed by such counsel and is a fair summary of such matters and conclusions; and the forms of certificates evidencing the Common Stock and filed as exhibits to the Registration Statement comply with Massachusetts law;

(xi) The description in the Registration Statement and the Prospectus of the charter and bylaws of the Company and of statutes are accurate and fairly present in all material respects the information required to be presented by the Act and the applicable Rules and Regulations;

(xii) To such counsel's knowledge, there are no agreements, contracts, leases or documents to which the Company is a party of a character required to be described or referred to in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement which are not described or referred to therein or filed as required;

(xiii) The performance of this Agreement and the consummation of the transactions herein contemplated (other than performance of the Company's indemnification and contribution obligations hereunder, concerning which no opinion need be expressed) will not (a) result in any violation of the Company's charter or bylaws or (b) to such counsel's knowledge, result in a material breach or violation of any of the terms and provisions of, or constitute a material default under, any bond, debenture, note or other evidence of indebtedness, or under any lease, contract, indenture, mortgage, deed of trust, loan agreement, joint venture or other agreement or instrument known to such counsel to which the Company is a party or by which its properties are bound, or any applicable statute, rule or regulation known to such counsel or, to such counsel's knowledge, any order, writ or decree of any court, government or governmental agency or body having jurisdiction over the Company or over any of its properties or operations;

(xiv) No consent, approval, authorization or order of or qualification with any court, government or governmental agency or body having jurisdiction over the Company or over any of its properties or operations is necessary in connection with the consummation by the Company of the transactions herein contemplated, except such as have been obtained under the Act, under the Exchange Act or such as may be required under state or other securities or Blue Sky laws in connection with the purchase and the distribution of the Shares by the Underwriters;

(xv) To such counsel's knowledge, there are no legal or governmental proceedings pending or threatened against the Company of a character required to be disclosed in the Registration Statement or the Prospectus by the Act or the Rules and Regulations, other than those described therein;

(xvi) To such counsel's knowledge, the Company is not presently (a) in material violation of its charter or bylaws, or (b) in material breach of any applicable

statute, rule or regulation known to such counsel or, to such counsel's knowledge, any order, writ or decree of any court or governmental agency or body having jurisdiction over the Company or over any of its properties or operations; and

(xvii) To such counsel's knowledge, except as set forth in the Registration Statement and Prospectus, no holders of Common Stock or other securities of the Company have registration rights with respect to securities of the Company and, except as set forth in the Registration Statement and Prospectus, all holders of securities of the Company having rights known to such counsel to registration of such shares of Common Stock or other securities, because of the filing of the Registration Statement by the Company have, with respect to the offering contemplated thereby, waived such rights or such rights have expired by reason of lapse of time following notification of the Company's intent to file the Registration Statement.

In addition, such counsel shall state that such counsel has participated in conferences with officials and other representatives of the Company, the Representatives, Underwriters' Counsel and the independent certified public accountants of the Company, at which such conferences the contents of the Registration Statement and Prospectus and related matters were discussed, and although they have not verified the accuracy or completeness of the statements contained in the Registration Statement or the Prospectus, nothing has come to the attention of such counsel which leads them to believe that, at the time the Registration Statement became effective, the Registration Statement and any amendment or supplement thereto (other than the financial statements and notes thereto including supporting schedules and other financial and statistical information derived therefrom, as to which such counsel need express no comment) contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or at the Closing Date or any later date on which the Option Shares are to be purchased, as the case may be, the Prospectus and any amendment or supplement thereto (except as aforesaid) contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

Counsel rendering the foregoing opinion may rely as to questions of law not involving the laws of the United States or the Commonwealth of Massachusetts upon opinions of local counsel, and as to questions of fact upon representations or certificates of officers of the Company, and of government officials, in which case their opinion is to state that they are so relying and that they have no knowledge of any material misstatement or inaccuracy in any such opinion, representation or certificate. Copies of any opinion, representation or certificate so relied upon shall be delivered to you, as Representatives of the Underwriters, and to Underwriters' Counsel.

(e) You shall have received on the Closing Date and on any later date on which Option Shares are purchased, as the case may be, the opinion of Cesari & McKenna, patent counsel to the Company, to the effect that they serve as patent counsel to the Company with respect to the Company's Intellectual Property, and that:



(i) The statements in the Registration Statement and Prospectus (x) under the caption "Risk Factors -- \_\_\_\_\_," and (y) under the caption "Business -- \_\_\_\_\_" insofar as such statements constitute summaries of matters of law, are accurate and complete statements or summaries of the matters set forth therein.

(ii) To such counsel's knowledge, there are no legal or governmental proceedings pending (other than patent applications pending) relating to patents or Intellectual Property owned or used by the Company, and to such counsel's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others, except as set forth in the Prospectus.

In addition, such counsel shall state that although they have not verified the accuracy or completeness of the statements contained in the Prospectus, nothing has come to the attention of such counsel that caused them to believe that, at the time the Registration Statement became effective, or at the Closing Date or at any later date on which Option Shares are purchased, as the case may be, the Prospectus (i) under the caption "Risk Factors -- \_\_\_\_\_"; and (ii) under the caption "Business -- \_\_\_\_\_" contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(f) You shall have received on the Closing Date and on any later date on which Option Shares are to be purchased, as the case may be, an opinion of Testa, Hurwitz & Thibault, LLP, in form and substance satisfactory to you, with respect to the sufficiency of all such corporate proceedings and other legal matters relating to this Agreement and the transactions contemplated hereby as you may reasonably require, and the Company shall have furnished to such counsel such documents as they may have reasonably requested for the purpose of enabling them to pass upon such matters.

(g) You shall have received on the Closing Date and on any later date on which Option Shares are to be purchased, as the case may be, a letter from Deloitte & Touche LLP addressed to the Company and the Underwriters, dated the Closing Date or such later date on which Option Shares are to be purchased, as the case may be, confirming that they are independent certified public accountants with respect to the Company within the meaning of the Act and the applicable published Rules and Regulations and based upon the procedures described in such letter delivered to you concurrently with the execution of this Agreement (herein called the "Original Letter"), but carried out to a date not more than five (5) business days prior to the Closing Date or such later date on which Option Shares are to be purchased, as the case may be, (i) confirming, to the extent true, that the statements and conclusions set forth in the Original Letter are accurate as of the Closing Date or such later date on which Option Shares are to be purchased, as the case may be, and (ii) setting forth any revisions and additions to the statements and conclusions set forth in the Original Letter which are necessary to reflect any changes in the facts described in the Original Letter since the date of such letter, or to reflect the availability of more recent financial statements, data or information. The letter shall not disclose

any change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company from that set forth in the Registration Statement or Prospectus, which, in your sole judgment, is material and adverse and that makes it, in your sole judgment, impracticable or inadvisable to proceed with the public offering of the Shares as contemplated by the Prospectus. The Original Letter from Deloitte & Touche LLP shall be addressed to or for the use of the Underwriters in form and substance satisfactory to the Underwriters and shall (i) represent, to the extent true, that they are independent certified public accountants with respect to the Company within the meaning of the Act and the applicable published Rules and Regulations, (ii) set forth their opinion with respect to their examination of the balance sheet of the Company as of December 31, 1995 and related statements of operations, shareholders' equity, and cash flows for the twelve (12) months ended December 31, 1995, (iii) state that Deloitte & Touche LLP has performed the procedure set out in Statement on Auditing Standards No. 71 ("SAS 71") for a review of interim financial information and providing the report of Deloitte & Touche LLP in SAS 71 on the financial statements for each of the quarters ended June 30, 1996 and (iv) address other matters agreed upon by Deloitte & Touche LLP and you.

(h) You shall have received on the Closing Date and on any later date on which Option Shares are to be purchased, as the case may be, a certificate of the Company, dated the Closing Date or such later date on which Option Shares are to be purchased, as the case may be, signed by the President and Chief Executive Officer, and Chief Financial Officer of the Company, to the effect that, and you shall be satisfied that:

(i) The representations and warranties of the Company in this Agreement are true and correct, as if made on and as of the Closing Date or any later date on which Option Shares are to be purchased, as the case may be, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date or any later date on which Option Shares are to be purchased, as the case may be;

(ii) No stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or threatened under the Act;

(iii) When the Registration Statement became effective and at all times subsequent thereto up to the delivery of such certificate, the Registration Statement and the Prospectus, and any amendments or supplements thereto, contained all material information required to be included therein by the Act and the Rules and Regulations, and in all material respects conformed to the requirements of the Act and the Rules and Regulations, the Registration Statement, and any amendment or supplement thereto, did not and does not include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, the Prospectus, and any amendment or supplement thereto, did not and does not include any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the

circumstances under which they were made, not misleading, and, since the effective date of the Registration Statement, there has occurred no event required to be set forth in an amended or supplemented Prospectus which has not been so set forth; and

(iv) Subsequent to the respective dates as of which information is given in the Registration Statement and Prospectus, there has not been (a) any material adverse change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company, (b) any transaction that is material to the Company, except transactions entered into in the ordinary course of business, (c) any obligation, direct or contingent, that is material to the Company, incurred by the Company, except obligations incurred in the ordinary course of business, (d) any change in the capital stock or outstanding indebtedness of the Company that is material to the Company and has not been disclosed in the Registration Statement and Prospectus, (e) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company, or (f) any loss or damage (whether or not insured) to the property of the Company which has been sustained or will have been sustained which has a material adverse effect on the condition (financial or otherwise), earnings, operations, business or business prospects of the Company.

(i) The Company shall have obtained and delivered to you an agreement from each executive officer and director of the Company, and each beneficial owner of 1% or more of the shares of Common Stock in writing prior to the date hereof that such person will not, during the Lock-up Period, effect the Disposition of any Securities now owned or hereafter acquired directly by such person or with respect to which such person has or hereafter acquires the power of disposition, otherwise than (i) as a bona fide gift or gifts, provided the donee or donees thereof agree in writing to be bound by this restriction, (ii) as a distribution to limited partners or shareholders of such person, provided that the distributees thereof agree in writing to be bound by the terms of this restriction, or (iii) with the prior written consent of Robertson, Stephens & Company LLC. The foregoing restriction is expressly agreed to preclude the holder of the Securities from engaging in any hedging or other transaction which is designed to or reasonably expected to lead to or result in a Disposition of Securities during the Lock-up Period, even if such Securities would be disposed of by someone other than the such holder. Such prohibited hedging or other transactions would include, without limitation, any short sale (whether or not against the box) or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any Securities or with respect to any security (other than a broad-based market basket or index) that includes, relates to or derives any significant part of its value from Securities. Furthermore, such person will have also agreed and consented to the entry of stop transfer instructions with the Company's transfer agent against the transfer of the Securities held by such person except in compliance with this restriction.

(j) The Company shall have furnished to you such further certificates and documents as you shall reasonably request (including certificates of officers of the Company) as to the accuracy of the representations and warranties of the Company herein, as to the

performance by the Company of its obligations hereunder and as to the other conditions concurrent and precedent to the obligations of the Underwriters hereunder.

All such opinions, certificates, letters and documents will be in compliance with the provisions hereof only if they are reasonably satisfactory to Underwriters' Counsel. The Company will furnish you with such number of conformed copies of such opinions, certificates, letters and documents as you shall reasonably request.

7. Option Shares.

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company hereby grants to the several Underwriters, for the purpose of covering over-allotments in connection with the distribution and sale of the Firm Shares only, a nontransferable option to purchase up to an aggregate of 510,000 Option Shares at the purchase price per share for the Firm Shares set forth in Section 3 hereof. Such option may be exercised by the Representatives on behalf of the several Underwriters on one (1) or more occasions in whole or in part during the period of thirty (30) days after the date on which the Firm Shares are initially offered to the public, by giving written notice to the Company. The number of Option Shares to be purchased by each Underwriter upon the exercise of such option shall be the same proportion of the total number of Option Shares to be purchased by the several Underwriters pursuant to the exercise of such option as the number of Firm Shares purchased by such Underwriter (set forth in Schedule A hereto) bears to the total number of Firm Shares purchased by the several Underwriters (set forth in Schedule A hereto), adjusted by the Representatives in such manner as to avoid fractional shares.

Delivery of definitive certificates for the Option Shares to be purchased by the several Underwriters pursuant to the exercise of the option granted by this Section 7 shall be made against payment of the purchase price therefor by the several Underwriters by certified or official bank check or checks drawn in next-day funds, payable to the order of the Company (and the Company agrees not to deposit any such check in the bank on which it is drawn, and not to take any other action with the purpose or effect of receiving immediately available funds, until the business day following the date of its delivery to the Company). In the event of any breach of the foregoing, the Company shall reimburse the Underwriters for the interest lost and any other expenses borne by them by reason of such breach. Such delivery and payment shall take place at the offices of Foley, Hoag & Eliot LLP, One Post Office Square, Boston, Massachusetts 02109 or at such other place as may be agreed upon among the Representatives and the Company (i) on the Closing Date, if written notice of the exercise of such option is received by the Company at least two (2) full business days prior to the Closing Date, or (ii) on a date which shall not be later than the third (3rd) full business day following the date the Company receives written notice of the exercise of such option, if such notice is received by the Company less than two (2) full business days prior to the Closing Date.

The certificates for the Option Shares to be so delivered will be made available to you at such office or such other location including, without limitation, in New York

City, as you may reasonably request for checking at least one (1) full business day prior to the date of payment and delivery and will be in such names and denominations as you may request, such request to be made at least two (2) full business days prior to such date of payment and delivery. If the Representatives so elect, delivery of the Option Shares may be made by credit through full fast transfer to the accounts at The Depository Trust Company designated by the Representatives.

It is understood that you, individually, and not as the Representatives of the several Underwriters, may (but shall not be obligated to) make payment of the purchase price on behalf of any Underwriter or Underwriters whose check or checks shall not have been received by you prior to the date of payment and delivery for the Option Shares to be purchased by such Underwriter or Underwriters. Any such payment by you shall not relieve any such Underwriter or Underwriters of any of its or their obligations hereunder.

(b) Upon exercise of any option provided for in Section 7(a) hereof, the obligations of the several Underwriters to purchase such Option Shares will be subject (as of the date hereof and as of the date of payment and delivery for such Option Shares) to the accuracy of and compliance with the representations, warranties and agreements of the Company herein, to the accuracy of the statements of the Company and officers of the Company made pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder, and to the condition that all proceedings taken at or prior to the payment date in connection with the sale and transfer of such Option Shares shall be satisfactory in form and substance to you and to Underwriters' Counsel, and you shall have been furnished with all such documents, certificates and opinions as you may request in order to evidence the accuracy and completeness of any of the representations, warranties or statements, the performance of any of the covenants or agreements of the Company or the compliance with any of the conditions herein contained.

#### 8. Indemnification and Contribution.

(a) The Company agrees to indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject (including, without limitation, in its capacity as an Underwriter or as a "qualified independent underwriter" within the meaning of Schedule E of the Bylaws of the NASD), under the Act, the Exchange Act or otherwise, specifically including, but not limited to, losses, claims, damages or liabilities, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) any breach of any representation, warranty, agreement or covenant of the Company herein contained, (ii) any untrue statement or alleged untrue statement of any material fact contained in the Registration Statement or any amendment or supplement thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, or (iii) any untrue statement or alleged untrue statement of any material fact contained in any Preliminary Prospectus or the Prospectus or any amendment or supplement thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were

made, not misleading, and agrees to reimburse each Underwriter for any legal or other expenses reasonably incurred by it in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus or the Prospectus, or any amendment or supplement thereto, in reliance upon, and in conformity with, written information relating to any Underwriter furnished to the Company by such Underwriter, directly or through you, specifically for use in the preparation thereof and, provided further, that the indemnity agreement provided in this Section 8(a) with respect to any Preliminary Prospectus shall not inure to the benefit of any Underwriter from whom the person asserting any losses, claims, damages, liabilities or actions based upon any untrue statement or alleged untrue statement of material fact or omission or alleged omission to state therein a material fact purchased Shares, if a copy of the Prospectus in which such untrue statement or alleged untrue statement or omission or alleged omission was corrected had not been sent or given to such person within the time required by the Act and the Rules and Regulations, unless such failure is the result of noncompliance by the Company with Section 4(d) hereof.

The indemnity agreement in this Section 8(a) shall extend upon the same terms and conditions to, and shall inure to the benefit of, each person, if any, who controls any Underwriter within the meaning of the Act or the Exchange Act. This indemnity agreement shall be in addition to any liabilities which the Company may otherwise have.

(b) Each Underwriter, severally and not jointly, agrees to indemnify and hold harmless the Company against any losses, claims, damages or liabilities, joint or several, to which the Company may become subject under the Act, the Exchange Act or otherwise, specifically including, but not limited to, losses, claims, damages or liabilities, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) any breach of any representation, warranty, agreement or covenant of such Underwriter herein contained, (ii) any untrue statement or alleged untrue statement of any material fact contained in the Registration Statement or any amendment or supplement thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, or (iii) any untrue statement or alleged untrue statement of any material fact contained in any Preliminary Prospectus or the Prospectus or any amendment or supplement thereto, or the omission or alleged omission to state therein a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, in the case of subparagraphs (ii) and (iii) of this Section 8(b) to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company by such Underwriter, directly or through you, specifically for use in the preparation thereof, and agrees to reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such loss, claim, damage, liability or action.

The indemnity agreement in this Section 8(b) shall extend upon the same terms and conditions to, and shall inure to the benefit of, each officer of the Company who signed the Registration Statement and each director of the Company, and each person, if any, who controls the Company within the meaning of the Act or the Exchange Act. This indemnity agreement shall be in addition to any liabilities which each Underwriter may otherwise have.

(c) Promptly after receipt by an indemnified party under this Section 8 of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against any indemnifying party under this Section 8, notify the indemnifying party in writing of the commencement thereof but the omission so to notify the indemnifying party will not relieve it from any liability which it may have to any indemnified party otherwise than under this Section 8. In case any such action is brought against any indemnified party, and it notified the indemnifying party of the commencement thereof, the indemnifying party will be entitled to participate therein and, to the extent that it shall elect by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party; provided, however, that if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 8 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the next preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the expenses of more than one separate counsel (together with appropriate local counsel) approved by the indemnifying party representing all the indemnified parties under Section 8(a) or 8(b) hereof who are parties to such action), (ii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized the employment of counsel for the indemnified party at the expense of the indemnifying party. In no event shall any indemnifying party be liable in respect of any amounts paid in settlement of any action unless the indemnifying party shall have approved the terms of such settlement; provided that such approval shall not be unreasonably withheld. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnification could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such proceeding.

(d) In order to provide for just and equitable contribution in any action in which a claim for indemnification is made pursuant to this Section 8, but such indemnification is for any reason held to be unenforceable by the indemnified parties although applicable in accordance with its terms, all the parties hereto shall contribute to the aggregate losses, claims, damages or liabilities to which they may be subject (after contribution from others) in such proportion so that the Underwriters severally and not jointly are responsible pro rata for the portion represented by the percentage that the underwriting discount bears to the initial public offering price, and the Company is responsible for the remaining portion, provided, however, that (i) no Underwriter shall be required to contribute any amount in excess of the underwriting discount applicable to the Shares purchased by such Underwriter in excess of the amount of damages which such Underwriter is otherwise required to pay and (ii) no person guilty of a fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who is not guilty of such fraudulent misrepresentation. The contribution agreement in this Section 8(d) shall extend upon the same terms and conditions to, and shall inure to the benefit of, each person, if any, who controls the Underwriters or the Company within the meaning of the Act or the Exchange Act and each officer of the Company who signed the Registration Statement and each director of the Company.

(e) The parties to this Agreement hereby acknowledge that they are sophisticated business persons who were represented by counsel during the negotiations regarding the provisions hereof including, without limitation, the provisions of this Section 8, and are fully informed regarding said provisions. They further acknowledge that the provisions of this Section 8 fairly allocate the risks in light of the ability of the parties to investigate the Company and its business in order to assure that adequate disclosure is made in the Registration Statement and Prospectus as required by the Act and the Exchange Act.

9. Representations, Warranties, Covenants and Agreements to Survive Delivery. All representations, warranties, covenants and agreements of the Company and the Underwriters herein or in certificates delivered pursuant hereto, and the indemnity and contribution agreements contained in Section 8 hereof shall remain operative and in full force and effect regardless of any investigation made by or on behalf of any Underwriter or any controlling person within the meaning of the Act or the Exchange Act, or by or on behalf of the Company, or any of its officers, directors or controlling persons within the meaning of the Act or the Exchange Act, and shall survive the delivery of the Shares to the several Underwriters hereunder or termination of this Agreement.

10. Substitution of Underwriters. If any Underwriter or Underwriters shall fail to take up and pay for the number of Firm Shares agreed by such Underwriter or Underwriters to be purchased hereunder upon tender of such Firm Shares in accordance with the terms hereof, and if the aggregate number of Firm Shares which such defaulting Underwriter or Underwriters so agreed but failed to purchase does not exceed 10% of the Firm Shares, the remaining Underwriters shall be obligated, severally in proportion to their respective commitments hereunder, to take up and pay for the Firm Shares of such defaulting Underwriter or Underwriters.



If any Underwriter or Underwriters so defaults and the aggregate number of Firm Shares which such defaulting Underwriter or Underwriters agreed but failed to take up and pay for exceeds 10% of the Firm Shares, the remaining Underwriters shall have the right, but shall not be obligated, to take up and pay for (in such proportions as may be agreed upon among them) the Firm Shares which the defaulting Underwriter or Underwriters so agreed but failed to purchase. If such remaining Underwriters do not, at the Closing Date, take up and pay for the Firm Shares which the defaulting Underwriter or Underwriters so agreed but failed to purchase, the Closing Date shall be postponed for twenty-four (24) hours to allow the several Underwriters the privilege of substituting within twenty-four (24) hours (including non-business hours) another underwriter or underwriters (which may include any nondefaulting Underwriter) satisfactory to the Company. If no such underwriter or underwriters shall have been substituted as aforesaid by such postponed Closing Date, the Closing Date may, at the option of the Company, be postponed for a further twenty-four (24) hours, if necessary, to allow the Company the privilege of finding another underwriter or underwriters, satisfactory to you, to purchase the Firm Shares which the defaulting Underwriter or Underwriters so agreed but failed to purchase. If it shall be arranged for the remaining Underwriters or substituted underwriter or underwriters to take up the Firm Shares of the defaulting Underwriter or Underwriters as provided in this Section 10, (i) the Company shall have the right to postpone the time of delivery for a period of not more than seven (7) full business days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees promptly to file any amendments to the Registration Statement or supplements to the Prospectus which may thereby be made necessary, and (ii) the respective number of Firm Shares to be purchased by the remaining Underwriters and substituted underwriter or underwriters shall be taken as the basis of their underwriting obligation. If the remaining Underwriters shall not take up and pay for all such Firm Shares so agreed to be purchased by the defaulting Underwriter or Underwriters or substitute another underwriter or underwriters as aforesaid and the Company shall not find or shall not elect to seek another underwriter or underwriters for such Firm Shares as aforesaid, then this Agreement shall terminate.

In the event of any termination of this Agreement pursuant to the preceding paragraph of this Section 10, the Company shall not be liable to any Underwriter (except as provided in Sections 5 and 8 hereof) nor shall any Underwriter (other than an Underwriter who shall have failed, otherwise than for some reason permitted under this Agreement, to purchase the number of Firm Shares agreed by such Underwriter to be purchased hereunder, which Underwriter shall remain liable to the Company and the other Underwriters for damages, if any, resulting from such default) be liable to the Company (except to the extent provided in Sections 5 and 8 hereof).

The term "Underwriter" in this Agreement shall include any person substituted for an Underwriter under this Section 10.

## 11. Effective Date of this Agreement and Termination.

(a) This Agreement shall become effective at the earlier of (i) 6:30 A.M., San Francisco time, on the first full business day following the date of this Agreement, or (ii) the time of the initial public offering of any of the Shares by the Underwriters after the Registration Statement becomes effective. The time of the initial public offering shall mean the time of the release by you, for publication, of the first newspaper advertisement relating to the Shares, or the time at which the Shares are first generally offered by the Underwriters to the public by letter, telephone, telegram or telecopy, whichever shall first occur. By giving notice as set forth in Section 12 before the time this Agreement becomes effective, you, as Representatives of the several Underwriters, or the Company, may prevent this Agreement from becoming effective without liability of any party to any other party, except as provided in Sections 4(j), 5 and 8 hereof.

(b) You, as Representatives of the several Underwriters, shall have the right to terminate this Agreement by giving notice as hereinafter specified at any time at or prior to the Closing Date or on or prior to any later date on which Option Shares are to be purchased, as the case may be, (i) if the Company shall have failed, refused or been unable to perform any agreement on its part to be performed, or because any other condition of the Underwriters' obligations hereunder required to be fulfilled is not fulfilled, including, without limitation, any change in the condition (financial or otherwise), earnings, operations, business or business prospects of the Company from that set forth in the Registration Statement or Prospectus, which, in your sole judgment, is material and adverse, or (ii) if additional material governmental restrictions, not in force and effect on the date hereof, shall have been imposed upon trading in securities generally or minimum or maximum prices shall have been generally established on the New York Stock Exchange or on the American Stock Exchange or in the over the counter market maintained by the NASD, or trading in securities generally shall have been suspended on either such exchange or in the over the counter market maintained by the NASD, or if a banking moratorium shall have been declared by federal, New York or California authorities, or (iii) if the Company shall have sustained a loss by strike, fire, flood, earthquake, accident or other calamity of such character as to interfere materially with the conduct of the business and operations of the Company regardless of whether or not such loss shall have been insured, or (iv) if there shall have been a material adverse change in the general political or economic conditions or financial markets as in your reasonable judgment makes it inadvisable or impracticable to proceed with the offering, sale and delivery of the Shares, or (v) if there shall have been an outbreak or escalation of hostilities or of any other insurrection or armed conflict or the declaration by the United States of a national emergency which, in the reasonable opinion of the Representatives, makes it impracticable or inadvisable to proceed with the public offering of the Shares as contemplated by the Prospectus. In the event of termination pursuant to subparagraph (i) above, the Company shall remain obligated to pay costs and expenses pursuant to Sections 4(j), 5 and 8 hereof. Any termination pursuant to any of subparagraphs (ii) through (v) above shall be without liability of any party to any other party except as provided in Sections 5 and 8 hereof.

If you elect to prevent this Agreement from becoming effective or to terminate this Agreement as provided in this Section 11, you shall promptly notify the Company by

telephone, telecopy or telegram, in each case confirmed by letter. If the Company shall elect to prevent this Agreement from becoming effective, the Company shall promptly notify you by telephone, telecopy or telegram, in each case confirmed by letter.

12. Notices. All notices or communications hereunder, except as herein otherwise specifically provided, shall be in writing and if sent to you shall be mailed, delivered, telegraphed (and confirmed by letter) or telecopied (and confirmed by letter) to you c/o Robertson, Stephens & Company LLC, 555 California Street, Suite 2600, San Francisco, California 94104, telecopier number (415) 781-0278, Attention: General Counsel; if sent to the Company, such notice shall be mailed, delivered, telegraphed (and confirmed by letter) or telecopied (and confirmed by letter) to One Oak Park, Bedford, Massachusetts 01730, telecopier number (617) 276-4001, Attention: James C. Bender, President and Chief Executive Officer.

13. Parties. This Agreement shall inure to the benefit of and be binding upon the several Underwriters and the Company and their respective executors, administrators, successors and assigns. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person or corporation, other than the parties hereto and their respective executors, administrators, successors and assigns, and the controlling persons within the meaning of the Act or the Exchange Act, officers and directors referred to in Section 8 hereof, any legal or equitable right, remedy or claim in respect of this Agreement or any provisions herein contained, this Agreement and all conditions and provisions hereof being intended to be and being for the sole and exclusive benefit of the parties hereto and their respective executors, administrators, successors and assigns and said controlling persons and said officers and directors, and for the benefit of no other person or corporation. No purchaser of any of the Shares from any Underwriter shall be construed a successor or assign by reason merely of such purchase.

In all dealings with the Company under this Agreement, you shall act on behalf of each of the several Underwriters, and the Company shall be entitled to act and rely upon any statement, request, notice or agreement made or given by you jointly or by Robertson, Stephens & Company LLC on behalf of you.

14. Applicable Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of California.

15. Counterparts. This Agreement may be signed in several counterparts, each of which will constitute an original.

If the foregoing correctly sets forth the understanding among the Company and the several Underwriters, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement among the Company and the several Underwriters.

Very truly yours,

AWARE, INC.

By \_\_\_\_\_

Accepted as of the date first above written:

ROBERTSON, STEPHENS & COMPANY LLC  
FURMAN SELZ LLC

On their behalf and on behalf of each of the  
several Underwriters named in Schedule A hereto.

ROBERTSON, STEPHENS & COMPANY LLC

By ROBERTSON, STEPHENS & COMPANY GROUP, L.L.C.

By \_\_\_\_\_  
Authorized Signatory

SCHEDULE A

Underwriters	Number of Firm Shares To Be Purchased
--------------	--

Robertson, Stephens & Company LLC.....	
Furman Selz LLC.....	

Total.....	----- 3,400,000 =====
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FEDERAL IDENTIFICATION  
NO. 04-2911026  
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Examiner

THE COMMONWEALTH OF MASSACHUSETTS  
WILLIAM FRANCIS GALVIN  
Secretary of the Commonwealth  
One Ashburton Place, Boston, Massachusetts 02108-1512

RESTATED ARTICLES OF ORGANIZATION  
(GENERAL LAWS, CHAPTER 156B, SECTION 74)

We, James C. Bender, \*President

Name  
Approved

and Valerie L. Pawson, \*Clerk

of AWARE, INC.

(Exact name of corporation)

located at One Oak Park, Bedford, MA 01730

(Street address of corporation Massachusetts)

do hereby certify that the following Restatement of the Articles of  
Organization was duly adopted at a meeting held on June 6, 1996 by a  
vote of the directors/or:

\_\_\_\_ shares of \_\_\_\_\_ of \_\_\_\_\_ shares outstanding.  
(type, class & series, if any)

\_\_\_\_ shares of \_\_\_\_\_ of \_\_\_\_\_ shares outstanding, and  
(type, class & series, if any)

\_\_\_\_ shares of \_\_\_\_\_ of \_\_\_\_\_ shares outstanding.  
(type, class & series, if any)

\*\*being at least a majority of each type, class or series  
outstanding and entitled to vote thereon:\*\*being at least  
two-thirds of each type, class or series outstanding and entitled  
to vote thereon and of each type, class or series of stock whose  
rights are adversely affected thereby:

#### ARTICLE I

The name of the corporation is:

AWARE, INC.

#### ARTICLE II

The purpose of the corporation is to engage in the following  
business activities:

See Rider 2 attached

\*Delete the inapplicable words. \*\*Delete the inapplicable clause.  
Note: If the space provided under any article or item on this form  
is insufficient, additions shall be set forth on separate 8 1/2 X 11  
sheets of paper with a left margin of at least 1 inch. Additions  
to more than one article may be made on a single sheet so long as  
each article requiring each addition is clearly indicated.

C [ ]  
P [ ]  
M [ ]  
R.A. [ ]

P.C.

## ARTICLE III

State the total number of shares and par value, if any, of each class of stock which the corporation is authorized to issue:

WITHOUT PAR VALUE		WITH PAR VALUE		
TYPE	NUMBER OF SHARES	TYPE	NUMBER OF SHARES	PAR VALUE
Common:		Common:	30,000,000	1 cent
Preferred:		Preferred:	1,048,356	\$1.00
		Series C	5,410	
		Series D	13,512	Undesignated 1,000,000
		Series E	29,432	

## ARTICLE IV

If more than one class of stock is authorized, state a distinguishing designation for each class. Prior to the issuance of any share of a class, if shares of another class are outstanding, the corporation must provide a description of the preferences, voting powers, qualifications, and special or relative rights or privileges of that class and of each other class of which shares are outstanding and of each series then established within any class.

See Rider 4(i) - (viii) attached

## ARTICLE V

The restrictions, if any, imposed by the Articles of Organization upon the transfer of shares of stock of any class are:

None

## ARTICLE VI

\*\*Other lawful provisions, if any, for the conduct and regulation of the business and affairs of the corporation, for its voluntary dissolution, or for limiting, defining, or regulating the powers of the corporation, or of its directors or stockholders, or of any class of stockholders:

See Rider 6 A-F attached

\*\*If there are no provisions state "None".

Note: The preceding six(6) articles are considered to be permanent and may ONLY be changed by filing appropriate Articles of Amendment.

ARTICLE VII

The effective date of the restated Articles of Organization of the corporation shall be the date approved and filed by the Secretary of the Commonwealth. If a later effective date is desired, specify such date which shall not be more than thirty days after the date of filing.

ARTICLE VIII

The information contained in Article VIII is not a permanent part of the Articles of Organization.

- a. The street address (post office boxes are not acceptable) of the principal office of the corporation in Massachusetts is:

One Oak Park, Bedford, MA 01730

- b. The name, residential address and post office address of each director and officer of the corporation is as follows:

	NAME	RESIDENTIAL ADDRESS	POST OFFICE ADDRESS
President:	James C. Bender	272 Farley Rd., Hollis, NH	03049
Treasurer:	John Walsh	213 Forest St., Weymouth, MA	02190
Clerk:	Valerie L. Pawson	196 Eliot St., Natick, MA	01760
Directors:	James C. Bender	272 Farley Road, Hollis, NH	03049
	John Kerr	336 Essex Road, Kenilworth, IL	60043
	John Stafford	60 Strawberry Hill Road, Dover, MA	02030
	Charles Stewart	7 Bristol Road, Northbrook, IL	60093
	Jerald Fishman	169 Hickory Road, Weston, MA	

- c. The fiscal year (i.e., tax year) of the corporation shall end on the last day of the month of: December

- d. The name and business address of the resident agent, if any, of the corporation is:

One Oak Park, Bedford, MA 01730

\*\*We further certify that the foregoing Restated Articles of Organization affect no amendments to the Articles of Organization of the corporation as heretofore amended, except amendments to the following articles. Briefly describe amendments below:

- Article 2 - shorten purposes  
Article 3 - increase common & preferred  
Article 4 - various  
Article 5 - various

SIGNED UNDER THE PENALTIES OF PERJURY, this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, \_\_\_\_\_, "President/"Vice President, \_\_\_\_\_, "Clerk/"Assistant Clerk.

\*Delete the inapplicable words.      \*\*If there are no amendments, state "None".



AWARE, INC.

Rider 2 to Restated Articles of Organization

To research, develop, manufacture and market computer software, hardware, systems and electronic components, equipment and other products utilizing computers and other information processing technologies.

In general, to carry on any lawful business whatsoever in connection with the foregoing, or which is calculated directly or indirectly to promote the interest of the corporation or to enhance the value of its properties and which is not contrary to Chapter 156B of the General Laws of the Commonwealth of Massachusetts, and to do or cause to have done any and all such acts and things as may be necessary, desirable, convenient, or incidental to the consummation or accomplishment of any or all of the foregoing purposes.

AWARE, INC.

Rider 4 to Restated Articles of Organization

I. PROVISIONS APPLICABLE TO SERIES A AND SERIES B PREFERRED SHARES.

All Series A Preferred Shares and all Series B Preferred Shares have been canceled.

II. PROVISIONS APPLICABLE TO SERIES C PREFERRED SHARES, SERIES D PREFERRED SHARES AND SERIES E PREFERRED SHARES.

There is hereby created a series of Preferred Shares designated as "Series C Preferred Shares," and consisting of 5,410 Preferred Shares. There is hereby created a series of Preferred Shares designated as "Series D Preferred Shares," and consisting of 13,512 Preferred Shares. There is hereby created a series of Preferred Shares designated as "Series E Preferred Shares," and consisting of 29,432 Preferred Shares. The relative rights, preferences, privileges, restrictions and other matters relating to the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares or the holders thereof are as follows:

1. Definitions. For purposes of this Rider 4 "Junior Shares" shall mean all common stock and any other shares of the Corporation other than the Preferred stock.

2. Voting Rights. The holders of the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall be entitled to one hundred (100) votes for each share of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares held by them on all matters in which stockholders are entitled to vote, including the election of directors.

3. Dividends Rights of Preferred. The holders of the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall be entitled to receive in any fiscal year, when and as declared by the Board of Directors, out of any assets at the time legally available therefor, dividends in cash at the rate per share per annum of one hundred (100) times the amount payable in dividend on Junior Shares. The right to such dividends on the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall not be cumulative, and no right shall accrue to holders of Series C Preferred Shares, Series D Preferred Shares or Series E Preferred Shares by reason of the fact that dividends on such shares are not declared or paid in any prior year. The holders of the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall not be entitled to receive interest type dividends on their investment.

4. Liquidation Preference.

(a) In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of

Rider 4 (i)

the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall be entitled to receive (i) the amount of \$100.00 per share for each share of Series C Preferred Stock then held by them, (ii) the amount of \$100.00 per share of Series D Preferred Stock then held by them, and (iii) the amount of \$130.00 per share of Series E Preferred Stock then held by them, and in addition, a further amount equal to all declared but unpaid dividends on the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares as provided in Paragraph 3 above, and after payment of the holders of Junior Shares of \$1.00 per share, the remaining assets of the Corporation shall be distributed in equal amounts per share to the holders of the Series C, Series D and Series E Preferred Stock and the holders of the Junior Shares.

If upon the occurrence of such event the assets and funds thus distributed among the holders of the Preferred Stock shall be insufficient to permit the payment to such holders of the full preferential amount aforesaid, then the assets and funds of the Corporation legally available for distribution shall first be distributed ratably among the holders of the Series E Preferred Stock. After payment has been made to the holders of the Series E Preferred Stock of the full preferential amounts to which they shall be entitled as aforesaid, the holders of Series D Preferred Stock shall be entitled to receive any remaining assets of the Corporation up to the full preferential amounts to which they shall be entitled as aforesaid. After payment has been made to the holders of the Series D Preferred Stock of the full preferential amounts to which they shall be entitled as aforesaid, the holders of Series C Preferred Stock shall be entitled to receive any remaining assets of the Corporation up to the full preferential amounts to which they shall be entitled as aforesaid.

(b) For purposes of this Paragraph 4, a liquidation, dissolution or winding up of the Corporation shall be deemed to be occasioned by, or to include the Corporation's sale of all or substantially all of its assets or the acquisition of this Corporation by another entity by means of merger or consolidation resulting in the exchange of the outstanding shares of this Corporation for securities or consideration issued, or caused to be issued, by the acquiring corporation or its subsidiary.

(c) In the event the Corporation shall propose to take any action of the types described in subparagraphs (a) and (b) of this Paragraph 4, the Corporation shall, within ten (10) days after the date the Board of Directors approves such action, or twenty (20) days prior to any shareholders' meeting called to approve such action, whichever is earlier, give each holder of shares of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares initial written notice of the proposed action. Such initial written notice shall describe the material terms and conditions of such proposed action, including a description of the stock, cash and property to be received by the holders of shares of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares upon consummation of the proposed action and the date of delivery thereof. If any material change in the facts set forth in

Rider 4 (ii)

the initial notice shall occur, the Corporation shall promptly giving written notice to each holder of shares of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares of such material change.

(d) The Corporation shall not consummate any proposed action of the type described in subparagraphs (a) and (b) of this Paragraph 4 before the expiration of thirty (30) days after mailing of the initial notice or twenty (20) days after the mailing of any subsequent written notice, whichever is later; provided that any such 30-day or 20-day period may be shortened upon the written consent of the holders of a majority of the outstanding shares of Preferred Stock.

(e) In the event the Corporation shall propose to take any action of the types described in subparagraphs (a) and (b) of this paragraph 4 which will involve the distribution of assets other than cash, the Corporation shall promptly engage independent competent appraisers to determine the value of the assets to be distributed to the holders of shares of Preferred Stock. The Corporation shall, upon receipt of such appraiser's valuation, give prompt written notice to each holder of shares of Preferred Stock of the appraiser's valuation. All notices pursuant to this paragraph 4 shall be deemed given upon personal delivery or upon deposit in a United States Post Office by registered or certified mail.

5. Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "Conversion Rights"):

(a) Right to Convert.

(i) Each share of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share, at the office of the Corporation or any transfer agent for the Preferred Stock, into Common Stock at the Conversion Rate (as hereinafter defined) in effect at the time of conversion. The number of shares of Common Stock into which each share of Series C Preferred Stock may be converted is hereinafter referred to as the "Series C Conversion Rate", the number of shares of Common Stock into which each share of Series D Preferred Stock may be converted is hereinafter referred to as the "Series D Conversion Rate", and the number of shares of Common Stock into which each share of Series E Preferred Stock may be converted is hereinafter referred to as the "Series E Conversion Rate". The Series C Conversion Rate, the Series D Conversion Rate and the Series E Conversion Rate shall each be one hundred (100).

(ii) Each share of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall automatically be converted into shares of Common Stock at its Conversion Rate in the event of the closing of a firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock for the account of the Corporation to the public at a

Rider 4 (iii)

price per share of not less than \$1.00 (as adjusted for stock splits, reorganizations and the like) and an aggregate offering price of not less than \$7,500,000. In the event of such an offering, the person(s) entitled to receive Common Stock issuable upon conversion of Series C Preferred Shares, Series D Preferred Shares or Series E Preferred Shares shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such sale of securities.

(iii) At the election of the Board of Directors at any time after the Corporation has earned a cumulative profit of \$5,000,000, each share of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall automatically be converted into Common Stock at its then effective Conversion Rate fifteen (15) days after written notice of such election to each of the holders of the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares.

(b) Mechanics of Conversion.

(i) In order to exercise the conversion privilege, the holder of any Series C Preferred Shares, Series D Preferred Shares or Series E Preferred Shares to be converted shall surrender the certificate or certificates therefor to any transfer agent of the Corporation for such Preferred Shares, at offices which the Corporation shall cause to be maintained in Massachusetts, duly endorsed in blank for transfer, accompanied by written notice of election to convert such Preferred Shares or a portion thereof executed on the form set forth on such certificates or on such other form as may be provided from time to time by the Corporation.

As soon as practicable after the surrender of such certificates as provided above, the Corporation shall cause to be issued and delivered, at the office of such transfer agent, to or on the order of the holder of the certificates thus surrendered, a certificate or certificates for the number of Common Shares issuable hereunder upon the conversion of such Preferred Shares. Such conversion shall be deemed to have been effected on the date on which the certificates for such Preferred Shares have been surrendered as provided above, and the person in whose name any certificate or certificates for Common Shares are issuable upon such conversion shall be deemed to have become on such date the holder of record of the shares represented thereby.

(ii) As long as any of the Series C Preferred Shares, Series D Preferred Shares or Series E Preferred Shares remains outstanding, the Corporation shall take all steps necessary to reserve and keep available a number of its authorized but unissued Common Shares sufficient for issuance upon conversion of all such outstanding Preferred Shares.

(iii) All certificates of Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares surrendered for conversion as provided herein shall be canceled and retired in the

Rider 4 (iv)

manner provided by law, and no further Preferred Shares shall be issued in lieu thereof.

(iv) The exercise of the conversion privilege shall be subject to such regulations, not inconsistent with the foregoing provisions of this Section 5, as may from time to time be adopted by the Board of Directors of the Corporation.

(v) All Common Shares issued upon the conversion of the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares shall be validly issued and outstanding and fully paid and nonassessable.

#### 6. Restrictions on certain corporate action.

(a) The holders of the Series C, Series D and Series E Preferred Shares shall vote as one class, regardless of series, and in no other manner, upon any proposal for the Corporation to take any of the following actions, and no such proposal shall be adopted, nor shall the Corporation take any such action, without the affirmative vote, at a meeting duly called for that purpose, or the written consent, with or without a meeting, of the holders of at least a majority of the Series C, Series D and Series E Preferred Shares, voting as one class regardless of series, together with such vote or consent of the holders of other classes of shares of the Corporation as may then be required:

(i) any amendment or repeal of any of the provisions of the Restated Articles of Organization as amended, or of any certificate filed pursuant to law and setting forth the designation, description, and terms of any series of Preferred Shares, or of any Bylaw, which would adversely affect the rights or preferences of the Series C, Series D and Series E Preferred Shares or of the holders thereof. If any such amendment or repeal, however, would adversely affect the rights or preferences of less than all of the series of Preferred Shares at the time outstanding, the vote or consent of the holders of at least a majority of the outstanding shares of all series so affected, voting as one class, shall be required in lieu of the vote or consent of the holders of a majority of all of the Preferred Shares;

(ii) the creation or authorization of any additional class of shares of the Corporation ranking prior to or on a parity with the Series C, Series D and Series E Preferred Shares or of any shares or other security of the Corporation convertible into shares of any class ranking prior to or on a parity with the Series C, Series D and Series E Preferred Shares, or any increase in the authorized amount of the Series C, Series D and Series E Preferred Shares or of any additional class of shares of the Corporation ranking prior to or on a parity with the Series C, Series D and Series E Preferred Shares;

(iii) the sale or conveyance of all or substantially all of the property or business of the Corporation, or the parting with control thereof; or a consolidation of the Corporation with, or its merger with or into, any other corporation, but this restriction

Rider 4 (v)

shall not apply to or prevent a consolidation with, or a merger with or into, any wholly owned subsidiary. If any such sale or conveyance, however, requires by law a greater percentage to authorize such action, the vote or consent of the holders of at least two thirds of the outstanding shares of all Series C, Series D and Series E Preferred Shares, voting as one class, shall be required in lieu of the vote or consent of the holders of a majority of all of the Series C, Series D and Series E Preferred Shares; or

(iv) a voluntary liquidation or dissolution of the Corporation. If any such liquidation or dissolution, however, requires by law a greater percentage to authorize such action, the vote or consent of the holders of at least two thirds of the outstanding shares of all Series C, Series D and Series E Preferred Shares, voting as one class, shall be required in lieu of the vote or consent of the holders of a majority of all of the Series C, Series D and Series E Preferred Shares.

(b) Except as provided in paragraphs (a) of this Section 6, the Series C, Series D and Series E Preferred Shares shall have no rights voting as a class, but shall exercise all voting rights in accordance with the provisions of Section 2 hereof, voting in conjunction with the holders of the Common Shares.

7. Accountants' Certificates. The certificate of any firm of independent public accountants selected by the Board of Directors shall be conclusive evidence of the correctness of any computation made under the provisions of this Article or any certificate filed pursuant to law and setting forth the designation, description, and terms of any series of Preferred Shares.

### III. PROVISIONS GENERALLY APPLICABLE TO PREFERRED SHARES

The description of the Preferred Stock is as follows:

1. Certificate of Designation. The Board of Directors is authorized, subject to limitations described by law and the provisions of this Article 4, to provide for the issuance of shares of Preferred Stock with or without series, and, by filing a certificate pursuant to the applicable law of The Commonwealth of Massachusetts (the "Certificate of Designation"), to establish from time to time the number of shares to be included in each such series and to fix the designation, preferences, voting powers, qualifications and special or relative rights or privileges of the shares of each such series. In the event that at any time the Board of Directors shall have established and designated one or more series of Preferred Stock consisting of a number of shares less than all of the authorized number of shares of Preferred Stock, the remaining authorized shares of Preferred Stock shall be deemed to be shares of an undesignated series of Preferred Stock until designated by the Board of Directors as being a part of a series previously established or a new series then being established by the Board of Directors. Notwithstanding the fixing of the number of shares constituting a particular series, the Board of Directors may at any time thereafter

Rider 4 (vi)

authorize the issuance of additional shares of the same series except as set forth in the Certificate of Designation.

2. Authority of Board. The authority of the Board of Directors with respect to each series of Preferred Stock shall include, but not be limited to, determination of the following:

(a) the number of shares constituting that series, which number may be increased or decreased (but not below the number of shares of such series then outstanding) from time to time by the Board of Directors, and the distinctive designation of that series;

(b) whether any dividend shall be paid on shares of that series, and, if so, the dividend rate on the shares of that series; whether dividends shall be cumulative and, if so, from which date or dates, and the relative rights of priority, if any, of payment of dividends on shares of that series;

(c) whether shares of that series shall have voting rights in addition to the voting rights provided by law and, if so, the terms of such voting rights;

(d) whether shares of that series shall be convertible into shares of Common Stock or another security and, if so, the terms and conditions of such conversion, including provisions for adjustment of the conversion rate in such events as the Board of Directors shall determine;

(e) whether or not the shares of that series shall be redeemable and, if so, the terms and conditions of such redemption, including the date or dates upon or after which they shall be redeemable and the amount per share payable in case of redemption, which amount may vary under different conditions and at different redemption dates; and whether that series shall have a sinking fund for the redemption or purchase of shares of that series and, if so, the terms and amount of such sinking fund;

(f) whether, in the event of purchase or redemption of the shares of that series, any shares of that series shall be restored to the status of authorized but unissued shares or shall have such other status as shall be set forth in the Certificate of Designation;

(g) the rights of the shares of that series in the event of the sale, conveyance, exchange or transfer of all or substantially all of the property and assets of the Corporation, or the merger or consolidation of the corporation into or with any other corporation, or the merger of any other corporation into it, or the voluntary or involuntary liquidation, dissolution or winding up of the Corporation, and the relative rights of priority, if any, of shares of that series to payment in any such event;

(h) whether the shares of that series shall carry any preemptive right in or preemptive right to subscribe to any additional shares of Preferred Stock or any shares of any other class of stock which may at any time be authorized or issued, or any bonds,

Rider 4 (vii)

debentures or other securities convertible into shares of stock of any class of the Corporation, or options or warrants carrying rights to purchase such shares or securities; and

(i) any other designation, preferences, voting powers, qualifications, and special or relative rights or privileges of the shares of that series.

#### IV. PROVISIONS APPLICABLE TO COMMON SHARES

1. No Preference. None of the Common Shares shall be entitled to any preference, and each Common Share shall be equal to every other such share in every respect. Each Common Share shall be entitled to one vote.

2. Dividend Rights. Subject to the provisions with respect to the Preferred Shares, and not otherwise, such dividends, payable in cash, shares or otherwise, as may be determined by the Board of Directors may be declared and paid on the Common Shares from time to time out of any funds lawfully available therefor, and except as to the Series C Preferred Shares, Series D Preferred Shares and Series E Preferred Shares, the Preferred Shares shall not be entitled to participate, as such, in any such dividend.

Rider 4 (viii)

AWARE, INC.

Rider 6 to Restated Articles of Organization

#### 6A. LIMITATION OF DIRECTORS LIABILITY

The personal liability of the corporation's directors is hereby eliminated to the fullest extent permitted by law, including, without limitation, by the provisions of Chapter 156B, Section 13(b) (1-1/2) of the General Laws.

#### 6B. BY-LAW AMENDMENTS

The By-laws at any time may be amended by vote of the stockholders, provided that notice of the substance of the proposed amendment is stated in the notice of the meeting, or may be amended by vote of a majority of the Directors then in office except that no amendment may be made by the Directors which alters the provisions of the By-laws with respect to matters which by law or the Articles of Organization require action by the stockholders. No later than the time of giving notice of the meeting of stockholders next following the making, amending or repealing by the Directors of any By-laws, notice thereof stating the substance of such change shall be given to all stockholders entitled to vote on amending the By-laws.

#### 6C. TERM OF OFFICE FOR THE BOARD OF DIRECTORS

The directors shall be classified with respect to the time for which they shall severally hold office by dividing them into three classes, each consisting of one-third of the whole number of the board of directors, and all directors shall hold office until their successors are chosen and qualified, or until their earlier death, resignation, or removal. At the first meeting held for election of the board of directors following adoption of these Restated Articles, directors of the first class (Class I Directors) shall be elected for a term of one year; directors of the second class (Class II Directors) shall be elected for a term of two years; directors of the third class (Class III Directors) shall be elected for a term of three years. At each annual meeting thereafter, the successors to the class of directors whose term expires at that meeting shall be elected to hold office for a term continuing until the annual meeting held in the third year following the year of their election and until their successors are duly elected and qualified.

#### 6D. CERTAIN TRANSACTIONS APPROVED BY THE BOARD OF DIRECTORS

Except as otherwise provided in these Articles of Organization, the Corporation may authorize, by a vote of a majority of the shares of each class of stock outstanding and entitled to vote thereon, (a) the sale, lease or exchange of all or substantially all of its property and assets, including its goodwill, upon such terms and conditions as it deems expedient, and (b) the merger or consolidation of the Corporation into any other corporation, provided, however, that such sale, lease, exchange, merger or consolidation shall have been approved by a majority of the members of the Board of Directors.

#### 6E. PLACES OF MEETING OF STOCKHOLDERS

Meetings of the stockholders may be held anywhere in the United States.

#### 6F. PARTNERSHIP IN ANY BUSINESS ENTERPRISE

The Corporation may be a partner in any business enterprise it would have power to conduct by itself.



## THE COMMONWEALTH OF MASSACHUSETTS

RESTATED ARTICLES OF ORGANIZATION  
(General Laws, Chapter 156B, Section 74)

=====

I hereby approve the within Restated Articles of Organization and,  
the filing fee in the amount of \$\_\_\_\_\_ having been paid, said  
articles are deemed to have been filed with me this \_\_\_\_\_ day of  
\_\_\_\_\_, 19\_\_\_\_\_.

Effective Date:\_\_\_\_\_

WILLIAM FRANCIS GALVIN  
Secretary of the Commonwealth

TO BE FILLED IN BY CORPORATION  
Photocopy of document to be sent to:

Valerie L. Pawson, Esq.

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Lawson & Weitzen

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425 Summer Street

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Boston, MA 02210-1736

Telephone: (617) 439-4990

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AWARE, INC.

AMENDED AND RESTATED BY-LAWS

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## ARTICLE I - STOCKHOLDERS

1.1 Annual Meeting. The annual meeting of stockholders shall be held on the second Tuesday in March in each year (or if that be a legal holiday in the place where the meeting is to be held, on the next succeeding full business day) at 11:00 a.m. unless a different day or hour is fixed by the Board of Directors or the President and stated in the notice of the meeting. The purposes for which the annual meeting is to be held, in addition to those prescribed by law, the Articles of Organization, or these By-Laws, may be specified by the Board of Directors or the President. If no annual meeting is held in accordance with the foregoing provisions, a special meeting may be held in lieu thereof, and any action taken at such meeting shall have the same effect as if taken at the annual meeting.

1.2 Special Meetings. Special meetings of stockholders may be called by the President or by the Board of Directors. So long as the Corporation does not have a class of voting stock registered under the Securities Exchange Act of 1934, upon written application of one or more stockholders who hold at least ten (10%) percent of the capital stock entitled to vote at the meeting, special meetings shall be called by the Clerk, or in the case of the death, absence, incapacity or refusal of the Clerk, by any other officer. If the Corporation does have a class of voting stock registered under the Securities Exchange Act of 1934, upon written application of one or more stockholders who hold at least thirty-five (35%) percent of the capital stock entitled to vote at the meeting, special meetings shall be called by the Clerk, or in the case of the death, absence, incapacity or refusal of the Clerk, by any other officer. The call for the meeting shall state the place, date, hour and purposes of the meeting. Business transacted at any special meeting of the Stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

1.3 Place of Meetings. All meetings of stockholders shall be held at the principal office of the corporation unless a different place within the United States is fixed by the Board of Directors or the President and stated in the notice of the meeting.

1.4 Notice of Meeting. A written notice of each meeting of stockholders, stating the place, date and hour thereof, and the purposes for which the meeting is to be held, shall be given at least seven (7) days, and not more than sixty (60) days, before the meeting by the Clerk or other person calling the meeting to each stockholder entitled to vote thereat and to each stockholder who by law, the Articles of Organization or these By-Laws is entitled to such notice, by leaving such notice with him or at his residence or usual place of business, or by mailing it postage prepaid and addressed to him at his address as it appears upon the books of the corporation. All notices shall state the place, date and hour of the meeting, and if it is a special meeting, the purposes for which the meeting is called. No notice need be given to any stockholder if a written waiver of notice, executed before or after the meeting

by the stockholder or his authorized attorney, is filed with the records of the meeting. In the case of a special meeting of stockholders requested by stockholder(s) pursuant to Article I, Section 1.2 of these By-Laws, on payment by those stockholder(s) to the Corporation of the costs of notice of the meeting as provide in this Section 1.4, the Clerk shall send the written notice to each stockholder entitled to vote thereat and to each stockholder who by law, the Articles of Organization or these By-Laws is entitled to such notice.

1.5 Quorum. The holders of a majority in interest of all stock issued, outstanding and entitled to vote at a meeting, present in person or represented by proxy, shall constitute a quorum. The vote of a majority in interest of any quorum shall be sufficient to transact business unless otherwise provided by law, the Articles of Organization, or these By-Laws. If two or more classes of stock are outstanding and entitled to vote as separate classes, then in the case of each such class, a quorum shall consist of the holders of a majority in interest of the stock of that class issued, outstanding and entitled to vote, present in person or represented by proxy.

1.6 Voting and Proxies. Each stockholder shall have one vote for each share of stock entitled to vote held by him of record according to the records of the corporation, and a proportionate vote for each fractional share so held, unless otherwise provided by the Articles of Organization. Stockholders may vote either in person or by written proxy dated not more than six (6) months before the meeting named therein. Proxies shall be filed with the Clerk of the meeting, or of any adjournment thereof, before being voted. Except as otherwise limited therein, proxies shall entitle the persons named therein to vote at any adjournment of such meeting. A proxy with respect to stock held in the name of two or more persons shall be valid if executed by one of them unless at or prior to exercise of the proxy the corporation receives a specific written notice to the contrary from any one of them. A proxy purporting to be executed by or on behalf of a stockholder shall be deemed valid unless challenged at or prior to its exercise.

1.7 Action at Meeting. When a quorum is present, the holders of a majority of the stock present or represented and voting on a matter, (or if there are two or more classes of stock entitled to vote as separate classes, then in the case of each such class, the holders of a majority of the stock of that class present or represented and voting on a matter,) shall decide any matter to be voted on by the stockholders, except where a larger vote is required by law, the Articles of Organization or these By-Laws. Any election by stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote at the election. No ballot shall be required for such election unless requested by a stockholder present or represented at the meeting and entitled to vote in the election. The corporation shall not directly or indirectly vote any share of its stock.

1.8 Vacancies. The stockholders may, at a Special Meeting called for the purpose, choose a successor to a Director or other officer whose office may have become vacant by reason of his death, resignation, retirement, disqualification, removal from office, or otherwise, and the person so chosen shall displace any successor thereto chosen by the Board of Directors pursuant to Article II, Section 2.7 hereof, and shall hold office until the next Annual Meeting of the stockholders or the Special Meeting of the stockholders held in place of such Annual Meeting following the expiration of his term, and until his successor is chosen and qualified, or until his earlier death, resignation or removal.

1.9 Voting List. The officer who has charge of the stock ledger of the corporation shall prepare, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting, at a place within the city where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time of the meeting, and may be inspected by any stockholder who is present.

1.10 Adjournments. Any meeting of stockholders may be adjourned to any other time and to any other place at which a meeting of stockholders may be held under these By-Laws by the stockholders present or represented at the meeting and entitled to vote, although less than a quorum, or, if no stockholder is present, by any officer entitled to preside at or to act as Secretary of such meeting. It shall not be necessary to notify any stockholder of any adjournment of less than 30 days if the time and place of the adjourned meeting are announced at the meeting at which adjournment is taken, unless after the adjournment a new record date is fixed for the adjourned meeting. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting.

#### ARTICLE II - DIRECTORS

2.1 Powers. The business of the corporation shall be managed by a Board of Directors which may exercise all the powers of the corporation except as otherwise provided by law, the Articles of Organization, or these By-Laws. The Board of Directors may issue any of the corporation's unissued capital stock from time to time authorized under the Articles of Organization for such consideration and in such amounts as it shall deem appropriate. In the event of a vacancy in the Board of Directors, the remaining Directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

2.2 Number and Election. A Board of Directors, of such number as shall be fixed by the stockholders, shall be elected by the

stockholders at the annual meeting, unless otherwise provided by law.

2.3 Enlargement of the Board. The number of Directors may be increased at any meeting of the stockholders or by the Directors by a vote of a majority of the Directors then in office.

2.4 Tenure. The directors shall be classified with respect to the time for which they shall severally hold office by dividing them into three classes, each consisting of one-third of the whole number of the board of directors, and all directors shall hold office until their successors are chosen and qualified, or until their earlier death, resignation, or removal. At the first meeting held for election of the board of directors following adoption of these By-Laws, directors of the first class shall be elected for a term of one year; directors of the second class shall be elected for a term of two years; directors of the third class shall be elected for a term of three years; and at each annual election thereafter, successors to the class of directors whose terms shall expire that year shall be elected to hold office for a term of three years, so that the term of office of one class of directors shall expire in each year.

2.5 Resignation. Any Director may resign by delivering his written resignation to the corporation at its principal office or to the President, Clerk or Secretary, except that no Director shall resign by delivering such resignation to himself. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

2.6 Removal. Any Director may be removed from office with or without cause by vote of the holders of a majority of the shares entitled to vote in the election of Directors, provided that any Director elected by the holders of a particular class of stock may be removed from office only by vote of the holders of a majority of the shares of such class. In addition, a Director may be removed from office for cause by vote of a majority of the Directors then in office. A Director may be removed for cause only after reasonable notice and opportunity to be heard before the body proposing to remove him.

2.7 Vacancies. If the office of any Director, or any other office, becomes vacant by reason of death, resignation, retirement, disqualification, removal from office, or otherwise, including by enlargement of the Board of Directors, the Board of Directors or remaining Directors if less than a quorum may, by majority vote, choose a successor or successors, who shall hold office for the unexpired term in respect of which such vacancy occurred and until his successor be chosen and qualified, or until his earlier death, resignation or removal.

2.8 Regular Meetings. Regular meetings of the Board of Directors may be held without call or notice at such places and at such times



as the Board of Directors may from time to time determine, provided that any Director who is absent when such determination is made shall be given notice of the determination. A regular meeting of the Board of Directors may be held without call or notice immediately following and at the same place as the annual meeting of the stockholders or the special meeting held in lieu thereof.

2.9 Special Meetings. Special meetings of the Board of Directors may be held at any time and place designated in a call by the Chairman of the Board, President, Treasurer, two or more Directors, or one Director whenever he is the sole Director in office.

2.10 Notice of Special Meetings. Notice of each special meeting of the Board of Directors shall be given to each Director by the Secretary, or if there be no Secretary, by the Clerk or Assistant Clerk, or in the case of the death, absence, incapacity or refusal of such person, by the officer or one of the Directors calling the meeting. Notice shall be given to each Director in person or by telephone or by telegram sent to his business or home address at least forty-eight (48) hours in advance of the meeting. Notice may also be given by mail provided it is mailed at least ninety-six (96) hours in advance of the meeting. Notice need not be given to any Director if a written waiver of notice, executed by him before or after the meeting, is filed with the records of the meeting, or to any Director who attends the meeting without protesting prior thereto or at its commencement the lack of notice to him. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

2.11 Quorum. At any meeting of the Board of Directors, a majority of the Directors then in office shall constitute a quorum. In the event that one or more directors shall be disqualified to vote at any meeting, then the required quorum shall be reduced by one for each such director so disqualified; provided, however, that in no case shall less than one-third (1/3) of the total number of directors constitute a quorum. Less than a quorum may adjourn any meeting from time to time without further notice.

2.12 Action at Meetings. At any meeting of the Board of Directors at which a quorum is present, the vote of a majority of those present shall be sufficient to take any action, unless a different vote is specified by law, the Articles of Organization, or these By-Laws.

2.13 Action by Consent. Any action required or permitted to be taken by the Board of Directors may be taken without a meeting if all of the Directors consent to the action by a writing filed with the records of the meetings of the Board of Directors. Each such consent shall be treated for all purposes as a vote at a meeting.

2.14 Meetings by Telephone Conference Calls. Directors or any members of any committee designated by the Directors may participate in a meeting of the Board of Directors or such committee by means of conference telephone or similar communications equipment by means of

which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

2.15 Committees. The Board of Directors may, by vote of a majority of the whole Board then in office, elect from their number an executive committee, an audit committee, a compensation committee, and other committees, and may by like vote delegate thereto some or all of their powers except those which by law, the Articles of Organization, or these By-Laws they are prohibited from delegating. Each committee to consist of two or more directors. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but unless otherwise provided by the Board of Directors or in such rules, its business shall be conducted as nearly as is possible in the same manner as is provided by these By-Laws for the Directors.

2.16 Compensation of Directors. Directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any Director from serving the corporation or any of its parent or subsidiary corporations in any other capacity and receiving compensation therefor.

#### ARTICLE III - OFFICERS

3.1 Enumeration. The officers of the corporation shall consist of a President, a Treasurer, a Clerk, and such other officers as the Board of Directors may determine, including, without limitation, a Secretary and one or more Vice Presidents, Assistant Treasurers and Assistant Clerks.

3.2 Election. The President, Treasurer and Clerk shall be elected annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be chosen by the Board of Directors at such meeting or at any other meeting.

3.3 Qualification. Any officer may be a Director, stockholder, or both. No officer need be a Director or a stockholder. Any or all offices may be held by the same person. The Clerk shall be a resident of Massachusetts. Any officer may be required by the Board of Directors to give bond for the faithful performance of his duties

to the corporation in such amount and with such sureties as the Board of Directors may determine.

3.4 Tenure. Except as otherwise provided by law, the Articles of Organization, or these By-Laws, the President, Treasurer and Clerk each shall hold office until the first meeting of the Board of Directors following the annual meeting of stockholders and thereafter until his successor is chosen and qualified, or until his earlier death, resignation or removal. Except as otherwise provided by law, the Articles of Organization, or these By-Laws, all other officers each shall hold office until the first meeting of the Board of Directors following the annual meeting of stockholders, unless a shorter term is specified in the vote choosing or appointing him, or until his earlier death, resignation or removal.

3.5 Resignation. Any officer may resign by delivering his written resignation to the corporation at its principal office or to the President, Clerk or Secretary, except that no officer shall resign by delivering such resignation to himself. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

3.6 Removal. The Board of Directors may remove any officer with or without cause by a vote of a majority of the entire number of Directors then in office. However, an officer may be removed for cause only after reasonable notice and opportunity to be heard by the Board of Directors prior to action thereon. Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following his resignation or removal, or any right to damages on account of such removal, unless such compensation is expressly provided for in a duly authorized written agreement with the corporation.

3.7 Vacancies. The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of President, Treasurer and Clerk. Each such successor shall hold office for the unexpired term of his predecessor and until his successor is elected and qualified, or until his earlier death, resignation or removal.

3.8 Chairman of the Board and Vice-Chairman of the Board. The Board of Directors may appoint a Chairman of the Board and may designate the Chairman of the Board as Chief Executive Officer. If the Board of Directors appoints a Chairman of the Board, he shall perform such duties and possess such powers as are assigned to him by the Board of Directors. If the Board of Directors appoints a Vice-Chairman of the Board, he shall, in the absence or disability of the Chairman of the Board, perform the duties and exercise the powers of the Chairman of the Board and shall perform such other duties and possess such other powers as may from time to time be vested in him by the Board of Directors.

3.9 President and Vice Presidents. The President shall be the chief operating officer of the corporation. Unless the Board of Directors has designated the Chairman of the Board as Chief Executive Officer, the President shall also be the Chief Executive Officer of the corporation. Subject to the direction of the Board of Directors, the President shall have general supervision and control of its business. Unless otherwise provided by the Board of Directors he shall preside, when present, at all meetings of stockholders and of the Board of Directors. Any Vice President shall have such powers as the Board of Directors or the President may from time to time designate, and shall report to the President. In the event of the absence, inability or refusal to act of the President, the Vice President (or if there shall be more than one, the Vice Presidents in the order determined by the Board of Directors) shall perform the duties of the President and when so performing shall have all the powers of and be subject to all the restrictions upon the President. The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors.

3.10 Treasurer and Assistant Treasurers. The Treasurer shall, subject to the direction of the President and the Board of Directors, have general charge of the financial affairs of the corporation and shall cause to be kept accurate books of account. He shall have custody of all funds, securities, and valuable documents of the corporation, except as the President may otherwise provide. Any Assistant Treasurer shall have such powers as the Board of Directors, the President or the Treasurer may from time to time designate, and shall report to the Treasurer.

3.11 Clerk and Assistant Clerks. The Clerk shall keep a record of the meetings of stockholders. Unless a transfer agent is appointed, the Clerk shall keep or cause to be kept in Massachusetts, at the principal office of the corporation or at his office, the stock and transfer records of the corporation in which are contained the name and record address of and the amount of stock held by each stockholder. In case a Secretary is not elected, the Clerk shall keep a record of the meetings of the Board of Directors. Any Assistant Clerk shall have such powers as the Board of Directors, the President, or the Clerk may from time to time designate. In the absence of the Clerk from any meeting of stockholders, an Assistant Clerk if one is elected, and otherwise a temporary clerk designated by the person presiding at the meeting, shall perform the duties of the Clerk.

3.12 Secretary and Assistant Secretary. If a Secretary is elected, he shall keep a record of the meetings of the Board of Directors. If he is absent from any such meeting, an Assistant Secretary if one is elected, and otherwise a temporary secretary designated by the person presiding at such meeting, shall keep a record of such meeting. Any Assistant Secretary shall have such powers as the Board of Directors, the President, or the Secretary may from time to time designate.

3.13 Other Powers and Duties. In addition to the duties and powers specifically set forth in these By-Laws and subject to these By-Laws, each officer shall have such duties and powers as are customarily incident to his office and such duties and powers as the Board of Directors or the President may from time to time designate.

3.14 Compensation. Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors.

#### ARTICLE IV - STOCK

4.1 Certificate of Stock. Each stockholder shall be entitled to a certificate of the capital stock of the corporation in such form as may be prescribed from time to time by the Board of Directors, certifying the number and class of shares owned by him in the corporation. The certificate shall be signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer. When a certificate is signed by a transfer agent or a registrar other than a Director, officer, or employee of the corporation, the signature(s) of any President, Vice President, Treasurer or Assistant Treasurer on the certificate may be a facsimiles, engraved or printed. In case any officer who has signed or whose facsimile signature has been placed on such certificate shall have ceased to be such officer before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer at the time of its issue. Every certificate shall be sealed with the seal of the corporation or shall bear a facsimile of the seal. Every certificate for shares of stock which are subject to any restriction on transfer pursuant to the Articles of Organization, these By-Laws, or any agreement to which the corporation is a party, shall have noted conspicuously on the face or back of the certificate either the full text of the restriction or a statement of the existence of such restriction and a statement that the corporation will furnish a copy of the restriction to the holder of such certificate upon written request and without charge. Every certificate issued when the corporation is authorized to issue more than one class or series of stock shall set forth on its face or back either the full text of the preferences, voting powers, qualifications and special and relative rights of the shares of each class and series authorized to be issued or a statement of the existence of such class or series of stock and the corporation will furnish a copy of the preferences, powers, qualifications and rights of each class and series to the holder of such certificate upon written request and without charge.

4.2 Transfer of Stock. Subject to the restrictions, if any, imposed by the Articles of Organization, these By-Laws, or any stockholder agreement, shares of stock may be transferred on the books of the corporation only by the surrender to the corporation or its transfer agent of the certificate representing such shares properly endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent

may reasonably require. No transfer shall affect the right of the corporation to pay any dividend upon the stock or to treat the holder of record as the holder in fact until such transfer is recorded on the books of the corporation, and, except only as may be otherwise required by law, the corporation shall not be bound to recognize any equitable or other claim to or interest in shares on the part of any other person. In anticipation of stockholder's meetings, the declaration or payment of dividends, or the attachment to stock of any subscription or other rights, the transfer books of the stock of the corporation may be closed for such period as the Board of Directors may from time to time determine. It shall be the duty of each stockholder to notify the corporation of his post office address and of his taxpayer identification number and his failure to do so shall constitute a waiver by him of the right to receive any dividend or distribution or any notices given to the stockholders during the period that such failure continues.

4.3 Record Date. The Board of Directors may fix in advance a time of not more than sixty (60) days, nor less than seven (7) days, preceding the date of any meeting of stockholders, or the date for the payment of any dividend or the making of any distribution to stockholders, or the last day on which the consent or dissent of stockholders may be effectively expressed for any purpose, as the record date for determining which of the stockholders have the right to notice of and to vote at such meeting, and any adjournment thereof, or the right to receive such dividend or distribution or the right to give such consent or dissent. In such case only stockholders of record on such record date shall have such right, notwithstanding any transfer of stock on the books of the corporation after the record date. Without fixing such record date the Board of Directors may for any of such purposes close the transfer books for all or any part of such period. If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held. The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

4.4 Restrictions on Transfer. These securities may not be offered, sold, transferred, pledged or hypothecated in the absence of registration under the Securities Act of 1933, as amended, or the availability of an exemption from registration, under the Securities Act of 1933, as amended. Furthermore, no offer, sale or transfer of such unregistered security is to take place without the prior written approval of counsel of the issuer being affixed to the certificate.

4.5 Replacement of Certificates. In case of the alleged loss or destruction or the mutilation of a certificate of stock, a duplicate certificate may be issued in place thereof, upon such terms as the Board of Directors may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity as the Board of Directors may require for the protection of the corporation or any transfer agent or registrar.

#### ARTICLE V - MISCELLANEOUS PROVISIONS

5.1 Fiscal Year. Except as from time to time otherwise determined by the Board of Directors, the fiscal year of the corporation shall be the twelve months ending December 31 of each year.

5.2 Seal. The seal of the corporation shall, subject to alteration by the Board of Directors, bear its name, the word "Massachusetts" and the year of its incorporation.

5.3 Execution of Instruments. All deeds, leases, transfers, contracts, bonds, notes and other obligations authorized to be executed by an officer of the corporation in its behalf shall be signed by the President or Treasurer except as the Board of Directors may generally or in particular cases otherwise determine.

5.4 Voting of Securities. Except as the Board of Directors may otherwise designate, the President or Treasurer may waive notice of, and appoint any person or persons to act as proxy or attorney in fact for this corporation (with or without power of substitution) at any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this corporation.

5.5 Corporate Records. The original, or attested copies, of the Articles of Organization, By-Laws, and records of all meetings of the incorporators and stockholders, and the stock and transfer records, which shall contain the names of all stockholders and the record address and the amount of stock held by each, shall be kept in Massachusetts at the principal office of the corporation, or at an office of its transfer agent or of the Clerk. Said copies and records need not all be kept in the same office. They shall be available at all reasonable times to the inspection of any stockholder for any proper purpose but not to secure a list of stockholders for the purpose of selling said list of stockholders, copies thereof, or of using the same for a purpose other than in the interest of the applicant, as a stockholder, relative to the affairs of the corporation.

5.6 Articles of Organization. All references in these By-Laws to the Articles of Organization shall be deemed to refer to the Articles of Organization of the corporation, as amended and in effect from time to time.

5.7 Amendments. These By-Laws at any time may be amended by vote of the stockholders, provided that notice of the substance of the proposed amendment is stated in the notice of the meeting, or may be amended by vote of a majority of the Directors then in office, except that no amendment may be made by the Directors which alters the provisions of these By-Laws with respect to removal of Directors, election of committees by Directors and delegation of powers thereto, or amendment of these By-Laws. Not later than the time of giving notice of the meeting of stockholders next following the making, amendment or repealing by the Directors of any of these By-Laws, notice thereof stating the substance of such change shall be given to all stockholders entitled to vote on amending these By-Laws.

5.8 Indemnification of Officers and Directors. The corporation shall, to the fullest extent permitted by law, indemnify and hold harmless each person, now or hereafter an officer or Director of the corporation, from and against any and all claims and liabilities to which he may be or become subject by reason of his being or having been an officer or a Director of the corporation or by reason of his alleged acts or omissions as an officer or Director of the corporation, except in relation to matters as to which such officer or Director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office. The corporation shall indemnify and reimburse each such officer and Director against and for any and all legal and other expenses reasonably incurred by him in connection with any such claims and liabilities, actual or threatened, whether or not, at or prior to the time when so indemnified, held harmless and reimbursed, he had ceased being an officer or a Director of the corporation, except in relation to matters as to which such officer or Director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office; provided, however, that the corporation prior to such final adjudication may compromise and settle any such claims and liabilities and pay such expenses, if such settlement or payment or both appears, in the judgment of a majority of the Board of Directors, to be for the best interest of the corporation, evidenced by a resolution to that effect adopted after receipt by the corporation of a written opinion of counsel for the corporation that such officer or Director has not been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office in connection with the matters involved in such compromise, settlement and payment. The right of indemnification herein provided shall not be exclusive of any other rights to which any officer or Director may otherwise be lawfully entitled. The right of indemnification herein provided may be incorporated into individual indemnification agreements between the corporation and any director or officer.

5.9 Contracting by Directors and Officers. In the absence of fraud, no contract or other transaction between this corporation and any other corporation, firm, association, or partnership shall be affected or invalidated by the fact that any Director or officer of



this corporation is pecuniarily or otherwise interested in or is a Director, member or officer of such other corporation, firm, association or partnership or is a party to or is pecuniarily or otherwise interested in such contract or other transaction or in any way connected with any person or persons, firm, association, partnership or corporation that is pecuniarily or otherwise interested therein, if:

(a) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee of the Board of Directors, or the stockholders. Any Director may be counted in determining the existence of a quorum at any meeting of the Board of Directors of this corporation for the purpose of authorizing any such contract or transaction with like force and effect as if he were not so interested, or were not a Director, member or officer of such other corporation, firm, association or partnership.

5.10 Evidence of Authority. A certificate by the Clerk or Secretary, or an Assistant Clerk or Assistant Secretary, or a temporary Clerk or Secretary, as to any action taken by the stockholders, directors, a committee or any officer or representative of the corporation, shall as to all persons who rely on the certificate in good faith be conclusive evidence of such action.

5.11 Severability. Any determination that any provision of these By-Laws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these By-Laws.

5.12 Pronouns. All pronouns used in these By-Laws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identify of the person or persons may require.

#### ARTICLE VI - RIGHT OF FIRST REFUSAL

6.1 Restrictions on Transfer. No shareholder of the corporation shall sell, assign, pledge or in any manner transfer any of the shares of capital stock of the corporation or any right or interest therein, whether voluntarily or by operation of law, or by gift or otherwise, except by a transfer which meets the requirements

hereinafter set forth in this Article VI. Any sale or transfer, or purported sale or transfer, of capital stock of the corporation shall be null and void unless the terms, conditions, and provisions of this Article VI are strictly observed and followed.

6.2 First Refusal Notice. If a shareholder receives from anyone a bona fide offer acceptable to the shareholder to purchase any of his shares of capital stock of the corporation, then the shareholder shall first give written notice (the "First Refusal Notice") thereof to the corporation. The First Refusal Notice shall name and describe the proposed transferee (including a description of any relationship or affiliation with the holder) and state the class and number of shares to be transferred, the price per share (including how the price was determined and if it was negotiated at arm's length) and all other terms and conditions of the offer.

6.3 Corporation's Right to Purchase. For fifteen (15) business days following receipt of the First Refusal Notice, the corporation shall have the option to purchase all of the shares specified in such First Refusal Notice at the price and upon the terms set forth in such First Refusal Notice (subject to Section 6.4 below). The corporation may assign its rights hereunder to any third party or parties. In the event the corporation (and, if applicable, its assignees) elects to purchase all of the shares, it shall give written notice within such fifteen (15) day period to the selling shareholder of its election and settlement for said shares shall be made as provided below in Section 6.4.

6.4 Settlement. In the event the corporation elects to acquire all of the shares of the selling shareholder as specified in the First Refusal Notice, settlement thereof shall be made in cash within ten (10) business days after the corporation's written notice to the selling shareholder indicating the corporation's election under this Article VI; provided, however, that if the terms of payment set forth in the First Refusal Notice are other than cash against delivery, the corporation shall pay for said shares on the same terms and conditions set forth in the First Refusal Notice.

6.5 Sale by Selling Shareholder. In the event the corporation does not elect to acquire all of the shares specified in the First Refusal Notice, the selling shareholder may, within the sixty-day period following the expiration of the rights granted to the corporation herein, sell the shares specified in the First Refusal Notice which were not acquired by the corporation to the transferee named in the First Refusal Notice, in accordance with the provisions of this Article VI; provided that such sale shall not be on terms and conditions more favorable to the purchaser than those contained in the First Refusal Notice. All shares so sold by said selling shareholder shall continue to be subject to the provisions of this Article VI in the same manner as before such transfer. If the selling shareholder does not consummate such sale within such sixty (60) day period, the right of first refusal provided in this Article VI shall be deemed to be revived and the unsold shares shall not be

offered or sold unless first re-offered to the corporation in accordance with the provisions of this Article VI.

6.6 Exceptions. Anything to the contrary contained herein notwithstanding, (a) a shareholder's transfer by gift of any or all shares held either during such shareholder's lifetime, or a transfer on death by will or intestacy, or (b) the transfer by a shareholder which is a partnership or corporation to its partners or stockholders, shall be exempt from the provisions of this Article VI, provided, however, that any such transferee, assignee, or other recipient shall receive and hold such stock subject to the provisions of this Article VI, and there shall be no further transfer of such stock except in accordance with this Article VI.

6.7 Notices. Any notice, election or other communication required or permitted under this Article VI shall be in writing and shall be sent by certified or registered mail, return receipt requested, postage prepaid, and addressed, in the case of the corporation, to the attention of its President at the corporation's then principal executive office, and, in the case of a shareholder, to his address appearing on the record books of the corporation.

6.8 Waiver. Any or all of the provisions of this Article VI for the benefit of the corporation may be waived with respect to any transfer by the corporation, upon duly authorized action of its Board of Directors.

6.9 Legend. The certificates representing shares of the corporation shall bear the following legend so long as the foregoing right of first refusal remains in effect: "The shares represented by this certificate are subject to a right of first refusal option in favor of the corporation, as provided in the By-laws of the corporation."

6.10 Termination of Right of First Refusal. This Article VI shall terminate in its entirety and cease to be in effect on the first to occur on the following:

- (a) the effective date of the registration statement for the first firm underwritten public offering of equity securities of the corporation resulting in gross proceeds to the Company of not less than \$7,500,000; or
- (b) the merger or consolidation of the corporation into or with another corporation (except if this corporation is the surviving entity), or the sale of all or substantially all the assets of the corporation; or
- (c) December 31, 2000.

Robertson, Stephens & Company LLC  
[Other Underwriters]  
As Representatives of the several Underwriters  
c/o Robertson, Stephens & Company LLC  
555 California Street, Suite 2600  
San Francisco, CA 94104

Aware, Inc.  
One Oak Park  
Bedford, MA 01730

Re: Restriction on Stock Sales

Dear Sir or Madam:

Aware, Inc. (the "Company") proposes to sell shares (the "Shares") of the Company's Common Stock, par value \$.01 per share (the "Common Stock"), in a public offering (the "Public Offering") underwritten by Robertson, Stephens & Company LLC, [other Underwriters] (the "Representatives") and several other underwriters (the Representatives and the other underwriters are collectively referred to as the "Underwriters").

The Underwriters have indicated that the prospect of sales of Common Stock prior to several months after the Public Offering could be detrimental to their underwriting effort. They have requested that the undersigned agree not to sell any shares of Common Stock until the expiration of a period ending 180 days after the effective date of the Registration Statement on Form S-1 (the "Registration Statement") filed by the Company relating to the Shares.

The undersigned recognizes that it is in the best financial interests of the undersigned, as a holder of stock, options, warrants or other securities of the Company, that the Company complete the proposed Public Offering.

The undersigned further recognizes that the undersigned's Common Stock is, or may be, subject to certain restrictions on its transferability, including those imposed by the federal securities laws. Notwithstanding these restrictions, the undersigned has agreed to enter into this letter agreement to further assure the Underwriters that the undersigned's Common Stock, now held or hereafter acquired, will not enter the public market at a time that might impair the underwriting effort.

The undersigned, therefore, hereby acknowledges and agrees that the undersigned will not, directly or indirectly, without the prior written consent of Robertson, Stephens & Company LLC, sell, offer, contract to sell, pledge, grant any option to purchase or otherwise dispose (collectively, a "Disposition") of any shares of Common Stock or any securities convertible into or exchangeable for, or any rights to purchase or acquire, Common Stock held by the undersigned, acquired by the undersigned after the date hereof or which may be deemed to be beneficially owned by the undersigned pursuant to the Rules and Regulations promulgated under the Securities Exchange Act of 1934, as amended (the "Lock-Up Shares"), for a period of 180 days from the effective date of the Registration Statement (the "Lock-Up Period"). The foregoing restriction is expressly agreed to preclude, among other Dispositions, the holder of Lock-Up Shares from engaging in any hedging or other transaction which is designed to or reasonably expected to lead to or result in a Disposition of Lock-Up Shares during the Lock-Up Period, even if such Lock-Up Shares would be disposed of by someone other than such holder. Such prohibited

hedging or other transactions would include, without limitation, any short sale (whether or not against the box) or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any Lock-Up Shares or with respect to any security (other than a broad-based market basket or index) that includes, relates to or derives any significant part of its value from Lock-Up Shares.

Notwithstanding the foregoing, the undersigned may transfer any or all of the Lock-Up Shares (i) as a bona fide gift or gifts or (ii) as a distribution to limited partners or shareholders of such person; provided, however, that in any such case it shall be a condition to the transfer that the transferee execute an agreement stating that the transferee is receiving and holding the Lock-Up Shares subject to the provisions of this letter agreement. The transferor shall notify Robertson, Stephens & Company LLC in writing prior to the transfer and there shall be no further transfer of such Lock-Up Shares except in accordance with this letter agreement. Moreover, notwithstanding any other provision of this letter agreement, the undersigned may exercise any option to purchase shares of Common Stock, provided, however, that any shares so acquired shall constitute Lock-Up Shares for the purposes of this letter agreement.

It is understood that, if the Underwriting Agreement between the Representatives and the Company (the "Underwriting Agreement") does not become effective, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Shares, the obligations under this letter agreement shall terminate automatically.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent against the transfer of any Lock-Up Shares.

The undersigned recognizes that you are relying on the representations and agreements of the undersigned contained herein in entering into underwriting arrangements with respect to the Offering contemplated by the Registration Statement.

Executed as an instrument under seal this \_\_\_\_ day of \_\_\_\_\_, 1996.

Very truly yours,

[name of stockholder]

By:

Signature

(print name of signatory)

(title, if signing on behalf of an entity)

## SCHEDULE OF LOCK-UP AGREEMENTS

## NAME OF STOCKHOLDER

-----

Daniel Asher  
Bayview Investors Ltd.  
James C Bender  
Delb Investment & Leasing Associates  
Francis V Cook  
James Delaney III Trust  
Catherine S. Dawson  
Charles Dickson  
Genesis Fund Ltd  
Grove Investment Partners  
M Blair Hull  
Kathy N Hull, Trustee,  
    Katherine N Hull Trust  
David C Hunter  
John Kerr  
John Lawless  
Lorry Lichtenstein  
Richard A Mayer  
Richard J Naegele  
Robert J Nowlin  
Irvin R Kessler Trust  
    fbo Brett Kessler

## NAME OF DIRECTOR, STOCKHOLDER

-----  
Irvin R Kessler Trust  
fbo Bari Kessler  
Irvin R Kessler Trust  
fbo Ben Kessler  
Edmund C Reiter  
Howard L Resnikoff  
William N Sick, Jr  
John S Stafford, Jr  
Charles K Stewart  
Charles K Stewart, Trustee  
Dawson Family Trust  
H Dawson and S Stewart, Co-Trustees  
Stewart Children's Trust  
Michael A Tzannes  
W B Tech Partners  
Wilblairco  
John Stafford III  
James Stafford  
Richard Moberg  
Robert Stafford  
Trustee, James Stafford Trust  
Robert Stafford  
Trustee, John Stafford III Trust  
TTC Trust, Charles Dickson, Trustee  
Business Resources International

## AWARE, INC. INCENTIVE AND NONSTATUTORY STOCK OPTION PLAN

## I. DEFINITIONS AND PURPOSES

## A. DEFINITIONS

Unless otherwise specified or unless the context otherwise requires, the following terms have the following meanings:

1. "Board of Directors" or "Board" means the Board of Directors of Aware, Inc.
2. "Code" means the United States Internal Revenue Code of 1986, as amended.
3. "Company" means Aware, Inc.
4. "Incentive Option" shall mean an Option, as identified below, which is designated as such and which, when granted, is intended to be an "incentive stock option" as defined in Section 422A of the Code.
5. "Employee" means an employee of the Company and its subsidiaries. For purposes of this definition and the Plan, a subsidiary of the Company shall be any corporation which at the time qualifies as a subsidiary thereof under the definition of "subsidiary corporation" in Section 425 of the Code. The term "Employee" shall also include directors of the Company who are not also employees of the Company. For purposes of this definition for the issuance of nonstatutory options under this Plan, Employee shall also include independent consultants and others that provide services to the Company.
6. "Nonstatutory Option" shall mean an Option, as defined below, which is designated as such and which, when granted, is not intended to be an "incentive stock option" as defined in Code Section 422A.
7. "Option" means an option granted under the Plan.
8. "Optionee" means an Employee to whom one or more Options are granted under the Plan.
9. "Plan" means this Incentive and Nonstatutory Stock Option Plan.
10. "Shares" means the Common Stock, \$.01 par value of Aware, Inc., or any shares of capital stock into which the Shares are changed or for which they are exchanged within the provisions of Article V of the Plan.

## B. PURPOSES OF THE PLAN

The Plan is intended to encourage ownership of Shares among employees, officers and directors of the Company and its



subsidiaries and to induce them to exert their maximum efforts toward the Company's success.

## II. SHARES SUBJECT OF THE PLAN

The aggregate number of Shares as to which Options may be granted from time to time shall be 2,873,002. The Shares to be issued shall be made available either from authorized but unissued Shares or Shares reacquired by the Company. If any Option granted under the Plan shall expire, be cancelled or terminate without being exercised in whole or in part, new Options may be granted covering the shares not purchased.

## III. ADMINISTRATION OF THE PLAN

The Plan shall be administered by the Board of Directors as such Board may be composed from time to time or by a committee appointed by such Board. As and to the extent authorized by the Board of Directors of the Company, a committee may exercise the power and authority vested in the Board under the Plan. The Board shall have the authority, in its discretion, to determine the employees to whom, and the time or times at which and the terms upon which, options shall be granted and may be exercised, and the number of shares to be subject to each Option, whether Options shall be Incentive Options or Nonstatutory Options, the exercise price of Options, and to interpret the Plan, to prescribe, amend and rescind rules and regulations relating to the Plan, to determine the terms and provisions of the respective option agreements (which need not be identical) and to make all other determinations and take all other actions necessary or advisable for the administration of the Plan; provided, however, that all such interpretations, rules, determinations, terms and conditions shall be made and prescribed in the context of preserving the status of any Incentive Option as an incentive stock option within the meaning of Section 422A of the Code. The Board of Directors' determinations on the matter referred to in this paragraph shall be conclusive.

## IV. TERMS AND CONDITIONS OF OPTIONS

Any Option granted under the Plan shall be in such form as the Board may from time to time approve. Any such option shall be subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the Plan, and in the case of an Incentive Option not inconsistent with the provisions of the Code applicable to "incentive stock options", as the Board shall deem desirable. Any Option granted prior to the approval by the Company's shareholders of the Plan shall be granted subject to such approval.

### (a) Option Price.

The purchase price of each of the Shares purchasable under an Option shall be determined by the Board. The exercise price of

Incentive Options shall not be less than the fair market value of the Shares on the date of grant.

(b) Option Period.

The period of each Option shall be fixed by the Board, but no Option shall be exercisable after the expiration of ten years from the date the Option is granted.

(c) Exercise of Option.

Except as provided in Paragraph (d), an Option may be exercised in whole at any time or in part from time to time during the option period, by giving written notice of exercise to the Company specifying the number of Shares to be purchased, together with Payment in full of the purchase price. Payment may be made by check and/or if permitted by the Board by tendering to the Company, Shares that the Optionee already owns or any combination thereof having a fair market value equal to the exercise price. If Shares are tendered as partial or full payment, the fair market value of such Shares shall be equal to the closing price of the Shares as reported on the principal national stock exchange on which the Shares may be traded on the day immediately preceding the day of receipt of the Shares by the Company, or if no sale of Shares has been made on any securities exchange on that date, the fair market value shall be determined by reference to such price for the next preceding day on which a sale occurred. During such time as the Shares are not listed on a national securities exchange, the fair market value of the Shares shall be the mean between the closing "bid" and "ask" Prices of the Shares as quoted by the National Association of Securities Dealers Automated Quotation System for the day preceding receipt by the Company of the Shares, and if no "bid" or "ask" Prices are quoted for such day, the fair market value shall be determined by reference to such prices on the next preceding day on which such prices were quoted. An Optionee shall have the rights of a shareholder only with respect to Shares for which certificates have been issued.

(d) Termination of Employment-Death.

Each Option granted under the Plan shall be exercisable only while the Optionee is an employee of the Company or a subsidiary or, in the case of a director who is not an employee only while a director of the Company or a subsidiary. If an Optionee dies, the Option may be exercised, to the extent that the Optionee was entitled to exercise it at the date of death, by an executor, personal representative or heir, as the case may be, at any time within a period of two (2) years after the Optionee's death. If the termination is due to disability, incentive options must be exercised within twelve (12) months of said termination and non-statutory options must be exercised within thirty six (36) months of the outset of the disability. Nothing herein shall be construed to permit an option to be exercised after the termination of the term of the Option. An Optionee's rights or Options under this Plan are exercisable, during the Optionee's lifetime, only by the

Optionee and such rights or options may not be sold, pledged, assigned or transferred in any manner other than by will or the laws of descent and distribution. Any attempt to sell, pledge, assign or transfer such rights or options shall be void and without effect.

(e) Incentive Stock Options.

An Incentive Option shall be subject to the following additional terms and conditions: (1) The aggregate fair market value, determined on the date of grant, of the Shares with respect to which Incentive Options or any incentive stock option granted under any other plan maintained by the Company are exercisable for the first time by an Optionee during any calendar year may not exceed \$100,000; and (2) the Optionee, immediately prior to the grant of an Option, does not, directly or indirectly as determined under Section 425 of the Code, own stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or its subsidiaries, unless the exercise price of the Option is at least 110% of the fair market value of the Shares at the time of grant and the term of the Option is not in excess of five (5) years from the date of grant.

(f) Options to Directors.

Options granted to directors shall be subject to the following additional terms and conditions: (1) No director shall receive Options at any time or from time to time for more than 1,000,000 Shares in the aggregate; (2) The exercise price of Nonstatutory Options shall be equal to the fair market value of the Shares determined on the date of grant; (3) The period of each Option shall be eight (8) years; and (4) An Option shall be exercisable over a three year period.

V. ADJUSTMENTS UPON CHANGES IN CAPITALIZATION

If the Shares are changed by reason of stock dividends, recapitalization, mergers, consolidations; split-ups, combinations or exchanges of shares and the like, the aggregate number and class of Shares available under the Plan and the maximum number of shares to which options may be granted to any individual shall be appropriately adjusted by the Board, and, in the case of each Option outstanding at the time of any such action, the number and class of shares which may thereafter be purchased pursuant thereto and the exercise price of each Option shall be adjusted to such extent as may be determined by the Board, whose determination shall be conclusive.

VI. LEAVE OF ABSENCE

The Board shall determine the extent to which military or Government service or leave of absence for any other reason shall constitute termination of employment for the purposes of the Plan or any Option.

## VII. GOVERNMENT REGULATIONS

The Plan, the grant and exercise of Options and the obligations of the Company to sell and deliver Shares under such Options shall be subject to all applicable Federal and state laws, rules and regulations, and to such approvals by any regulatory or governmental agency as may be required. The Company shall not be required to issue or deliver any certificate or certificates for Shares prior to (I) the admission of such Shares to listing on any stock exchange on which the Shares may then be listed; and (II) the completion of any registration or other qualification under any state or Federal law or rulings or regulations of any governmental body, which the Company shall, in its sole discretion, determine to be necessary or advisable.

## VIII. TERMINATION OF THE PLAN

The Plan shall become effective on January 22, 1990, and shall terminate on January 22, 2000. The Plan may be terminated at an earlier date by the Board of Directors; provided, however, that any such earlier termination shall not affect any Options granted prior to the date of such termination.

## IX. AMENDMENT OF THE PLAN

The Plan may be amended by the Board of Directors provided, however, that no such amendment may increase the number of Shares for which Options may be granted (except as provided by Article V) and no such amendment may alter the designation of the class of persons eligible to receive Options under the Plan unless such amendment is approved by the stockholders of the Company. No amendment shall affect any Options previously granted unless such amendment shall expressly so provide and unless any Optionee to whom an Option has been granted who would be adversely affected by such amendment consents in writing.

## X. PARTICIPATION AND EMPLOYMENT RELATIONSHIP

The adoption of this Plan shall not be deemed to give any employee, officer or director of the Company any right to be granted an option to purchase Shares, except to the extent and upon such terms and conditions as may be determined by the Board. Nothing herein contained shall be deemed to prevent the Company from terminating the employment of an Optionee.

## XI. GOVERNING LAW

This Plan and all determinations made and actions taken pursuant hereto, shall be governed by the laws of the Commonwealth of Massachusetts and construed in accordance therewith.

AWARE, INC.

## 1996 STOCK OPTION PLAN

## SECTION 1. PURPOSE

This 1996 Stock Option Plan (the "Plan") of Aware, Inc., a Massachusetts corporation (the "Company"), is designed to provide additional incentive to executives and other key employees of the Company and its subsidiaries and for certain other individuals providing services to or acting as directors of the Company and its subsidiaries. The Company intends that this purpose will be effected by the granting of incentive stock options ("Incentive Stock Options") as defined in Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), and nonqualified stock options ("Nonqualified Options") under the Plan which afford such executives, key employees, directors and other eligible individuals an opportunity to acquire or increase their proprietary interest in the Company through the acquisition of shares of its Common Stock. The Company intends that Incentive Stock Options issued under the Plan will qualify as "incentive stock options" as defined in Section 422 of the Code and the terms of the Plan shall be interpreted in accordance with this intention. The term "subsidiary" shall have the meaning set forth in Section 424 of the Code.

## SECTION 2. ADMINISTRATION

2.1 THE COMMITTEE. Unless otherwise determined by the Board, the Plan shall be administered by a Committee (the "Committee") consisting of at least two (2) "Outside Directors" who may also be members of the Compensation Committee. As used herein, the term "Outside Director" means any director who (i) is not an employee of the Company or of any "affiliated

group," as such term is defined in Section 1504(a) of the Code, which includes the Company (an "Affiliate"), (ii) is not a former employee of the Company or any Affiliate who is receiving compensation for prior services (other than benefits under a tax-qualified retirement plan) during the Company's or any Affiliate's taxable year, (iii) has not been an officer of the Company or any Affiliate and (iv) does not receive remuneration from the Company or any Affiliate, either directly or indirectly, in any capacity other than as a director. None of the members of the Committee shall have been granted any incentive stock option or nonqualified option under this Plan (other than pursuant to Section 4.4) or any other stock option plan of the Company within one year prior to service on the Committee. It is the intention of the Company that the Plan shall be administered by "disinterested persons" within the meaning of Rule 16b-3 under the Securities Exchange Act of 1934 (the "Exchange Act"), but the authority and validity of any act taken or not taken by the Committee shall not be affected if any person administering the Plan is not a disinterested person. Except as specifically reserved to the Company's Board of Directors (the "Board") under the terms of the Plan, the Committee shall have full and final authority to operate, manage and administer the Plan on behalf of the Company. Action by the Committee shall require the affirmative vote of a majority of all members thereof.

2.2 POWERS OF THE COMMITTEE. Subject to the terms and conditions of the Plan, the Committee shall have the power:

(a) To determine from time to time the persons eligible to receive options and the options to be granted to such persons under the Plan and to prescribe the terms, conditions, restrictions, if any, and provisions (which need not be identical) of each option granted under the Plan to such persons;

(b) To construe and interpret the Plan and options granted thereunder and to establish, amend, and revoke rules and regulations for administration of the Plan. In this connection, the Committee may correct any defect or supply any omission, or reconcile any inconsistency in the Plan, or in any option agreement, in the manner and to the extent it shall deem necessary or expedient to make the Plan fully effective. All decisions and determinations by the Committee in the exercise of this power shall be final and binding upon the Company and optionees;

(c) To make, in its sole discretion, changes to any outstanding option granted under the Plan, including: (i) to reduce the exercise price, (ii) to accelerate the vesting schedule or (iii) to extend the expiration date; and

(d) Generally, to exercise such powers and to perform such acts as are deemed necessary or expedient to promote the best interests of the Company with respect to the Plan.

### SECTION 3. STOCK

3.1 STOCK TO BE ISSUED. The stock subject to the options granted under the Plan shall be shares of the Company's authorized but unissued Common Stock, \$.01 par value (the "Common Stock"), or shares of the Company's Common Stock held in treasury. The total number of shares that may be issued pursuant to options granted under the Plan shall not exceed an aggregate of 3,000,000 shares of Common Stock; provided, however, that the class and aggregate number of shares which may be subject to options granted under the Plan shall be

subject to adjustment as provided in Section 8 hereof.

3.2 EXPIRATION, CANCELLATION OR TERMINATION OF OPTION. Whenever any outstanding option under the Plan expires, is cancelled or is otherwise terminated (other than by exercise), the shares of Common Stock allocable to the unexercised portion of such option may again be the subject of options under the Plan.

3.3 LIMITATION ON GRANTS. In no event may any Plan participant be granted options with respect to more than 350,000 shares of Common Stock in any calendar year. The number of shares of Common Stock issuable pursuant to an option granted to a Plan participant in a calendar year that is subsequently forfeited, cancelled or otherwise terminated shall continue to count toward the foregoing limitation in such calendar year. In addition, if the exercise price of an option is subsequently reduced, the transaction shall be deemed a cancellation of the original option and the grant of a new one so that both transactions shall count toward the maximum shares issuable in the calendar year of each respective transaction.

#### SECTION 4. ELIGIBILITY

4.1 PERSONS ELIGIBLE. Incentive Stock Options under the Plan may be granted only to officers and other employees of the Company or its subsidiaries. Nonqualified Options may be granted to officers or other employees of the Company or its subsidiaries, and to members of the Board and consultants or other persons who render services to the Company (regardless of whether they are also employees), provided, however, that no such option may be granted to a person who is a member of the Committee at the time of grant other than pursuant to Section 4.4.

4.2 GREATER-THAN-TEN-PERCENT STOCKHOLDERS. Except as may otherwise be



permitted by the Code or other applicable law or regulation, no Incentive Stock Option shall be granted to an individual who, at the time the option is granted, owns (including ownership attributed pursuant to Section 424 of the Code) more than ten percent of the total combined voting power of all classes of stock of the Company or any subsidiary (a "greater-than-ten-percent stockholder"), unless such Incentive Stock Option provides that (i) the purchase price per share shall not be less than one hundred ten percent of the fair market value of the Common Stock at the time such option is granted, and (ii) that such option shall not be exercisable to any extent after the expiration of five years from the date it is granted.

4.3 MAXIMUM AGGREGATE FAIR MARKET VALUE. The aggregate fair market value (determined at the time the option is granted) of the Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any optionee during any calendar year (under the Plan and any other plans of the Company or its subsidiary for the issuance of incentive stock options) shall not exceed \$100,000 (or such greater amount as may from time to time be permitted with respect to incentive stock options by the Code or any other applicable law or regulation).

4.4 OPTION GRANTS TO NON-EMPLOYEE DIRECTORS. As compensation for services to the Company, each director of the Company who is not an employee of the Company or any subsidiary of the Company (a "Non-Employee Director") shall, at the first meeting of the Board of Directors following each annual meeting of stockholders, commencing with the first meeting of the Board of Directors following the Company's annual meeting of stockholders in 1997, be automatically granted a Nonqualified Option (the "Director Option") to purchase that number of shares of Common Stock of the Company determined by dividing \$100,000 by the exercise price

per share of Common Stock determined in accordance with this Section 4.4.

Each Director Option shall have a term of six years and shall vest in twelve equal consecutive quarterly installments, the first to vest on the last day of the month following the month in which the grant occurs. In the event that a director's position as such terminates or is terminated by reason of his death, permanent and total disability, resignation (other than at the request of the Board), removal by the Board or the Company's stockholders, or refusal to accept the Company's nomination for reelection, any Director Option held by such director shall cease to vest and shall expire sixty days thereafter. In all other cases, a Director Option shall continue to vest after termination of the holder's position as a director and shall expire on the sixth anniversary of the date of grant.

The exercise price per share of Common Stock of each Director Option shall be equal to the fair market value of the Common Stock on the date the Director Option is granted, determined in accordance with the provisions of Section 6.3.

Notwithstanding any other provision of this Section 4.4, no Director Option shall be granted prior to the first meeting of the Board of Directors following the annual meeting of stockholders in 1999 to any individual who was or became a director of the Company, and was granted an option to purchase Common Stock of the Company, after December 31, 1995 and before the first meeting of the Board of Directors following the annual meeting of stockholders in 1997.

No Director Option granted under this Section 4.4 shall be transferable by the optionee otherwise than by will or by the laws of descent and distribution, and such Options shall be

exercisable during the optionee's lifetime only by the optionee. Any Director Option granted to a Non-Employee Director and outstanding on the date of his or her death may be exercised by the legal representative or legatee of the optionee until the expiration of the option.

Director Options granted under this Section 4.4 may be exercised only by written notice to the Company specifying the number of shares to be purchased. Payment of the full purchase may be made by one or more of the methods specified in Section 7.2. An optionee shall have the rights of a stockholder only as to shares acquired upon the exercise of an option and not as to unexercised options.

The provisions of this Section 4.4 shall apply only to options granted or to be granted to Non-Employee Directors, and shall not be deemed to modify, limit or otherwise apply to any other provision of this Plan or to any option issued under this Plan to a participant who is not a Non-Employee Director of the Company. To the extent inconsistent with the provisions of any other Section of this Plan, the provisions of this Section 4.4 shall govern the terms of, and the rights and obligations of the Company and Non-Employee Directors respecting, Director Options granted or to be granted to Non-Employee Directors.

This Section 4.4 may be modified or abrogated at any time if the Board determines that it or any provision in it is unnecessary for compliance or is in conflict with Rule 16b-3 under the Exchange Act.

#### SECTION 5. TERMINATION OF EMPLOYMENT OR DEATH OF OPTIONEE

5.1 TERMINATION OF EMPLOYMENT. Except as may be otherwise expressly provided herein, options shall terminate on the earlier of:

(a) the date of expiration thereof,

(b) the date of termination of the optionee's employment with or services to the Company by it for cause (as determined by the Company), or voluntarily by the optionee; or

(c) thirty days after the date of termination of the optionee's employment with or services to the Company by it without cause;

PROVIDED THAT Nonqualified Options granted to persons who are not employees of the Company need not, unless the Committee determines otherwise, be subject to the provisions set forth in clauses (b) and (c) above.

An employment relationship between the Company and the optionee shall be deemed to exist during any period in which the optionee is employed by the Company or any subsidiary. Whether authorized leave of absence, or absence on military or government service, shall constitute termination of the employment relationship between the Company and the optionee shall be determined by the Committee at the time thereof.

As used herein, "cause" shall mean (x) any material breach by the optionee of any agreement to which the optionee and the Company are both parties, (y) any act or omission to act by the optionee which may have a material and adverse effect on the Company's business or on the optionee's ability to perform services for the Company, including, without limitation, the commission of any crime (other than ordinary traffic violations), or (z) any material misconduct or material neglect of duties by the optionee in connection with the business or affairs of the Company or any affiliate of the Company.

5.2 DEATH OR PERMANENT DISABILITY OF OPTIONEE. In the event of the death or

permanent and total disability of the holder of an option prior to termination of the optionee's employment with or services to the Company and before the date of expiration of such option, such option shall terminate on the earlier of such date of expiration or one year following the date of such death or disability. After the death of the optionee, his/her executors, administrators or any person or persons to whom his/her option may be transferred by will or by the laws of descent and distribution, shall have the right, at any time prior to such termination, to exercise the option to the extent the optionee was entitled to exercise such option immediately prior to his/her death. Permanent and total disability shall be determined in accordance with Section 22(e)(3) of the Code and the regulations issued thereunder.

#### SECTION 6. TERMS OF THE OPTION AGREEMENTS

Each option agreement shall be in writing and shall contain such terms, conditions, restrictions, if any, and provisions as the Committee shall from time to time deem appropriate. Such provisions or conditions may include without limitation restrictions on transfer, repurchase rights, or such other provisions as shall be determined by the Committee; PROVIDED THAT such additional provisions shall not be inconsistent with any other term or condition of the Plan and such additional provisions shall not cause any Incentive Stock Option granted under the Plan to fail to qualify as an incentive option within the meaning of Section 422 of the Code. Option agreements need not be identical, but each option agreement by appropriate language shall include the substance of all of the following provisions:

6.1 EXPIRATION OF OPTION. Subject to Section 4.4 hereof, notwithstanding any other provision of the Plan or of any option agreement, each option shall expire on the date specified in the option agreement, which date shall not, in the case of an Incentive Stock Option, be later than the tenth anniversary (fifth anniversary in the case of a greater-than-ten-percent stockholder) of the date on which the option was granted, or as specified in Section 5 hereof.

6.2 EXERCISE. Subject to Sections 4.4 and 7.3 hereof, each option may be exercised, so long as it is valid and outstanding, from time to time in part or as a whole, subject to any limitations with respect to the number of shares for which the option may be exercised at a particular time and to such other conditions as the Committee in its discretion may specify upon granting the option.

6.3 PURCHASE PRICE. Subject to Section 4.4 hereof, the purchase price per share under each option shall be determined by the Committee at the time the option is granted; provided, however, that the option price of any Incentive Stock Option shall not, unless otherwise permitted by the Code or other applicable law or regulation, be less than the fair market value of the Common Stock on the date the option is granted (110% of the fair market value in the case of a greater-than-ten-percent stockholder). For the purpose of the Plan the fair market value of the Common Stock shall be the closing price per share on the date of grant of the option as reported by a nationally recognized stock exchange, or, if the Common Stock is not listed on such an exchange, as reported by the National Association of Securities Dealers Automated Quotation System, Inc. ("NASDAQ"), or, if the Common Stock is not quoted on NASDAQ, the fair market value as determined by the Committee.

6.4 TRANSFERABILITY OF OPTIONS. Options shall not be transferable by the optionee otherwise than by will or under the laws of descent and distribution, and shall be exercisable, during his or her lifetime, only by him or her.

6.5 RIGHTS OF OPTIONEES. No optionee shall be deemed for any purpose to be the owner of any shares of Common Stock subject to any option unless and until the option shall have been exercised pursuant to the terms thereof, and the Company shall have issued and delivered the shares to the optionee.

6.6 REPURCHASE RIGHT. The Committee may in its discretion provide upon the grant of any option hereunder that the Company shall have an option to repurchase upon such terms and conditions as determined by the Committee all or any number of shares purchased upon exercise of such option. The repurchase price per share payable by the Company shall be such amount or be determined by such formula as is fixed by the Committee at the time the option for the shares subject to repurchase is granted. In the event the Committee shall grant options subject to the Company's repurchase option, the certificates representing the shares purchased pursuant to such option shall carry a legend satisfactory to counsel for the Company referring to the Company's repurchase option.

6.7 "LOCKUP" AGREEMENT. The Committee may in its discretion specify upon granting an option that the optionee shall agree for a period of time (not to exceed 180 days) from the effective date of any registration of securities of the Company (upon request of the Company or the underwriters managing any underwritten offering of the Company's securities), not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any shares issued pursuant to the exercise of such option, without the prior written consent of the

Company or such underwriters, as the case may be.

#### SECTION 7. METHOD OF EXERCISE; PAYMENT OF PURCHASE PRICE

7.1 METHOD OF EXERCISE. Any option granted under the Plan may be exercised by the optionee by delivering to the Company on any business day a written notice specifying the number of shares of Common Stock the optionee then desires to purchase and specifying the address to which the certificates for such shares are to be mailed (the "Notice"), accompanied by payment for such shares.

7.2 PAYMENT OF PURCHASE PRICE. Payment for the shares of Common Stock purchased pursuant to the exercise of an option shall be made by:

(a) cash in an amount, or a check, bank draft or postal or express money order payable in an amount, equal to the aggregate exercise price for the number of shares specified in the Notice;

(b) with the consent of the Committee, shares of Common Stock of the Company having a fair market value (as defined for purposes of Section 6.3 hereof) equal to such aggregate exercise price;

(c) with the consent of the Committee, a personal recourse note issued by the optionee to the Company in a principal amount equal to such aggregate exercise price and with such other terms, including interest rate and maturity, as the Committee may determine in its discretion; PROVIDED THAT the interest rate borne by such note shall not be less than the lowest applicable federal rate, as defined in Section 1274(d) of the Code;

(d) with the consent of the Committee, such other consideration that is



acceptable to the Committee and that has a fair market value, as determined by the Committee, equal to such aggregate exercise price, including any broker-directed cashless exercise/resale procedure adopted by the Committee; or

(e) with the consent of the Committee, any combination of the foregoing.

As promptly as practicable after receipt of the Notice and accompanying payment, the Company shall deliver to the optionee certificates for the number of shares with respect to which such option has been so exercised, issued in the optionee's name; provided, however, that such delivery shall be deemed effected for all purposes when the Company or a stock transfer agent of the Company shall have deposited such certificates in the United States mail, addressed to the optionee, at the address specified in the Notice.

7.3 SPECIAL LIMITS AFFECTING SECTION 16(B) OPTION HOLDERS. Shares issuable upon exercise of options granted to a person who in the opinion of the Committee may be deemed to be a director or officer of the Company within the meaning of Section 16(b) of the Exchange Act and the rules and regulations thereunder shall not be sold or disposed of until after the expiration of six months following the date of grant.

#### SECTION 8. CHANGES IN COMPANY'S CAPITAL STRUCTURE

8.1 RIGHTS OF COMPANY. The existence of outstanding options shall not affect in any way the right or power of the Company or its stockholders to make or authorize, without limitation, any or all adjustments, recapitalizations, reorganizations or other changes in the Company's capital structure or its business, or any merger or consolidation of the Company, or any issue of Common Stock, or any issue of bonds, debentures, preferred or prior preference stock or other

capital stock ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

8.2 RECAPITALIZATION, STOCK SPLITS AND DIVIDENDS. If the Company shall effect a subdivision or consolidation of shares or other capital readjustment, the payment of a stock dividend, or other increase or reduction of the number of shares of the Common Stock outstanding, in any such case without receiving compensation therefor in money, services or property, then (i) the number, class, and price per share of shares of stock subject to outstanding options hereunder shall be appropriately adjusted in such a manner as to entitle an optionee to receive upon exercise of an option, for the same aggregate cash consideration, the same total number and class of shares as he or she would have received as a result of the event requiring the adjustment had he or she exercised his or her option in full immediately prior to such event; (ii) the number and class of shares with respect to which options may be granted under the Plan; and (iii) the number and class of shares set forth in Sections 3.3 and 4.4 shall be adjusted by substituting for the total number of shares of Common Stock then reserved for issuance under the Plan that number and class of shares of stock that the owner of an equal number of outstanding shares of Common Stock would own as the result of the event requiring the adjustment.

8.3 MERGER WITHOUT CHANGE OF CONTROL. After a merger of one or more corporations into the Company, or after a consolidation of the Company and one or more corporations in which (i) the Company shall be the surviving corporation, and (ii) the stockholders of the Company immediately prior to such merger or consolidation own after such merger or consolidation shares representing at least fifty percent of the voting power of the Company, each

holder of an outstanding option shall, at no additional cost, be entitled upon exercise of such option to receive in lieu of the number of shares as to which such option shall then be so exercisable, the number and class of shares of stock or other securities to which such holder would have been entitled pursuant to the terms of the agreement of merger or consolidation if, immediately prior to such merger or consolidation, such holder had been the holder of record of a number of shares of Common Stock equal to the number of shares for which such option was exercisable.

8.4 SALE OR MERGER WITH CHANGE OF CONTROL. If the Company is merged into or consolidated with another corporation under circumstances where the Company is not the surviving corporation, or if there is a merger or consolidation where the Company is the surviving corporation but the stockholders of the Company immediately prior to such merger or consolidation do not own after such merger or consolidation shares representing at least fifty percent of the voting power of the Company, or if the Company is liquidated, or sells or otherwise disposes of substantially all of its assets to another corporation while unexercised options remain outstanding under the Plan, (i) subject to the provisions of clause (iii) below, after the effective date of such merger, consolidation, liquidation, sale or disposition, as the case may be, each holder of an outstanding option shall be entitled, upon exercise of such option, to receive, in lieu of shares of Common Stock, shares of such stock or other securities, cash or property as the holders of shares of Common Stock received pursuant to the terms of the merger, consolidation, liquidation, sale or disposition; (ii) the Committee may accelerate the time for exercise of all unexercised and unexpired options to and after a date prior to the effective date of such merger, consolidation, liquidation, sale or disposition, as the case may be, specified by the Committee; or

(iii) all outstanding options may be cancelled by the Committee as of the effective date of any such merger, consolidation, liquidation, sale or disposition provided that (x) notice of such cancellation shall be given to each holder of an option and (y) each holder of an option shall have the right to exercise such option to the extent that the same is then exercisable or, if the Committee shall have accelerated the time for exercise of all unexercised and unexpired options, in full during the 30-day period preceding the effective date of such merger, consolidation, liquidation, sale or disposition.

8.5 ADJUSTMENTS TO COMMON STOCK SUBJECT TO OPTIONS. Except as hereinbefore expressly provided, the issue by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, for cash or property, or for labor or services, either upon direct sale or upon the exercise of rights or warrants to subscribe therefor, or upon conversion of shares or obligations of the Company convertible into such shares or other securities, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Common Stock then subject to outstanding options.

8.6 MISCELLANEOUS. Adjustments under this Section 8 shall be determined by the Committee, and such determinations shall be conclusive. No fractional shares of Common Stock shall be issued under the Plan on account of any adjustment specified above.

#### SECTION 9. GENERAL RESTRICTIONS

9.1 INVESTMENT REPRESENTATIONS. The Company may require any person to whom an option is granted, as a condition of exercising such option, to give written assurances in substance and form satisfactory to the Company to the effect that such person is acquiring the Common

Stock subject to the option for his or her own account for investment and not with any present intention of selling or otherwise distributing the same, and to such other effects as the Company deems necessary or appropriate in order to comply with federal and applicable state securities laws.

9.2 COMPLIANCE WITH SECURITIES LAWS. The Company shall not be required to sell or issue any shares under any option if the issuance of such shares shall constitute a violation by the optionee or by the Company of any provisions of any law or regulation of any governmental authority. In addition, in connection with the Securities Act of 1933, as now in effect or hereafter amended (the "Act"), upon exercise of any option, the Company shall not be required to issue such shares unless the Committee has received evidence satisfactory to it to the effect that the holder of such option will not transfer such shares except pursuant to a registration statement in effect under such Act or unless an opinion of counsel satisfactory to the Company has been received by the Company to the effect that such registration is not required. Any determination in this connection by the Committee shall be final, binding and conclusive. In the event the shares issuable on exercise of an option are not registered under the Act, the Company may imprint upon any certificate representing shares so issued the following legend or any other legend which counsel for the Company considers necessary or advisable to comply with the Act and with applicable state securities laws:

The shares of stock represented by this certificate have not been registered under the Securities Act of 1933 or under the securities laws of any State and may not be sold or transferred except upon such registration or upon receipt by the Corporation of an opinion of counsel satisfactory to the Corporation, in form and substance satisfactory to the Corporation, that registration is not required for such sale or transfer.

The Company may, but shall in no event be obligated to, register any securities covered hereby pursuant to the Act; and in the event any shares are so registered the Company may remove any legend on certificates representing such shares. The Company shall not be obligated to take any other affirmative action in order to cause the exercise of an option or the issuance of shares pursuant thereto to comply with any law or regulation of any governmental authority.

9.3 EMPLOYMENT OBLIGATION. The granting of any option shall not impose upon the Company any obligation to employ or continue to employ any optionee; and the right of the Company to terminate the employment of any officer or other employee shall not be diminished or affected by reason of the fact that an option has been granted to him or her.

#### SECTION 10. WITHHOLDING TAXES

10.1 RIGHTS OF COMPANY. The Company may require an employee exercising a Nonqualified Option, or disposing of shares of Common Stock acquired pursuant to the exercise of an Incentive Option in a disqualifying disposition (as defined in Section 421(b) of the Code), to reimburse the Company for any taxes required by any government to be withheld or otherwise deducted and paid by the Company in respect of the issuance or disposition of such shares. In lieu thereof, the Company shall have the right to withhold the amount of such taxes from any other sums due or to become due from the Company to the employee upon such terms and conditions as the Company may prescribe. The Company may, in its discretion, hold the stock certificate to which such employee is otherwise entitled upon the exercise of an Option as security for the payment of any such withholding tax liability, until cash sufficient to pay that liability has been received or accumulated.

10.2 PAYMENT IN SHARES. An employee may elect to have such tax withholding obligation satisfied, in whole or in part, by (i) authorizing the Company to withhold from shares of Common Stock to be issued pursuant to the exercise of a Nonqualified Option a number of shares with an aggregate fair market value (as defined in Section 6.3 hereof determined as of the date the withholding is effected) that would satisfy the withholding amount due with respect to such exercise, or (ii) transferring to the Company shares of Common Stock owned by the employee with an aggregate fair market value (as defined in Section 6.3 hereof determined as of the date the withholding is effected) that would satisfy the withholding amount due. With respect to any employee who is subject to Section 16 of the Exchange Act, the following additional restrictions shall apply:

(a) the election to satisfy tax withholding obligations relating to an option exercise in the manner permitted by this Section 10.2 shall be made either (1) during the period beginning on the third business day following the date of release of quarterly or annual summary statements of sales and earnings of the Company and ending on the twelfth business day following such date, or (2) at least six (6) months prior to the date of exercise of the option;

(b) such election shall be irrevocable;

(c) such election shall be subject to the consent or approval of the Committee; and

(d) the Common Stock withheld to satisfy tax withholding, if granted at the discretion of the Committee, must pertain to an option which has been held by the employee for at least six (6) months from the date of grant of the option.

10.3 NOTICE OF DISQUALIFYING DISPOSITION. Each holder of an Incentive Option shall agree to notify the Company in writing immediately after making a disqualifying disposition (as defined in Section 421(b) of the Code) of any Common Stock purchased upon exercise of the Incentive Option.

#### SECTION 11. AMENDMENT OR TERMINATION OF PLAN

11.1 AMENDMENT. The Board may terminate the Plan and may amend the Plan at any time, and from time to time, subject to the limitation that, except as provided in Section hereof, no amendment shall be effective unless approved by the stockholders of the Company in accordance with applicable law and regulations, at an annual or special meeting held within 12 months before or after the date of adoption of such amendment, in any instance in which such amendment would: (i) increase the number of shares of Common Stock that may be issued under, or as to which Options may be granted pursuant to, the Plan; or (ii) change in substance the provisions of Section hereof relating to eligibility to participate in the Plan. In addition, the provisions of Section 4.4 shall not be amended more than once every six months, other than to comport with changes in the Code, the Employee Retirement Income Security Act, or the rules thereunder. Without limiting the generality of the foregoing, the Board is expressly authorized to amend the Plan, at any time and from time to time, to confirm it to the provisions of Rule 16b-3 under the Exchange Act, as that Rule may be amended from time to time.

Except as provided in Section hereof, the rights and obligations under any option granted before amendment of this Plan or any unexercised portion of such option shall not be adversely affected by amendment of this Plan or such option without the consent of the holder of



such option.

11.2 TERMINATION. This Plan shall terminate as of the tenth anniversary of its effective date. The Board may terminate this Plan at any earlier time for any or no reason. No Option may be granted after the Plan has been terminated. No Option granted while this Plan is in effect shall be altered or impaired by termination of this Plan, except upon the consent of the holder of such Option. The power of the Committee to construe and interpret this Plan and the Options granted prior to the termination of this Plan shall continue after such termination.

## SECTION 12. NONEXCLUSIVITY OF PLAN

Neither the adoption of this Plan by the Board of Directors nor the submission of this Plan to the stockholders of the Company for approval shall be construed as creating any limitations on the power of the Board to adopt such other incentive arrangements as it may deem desirable, including the granting of stock options otherwise than under this Plan, and such arrangements may be either applicable generally or only in specific cases.

## SECTION 13. EFFECTIVE DATE AND DURATION OF PLAN

This Plan shall become effective upon its adoption by the Board, PROVIDED that the stockholders of the Company shall have approved this Plan within twelve months prior to or following the adoption of this Plan by the Board. Subject to the foregoing, options may be granted under the Plan at any time subsequent to its effective date; PROVIDED, HOWEVER, that (a) no such option shall be exercised or exercisable unless the stockholders of the Company shall have approved the Plan within twelve months prior to or following the adoption of this Plan by the Board, and (b) all options issued prior to the date of such stockholders' approval shall contain a reference to such condition. No option may be granted under the Plan after the tenth anniversary of the effective date. The Plan shall terminate (i) when the total amount of the Common Stock with respect to which options may be granted shall have been issued upon the exercise of options or (ii) by action of the Board of Directors pursuant to Section 11 hereof, whichever shall first occur.

## SECTION 14. PROVISIONS OF GENERAL APPLICATION

14.1 SEVERABILITY. The invalidity or unenforceability of any provision of this Plan shall not affect the validity or enforceability of any other provision of this Plan, each of which shall remain in full force and effect.

14.2 CONSTRUCTION. The headings in this Plan are included for convenience only and shall not in any way effect the meaning or interpretation of this Plan. Any term defined in the singular shall include the plural, and vice versa. The words "herein," "hereof" and "hereunder" refer to this Plan as a whole and not to any particular part of this Plan. The word "including" as used herein shall not be construed so as to exclude any other thing not referred to or described.

14.3 FURTHER ASSURANCES. The Company and any holder of an option shall from time to time execute and deliver any and all further instruments, documents and agreements and do such other and further acts and things as may be required or useful to carry out the intent and purpose of this Plan and such option and to assure to the Company and such option holder the benefits contemplated by this Plan; PROVIDED, HOWEVER, that neither the Company nor any option holder shall in any event be required to take any action inconsistent with the provisions of this Plan.

14.4 GOVERNING LAW. This Plan and each Option shall be governed by the laws of The Commonwealth of Massachusetts.

\* \* \*

## AWARE, INC.

## 1996 EMPLOYEE STOCK PURCHASE PLAN

## 1. PURPOSE

The 1996 Aware, Inc. Employee Stock Purchase Plan (the "Plan") is intended to provide a method whereby employees of Aware, Inc. (the "Company") will have an opportunity to acquire an ownership interest (or increase an existing ownership interest) in the Company through the purchase of shares of the Common Stock of the Company. It is the intention of the Company that the Plan qualify as an "employee stock purchase plan" under Section 423 of the Internal Revenue Code of 1986, as amended (the "Code"). The provisions of the Plan shall, accordingly, be construed so as to extend and limit participation in a manner consistent with the requirements of that section of the Code.

## 2. DEFINITIONS

(a) "Board" means the Board of Directors of the Company.

(b) "Code" shall have the meaning set forth in Paragraph 1.

(c) "Committee" means the Compensation Committee of the

Board.

(d) "Common Stock" means the common stock, par value \$.01 per share, of the Company.

(e) "Company" shall also include any Subsidiary (as hereinafter defined) of Aware, Inc. designated as a participant in the Plan by the Board, unless the context otherwise requires.

(f) "Compensation" means, for the purpose of any Offering pursuant to this Plan, base pay in effect as of the Offering Commencement Date (as hereinafter defined). Compensation shall not include any deferred compensation other than contributions by an individual through a salary reduction agreement to a cash or deferred plan pursuant to Section 401(k) of the Code or to a cafeteria plan pursuant to Section 125 of the Code.

(g) "Employee" means any person who is customarily employed by the Company for more than 20 hours per week and more than five months in any calendar year.

(h) "Offering" shall have the meaning set forth in Paragraph

4.

(i) "Offering Commencement Date" shall have the meaning set forth in Paragraph 4.

(j) "Offering Termination Date" shall have the meaning set forth in Paragraph 4.

(k) "Plan" shall have the meaning set forth in Paragraph 1.

(l) "Subsidiary" shall mean any present or future corporation which is or would constitute a "subsidiary corporation" as that term is defined in Section 425 of the Code.

### 3. ELIGIBILITY

(a) Participation in the Plan is completely voluntary. Participation in any one or more of the Offerings under the Plan shall neither limit, nor require, participation in any other Offering (as hereinafter defined).

(b) Each employee of the Company shall be eligible to participate in the Plan on the first Offering Commencement Date, as hereinafter defined, following the completion of six months of continuous service with the Company. Notwithstanding the foregoing, no employee shall be granted an option under the Plan:

(i) if, immediately after the grant, such employee would own stock, and/or hold outstanding options to purchase stock, possessing 5% or more of the total combined voting power or value of all classes of stock of the Company or any Subsidiary; for purposes of this Paragraph, the rules of Section 424(d) of the Code shall apply in determining the stock ownership of any employee;

(ii) which permits his rights to purchase stock under all Section 423 employee stock purchase plans of the Company and its Subsidiaries to exceed \$25,000 of the fair market value of the stock (determined at the time such option is granted) for each calendar year in which such option is outstanding; for purposes of this Paragraph, the rules of Section 423(b)(8) of the Code shall apply; or

(iii) if such employee is an officer of the Company, but only if such employee is a "highly compensated employee" within the meaning of Section 414(q) of the Code.

### 4. OFFERING DATES

The right to purchase stock hereunder shall be made available by a series of six-month offerings (the "Offering" or "Offerings") to employees eligible in accordance with Paragraph 3 hereof. The Committee will, in its discretion, determine the applicable date of commencement ("Offering Commencement Date") and termination date ("Offering Termination Date") for each Offering. Participation in any one or more of the Offerings under the Plan shall neither limit, nor require, participation in any other Offering.

## 5. PARTICIPATION

Any eligible employee may become a participant by completing a payroll deduction authorization form provided by the Company and filing it with the Company's Treasurer 20 days prior to each applicable Offering Commencement Date, as determined by the Committee pursuant to Paragraph 4.

## 6. PAYROLL DEDUCTIONS

(a) At the time a participant files an authorization for a payroll deduction, the participant shall elect to have deductions made from his or her pay on each payday during any Offering in which he or she is a participant, at a specified percentage of his or her Compensation as determined on the applicable Offering Commencement Date; said percentage shall be in increments of one percent up to a maximum percentage of six percent.

(b) Payroll deductions for a participant shall commence on the Offering Commencement Date when the applicable authorization for a payroll deduction becomes effective and shall end on the Offering Termination Date of the Offering to which such authorization is applicable, unless sooner terminated by the participant as provided in Paragraph 9.

(c) All payroll deductions made for a participant shall be credited to his or her account under the Plan. A participant may not make any separate cash payment into such account.

(d) A participant may withdraw from the Plan at any time during the applicable Offering period; provided, however, that a participant who is an officer or director of the Company and who withdraws from the Plan during any Offering period will not be eligible for the grant of any subsequent option under the Plan for a period of six months.

## 7. GRANTING OF OPTION

(a) Except as set forth in Paragraph 7(c) hereof, on the Offering Commencement Date of each Offering, a participating employee shall be deemed to have been granted an option to purchase a maximum number of shares of the Common Stock equal to an amount determined as follows: (i) 85% of the market value per share of the Common Stock on the applicable Offering Commencement Date shall be divided into an amount equal to the sum of (x) the percentage of the employee's Compensation which he or she has elected to have withheld (multiplied by the employee's Compensation over the Offering period) plus (y) any amounts in the employee's account on the Offering Commencement Date that have been carried forward from prior Offerings; multiplied by (ii) two. Such market value per share of the Common Stock shall be determined as provided in clause (i) of Paragraph 7(b).

(b) The option price of the Common Stock purchased with payroll deductions made during each such Offering for a participant therein shall be the lower of:

(i) 85% of the average of the bid and the asked prices as reported by the Nasdaq Stock Market in the Wall Street Journal, or, if the Common Stock is designated as a national market security by the National Association of Securities Dealers, Inc. ("NASD"), the last trading price of the Common Stock as reported by the Nasdaq National Market System in the Wall Street Journal, or, if the Common Stock is listed on an exchange, the closing price of the Common Stock on the exchange on the Offering Commencement Date applicable to such Offering (or on the next regular business date on which shares of the Common Stock shall be traded, in the event that no shares of the Common Stock have been traded on the Offering Commencement Date); or if the Common Stock is not quoted on Nasdaq, not designated as a Nasdaq national market security and not listed on an exchange, 85% of the fair market value on the Offering Commencement Date as determined by the Committee; and

(ii) 85% of the average of the bid and the asked prices as reported by Nasdaq in the Wall Street Journal, or, if the Common Stock is designated as a national market security by the NASD, the last trading price of the Common Stock as reported by the Nasdaq National Market System in the Wall Street Journal, or, if the Common Stock is listed on an exchange, the closing price of the Common Stock on the exchange on the Offering Termination Date applicable to such Offering (or on the next regular business date on which shares of the Common Stock shall be traded, in the event that no shares of the Common Stock shall have been traded on the Offering Termination Date); or if the Common Stock is not quoted on Nasdaq, not designated as a Nasdaq national market security and not listed on an exchange, 85% of the fair market value on the Offering Termination Date as determined by the Committee.

(c) A participant who is an officer or director of the Company and who elects pursuant to Paragraph 8(a) with respect to any Offering not to exercise an option deemed to have been granted pursuant to this Paragraph 7, shall not be eligible for the grant of an option hereunder for a period of six months.

#### 8. EXERCISE OF OPTION

(a) Unless a participant gives written notice to the Treasurer of the Company as hereinafter provided, his or her option for the purchase of Common Stock with payroll deductions made during any Offering will be deemed to have been exercised automatically on the Offering Termination Date applicable to such Offering for the purchase of the number of full shares of Common Stock which the accumulated payroll deductions in his or her account at that time (plus any amounts in his or her account that have been carried forward from prior Offerings) will purchase at the applicable option price (but not in excess of the number of shares for which options have been granted to the employee, pursuant to Paragraph 7(a)), and any excess in his account at that time will be automatically carried forward to the next

Offering unless the participant elects, by written notice to the Treasurer of the Company, to have the excess returned to the participant.

(b) Fractional shares will not be issued under the Plan and any accumulated payroll deductions which would have been used to purchase fractional shares shall be automatically carried forward to the next Offering unless the participant elects, by written notice to the Treasurer of the Company, to have the excess cash returned to the participant.

#### 9. WITHDRAWAL AND TERMINATION

(a) Prior to the Offering Termination Date for an Offering, any participant may withdraw the payroll deductions credited to his or her account under the Plan for such Offering by giving written notice to the Treasurer of the Company. All of the participant's payroll deductions credited to such account will be paid to the participant promptly after receipt of notice of withdrawal, without interest, and no future payroll deductions will be made from his or her pay during such Offering. The Company will treat any attempt to borrow by a participant on the security of accumulated payroll deductions as an election to withdraw such deductions.

(b) Except as set forth in Paragraphs 6(d) and 7(c), a participant's election not to participate in, or withdrawal from, any Offering will not have any effect upon his or her eligibility to participate in any succeeding Offering or in any similar plan which may hereafter be adopted by the Company.

(c) Upon termination of the participant's employment for any reason, including retirement but excluding death, the payroll deductions credited to his or her account will be returned to the participant, or, in the case of his or her death, to the person or persons entitled thereto under Paragraph 13.

(d) Upon termination of the participant's employment because of death, his or her beneficiary (as defined in Paragraph 13) shall have the right to elect, by written notice given to the Company's Treasurer prior to the expiration of a period of 90 days commencing with the date of the death of the participant, either:

(i) to withdraw all of the payroll deductions credited to the participant's account under the Plan; or

(ii) to exercise the participant's option for the purchase of stock on the Offering Termination Date next following the date of the participant's death for the purchase of the number of full shares which the accumulated payroll deductions in the participant's account at the date of the participant's death will purchase at the applicable option price (subject to the limitation contained in Paragraph 7(a)), and any excess in such account will be returned to said beneficiary. In the event that no such written notice of election shall be duly received by the office of the Company's Treasurer, the beneficiary shall automatically be



deemed to have elected to withdraw the payroll deductions credited to the participant's account at the date of the participant's death and the same will be paid promptly to said beneficiary.

#### 10. INTEREST

No interest will be paid or allowed on any money paid into the Plan or credited to the account of any participating employee.

#### 11. STOCK

(a) The maximum number of shares of Common Stock available for issuance and purchase by employees under the Plan, subject to adjustment upon changes in capitalization of the Company as provided in Paragraph 16, shall be 100,000 shares of Common Stock, \$.01 par value per share, of the Company. If the total number of shares for which options are exercised on any Offering Termination Date in accordance with Paragraph 8 exceeds the number of shares that remain available for issuance and purchase by employees under the Plan, the Company shall make a pro rata allocation of the shares available for delivery and distribution in an equitable manner, with the balances of payroll deductions credited to the account of each participant under the Plan carried forward to the next Offering or returned to the participant at his or her discretion, by giving written notice to the Treasurer to this effect.

(b) The participant will have no interest in the stock covered by his or her option until such option has been exercised.

(c) The shares of stock purchased by a participant who is an officer or director of the Company, or a beneficiary of a participant who was an officer or director of the Company pursuant to Paragraph 13 hereof, at each Offering Termination Date may not be sold or transferred by such participant or beneficiary for a period of six months following such Offering Termination Date. The shares of stock purchased by any other employee participant, or a beneficiary of any employee participant pursuant to Paragraph 13 hereof, at each Offering Termination Date may not be sold or transferred by such participant or beneficiary for a period of three months following such Offering Termination Date. Certificates representing said shares of stock issued pursuant to this Plan may bear legends to that effect.

#### 12. ADMINISTRATION

The Plan shall be administered by the Committee. The interpretation and construction of any provision of the Plan and adoption of rules and regulations for administering the Plan shall be made by the Committee. Determinations made by the Committee with respect to any matter or provision contained in the Plan shall be final, conclusive and binding upon the Company and upon all participants, their heirs or legal representatives.

Any rule or regulation adopted by the Committee shall remain in full force and effect unless and until altered, amended, or repealed by the Committee.

### 13. DESIGNATION OF BENEFICIARY

A participant shall file with the Treasurer of the Company a written designation of a beneficiary who is to receive any Common Stock and/or cash under the Plan. Such designation of beneficiary may be changed by the participant at any time by written notice. Upon the death of a participant and upon receipt by the Company of proof of the identity and existence of a beneficiary validly designated by the participant under the Plan, the Company shall deliver such Common Stock and/or cash to such beneficiary. In the event of the death of a participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such participant's death, the Company shall deliver such Common Stock and/or cash to the executor or administrator of the estate of the participant. No beneficiary shall, prior to the death of the participant by whom he or she has been designated, acquire any interest in the Common Stock and/or cash credited to the participant under the Plan.

### 14. TRANSFERABILITY

Neither payroll deductions credited to a participant's account nor any rights with regard to the exercise of an option or to receive Common Stock under the Plan may be assigned, transferred, pledged, or otherwise disposed of in any way by the participant other than by will or the laws of descent and distribution. Any such attempted assignment, transfer, pledge, or other disposition shall be without effect, except that the Company may treat such act as an election to withdraw funds in accordance with Paragraph 8(b).

### 15. USE OF FUNDS

All payroll deductions received or held by the Company under this Plan may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions.

### 16. EFFECT OF CHANGES OF COMMON STOCK

If the Company shall subdivide or reclassify the Common Stock which has been or may be optioned under this Plan, or shall declare thereon any dividend payable in shares of such Common Stock, or shall take any other action of a similar nature affecting such Common Stock, then the number and class of shares of Common Stock which may thereafter be optioned (in the aggregate and to any participant) shall be adjusted accordingly and in the case of each option outstanding at the time of any such action, the number and class of shares which may thereafter be purchased pursuant to such option and the option price per share shall be adjusted to such extent as may be determined by the Committee, following consultation with the Company's independent public accountants and counsel, to be necessary to preserve the rights of the holder of such option.

## 17. AMENDMENT OR TERMINATION

The Board may at any time terminate or amend the Plan. No such termination shall affect options previously granted, nor may an amendment make any change in any option theretofore granted which would adversely affect the rights of any participant holding options under the Plan.

## 18. NOTICES

All notices or other communications by a participant to the Company under or in connection with the Plan shall be deemed to have been duly given when received by the Treasurer of the Company.

## 19. MERGER OR CONSOLIDATION

If the Company shall at any time merge into or consolidate with another corporation, the holder of each option then outstanding will thereafter be entitled to receive at the next Offering Termination Date, upon the exercise of such option and for each share as to which such option shall be exercised, the securities or property which a holder of one share of the Common Stock was entitled to upon and at the time of such merger or consolidation. In accordance with this Paragraph and Paragraph 16, the Committee shall determine the kind and amount of such securities or property which such holder of an option shall be entitled to receive. A sale of all or substantially all of the assets of the Company shall be deemed a merger or consolidation for the foregoing purposes.

## 20. APPROVAL OF STOCKHOLDERS

The Plan is subject to the approval of the stockholders of the Company by written consent or at their next annual meeting or at any special meeting of the stockholders for which one of the purposes of such a special meeting shall be to act upon the Plan.

## 21. GOVERNMENTAL AND OTHER REGULATIONS

The Plan, and the grant and exercise of the rights to purchase shares hereunder, and the Company's obligation to sell and deliver shares upon the exercise of rights to purchase shares, shall be subject to all applicable federal, state and foreign laws, rules and regulations, and to such approvals by any regulatory or governmental agency as may, in the opinion of counsel for the Company, be required. The Plan shall be governed by, and construed and enforced in accordance with, the provisions of Sections 421, 423 and 424 of the Code and the substantive laws of the Commonwealth of Massachusetts. In the event of any inconsistency between such provisions of the Code and any such laws, said provisions of the Code shall govern to the extent necessary to preserve the favorable federal income tax treatment afforded employee stock purchase plans under Section 423 of the Code.

\* \* \*

LICENSE AGREEMENT  
BETWEEN  
AWARE, INC.  
AND  
ANALOG DEVICES, INC.

This Agreement is made and entered into this 25 day of September 1993, (the "Effective Date") by and between Aware, Inc. (hereinafter referred to as AWARE), a corporation duly organized under the laws of the Commonwealth of Massachusetts and having its principal office at One Memorial Drive, Cambridge, MA 02142, and Analog Devices, Inc. (hereinafter referred to as ADI), a corporation duly organized under the laws of Massachusetts and having a place of business at 181 Ballardvale Street, Wilmington, MA 01887-1024 (hereinafter referred to as "LICENSEE" or "ADI").

WITNESSETH

WHEREAS, AWARE is the owner of certain rights, title and interest in the PROGRAM (as later defined herein) and the TRADEMARK (as later defined herein) and has the right to grant licenses thereunder;

WHEREAS, ADI desires to obtain a license to manufacture and sell digital signal processing hardware incorporating the PROGRAM; and

WHEREAS, ADI and AWARE have entered into a separate DEVELOPMENT AGREEMENT, a copy of which is attached hereto as Appendix A and incorporated herein,

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

1 - DEFINITIONS

For the purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 "PROGRAM(s)" shall mean the software developed by AWARE (and all associated documentation) pursuant to the DEVELOPMENT AGREEMENT with exception of the software described in Section 17 of the DEVELOPMENT AGREEMENT.

1.2 "LICENSED PRODUCT(s)" shall mean any product(s) of LICENSEE that incorporate the PROGRAM(s) or any part thereof, including the AWARE-ADI chipset developed under the DEVELOPMENT CONTRACT between ADI and AWARE of even date.

1.3 "COPYRIGHT(s)" shall mean AWARE's copyrights in the PROGRAM(s).

1.4 "INTELLECTUAL PROPERTY RIGHTS" shall mean any and all rights associated with the PROGRAMS, including the COPYRIGHTS, and any rights associated with the TRADEMARKS.

1.5 "TERRITORY" shall mean the world.

1.6 "TRADEMARK(s)" shall mean the AWAKE trademark(s).

1.7 "FIELD OF USE" shall mean Asymmetric Digital Subscriber Loop transceiver which support the data rates and functions mandated in the T1E1.4 or successor standard as of August 2, 1993 a copy of which is attached hereto as Appendix B and incorporated herein.

## 2 - GRANT

2.1 AWARE hereby grants, unless changed sooner pursuant to Section 3.2, to ADI a perpetual, exclusive license under the INTELLECTUAL PROPERTY RIGHTS in the TERRITORY to:

- a. make, use, sell, and distribute LICENSED PRODUCT(s),
- b. use the TRADEMARK in conjunction with the manufacture, use, sale and distribution of the LICENSED PRODUCT(s), and

- c. use and reproduce the PROGRAM(s) in conjunction with (a) and (b) above.

2.2 The license granted hereunder shall not be construed to confer any rights upon LICENSEE by implication, estoppel or otherwise, as to any intellectual property not specifically included herein.

2.3 Within thirty (30) days of the development of any PROGRAMS under the Development Contract executed simultaneously herewith, AWARE shall deposit with an escrow agent, acceptable to ADI all source code for such PROGRAMS. ADI shall have access to such source code of the PROGRAMS upon the bankruptcy or breach of AWARE of any terms of this LICENSE AGREEMENT. This LICENSE AGREEMENT shall not take effect until such time as a mutually agreeable escrow agent has been identified and a form of escrow agreement agreed to among all the parties.

### 3 - ROYALTIES

3.1 For the rights, privileges and license granted hereunder, ADI shall pay a license fee and royalties to AWARE in the manner hereinafter provided or until this Agreement shall be terminated:

- a. A license fee of [redact] and an advance against royalties payment of [redact] payable as follows:

[redact] upon execution of this Agreement and [redact] within one week of the acceptance by LICENSEE of each of Milestones 1 through 4 as provided in Section 9 of the DEVELOPMENT CONTRACT. The final payment of [redact] shall be credited as an advance against royalties and shall be due on or before December 31, 1993.

- b. Royalty payments shall be based on the net selling price of LICENSED PRODUCTS and shall be calculated as follows:

- i. If the net selling price is less than or equal to [redact], the royalty shall be [redact] of the net selling price.
- ii. If the net selling price is between [redact], the royalty shall be of the net selling price plus [redact] % of the net selling price. For example, if the net selling price is [redact], then the royalty shall be: [redact].
- iii. If the net selling price is greater than [redact], the royalty shall be of the net selling price.

If ADI can show that a royalty of [redact] does not allow it to compete in the marketplace, then the royalty shall be reduced. ADI and AWARE will engage in good faith negotiations to determine a new royalty rate.

The net selling price of a LICENSED PRODUCT in the price paid by an unaffiliated ADI customer, minus transportation costs, taxes, duties and commissions.

3.2 To maintain the exclusive license, ADI shall make minimum calendar royalty payments equal to the royalties due on [redact] of the available market for TiE1.4 standard-compliant DMT ADSL Transceivers in said calendar year.

The balance of the minimum royalty payments shall be due on the 30th of September each year and shall be credited against the sums due under Section 3.1 in the year in which said minimum royalty payments are due. Should ADI fail to make any such minimum royalty payment on the 30th of September each year, AWARE or ADI may convert the exclusive license granted under Section 2.1 to a non-exclusive license. In the event the exclusive license is changed to a non-exclusive license, AWARE will not license any other party under terms more favorable than those given to ADI.

3.3 Royalty payments shall be paid in United States dollars in Cambridge, Massachusetts, or at such other place as AWARE may reasonably designate. If any currency conversion shall be required

in connection with the payment of royalties hereunder, such conversion shall be made pursuant to ADI's standard accounting procedures for booking foreign sourced revenue. A copy of such procedures are attached hereto as SCHEDULE 3.3.

#### 4 - AWARE REPRESENTATIONS AND WARRANTIES

4.1 AWARE represents and warrants that it shall be the legal owner of the PROGRAMS and all COPYRIGHTS associated therewith.

4.2 AWARE represents and warrants that the INTELLECTUAL PROPERTY RIGHTS shall not be subject to any liens, claims or entitlements on the part of any third party. AWARE represents and warrants that its employees are, and shall be, the original authors of the PROGRAMS and that AWARE shall acquire all such employees rights and title to such PROGRAMS.

4.3 AWARE represents and warrants that it does not know of any patents, copyrights or trade secrets or other proprietary rights which belong to third parties which will be infringed by the PROGRAMS after development by AWARE, which are not available for license under the provisions of ANSI standard practices.

4.4 AWARE represents and warrants that it will provide full support for its PROGRAM(s) including bug fixes consistent with standard software industry practices for four years.

#### 5 - REPORTS AND RECORDS

5.1 ADI shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amounts payable to AWARE hereunder. Said books of account shall be kept at ADI's principal place of business or the principal place of business or the appropriate division of ADI to which this Agreement relates. Said books and the supporting data shall be open at all reasonable times for three (3) years following the end of the calendar year to which they pertain, to the inspection of AWARE or its agents for the purpose of verifying ADI's royalty statement or compliance in other respects with this Agreement.



Should such inspection lead to the discovery of a greater than ten percent (10%) discrepancy in reporting, LICENSEE agrees to pay the full cost of such inspection.

5.2 ADI, within sixty (60) days after March 31, June 30, September 30 and December 31 of each year, shall deliver to AWARE true and accurate reports, giving such particulars of the business conducted by ADI during the preceding three-month period under this Agreement as shall be pertinent to a royalty accounting hereunder. These shall include at least the following:

- a. descriptions of LICENSED PRODUCTS;
- b. number of LICENSED PRODUCTS manufactured, distributed or sold by ADI;
- c. total royalties due.

5.3 With each such report submitted, ADI shall pay to AWARE the royalties due and payable under this Agreement. If no royalties shall be due, ADI shall so report.

5.4 The royalty payments set forth in this Agreement and amounts due under Paragraph 4 shall, if overdue, bear interest until payment at a per annum rate two percent (2%) above the prime rate in effect at the Chase Manhattan Bank (N.A.) on the due date. The payment of such interest shall not foreclose AWARE from exercising any other rights it may have as a consequence of the lateness of any payment.

#### 6 - COPYRIGHT

ADI acknowledges that title to the PROGRAM(s) (including copyright) shall remain with AWARE and that any copies of the LICENSED PRODUCTS and related documentation, or portions thereof, made by ADI shall include an AWARE copyright notice thereon the following form: "Copyright 199\_\_\_\_, Aware, Inc. All Rights Reserved". The notice shall be affixed to all copies or portions thereof in such manner and location as to give reasonable notice of AWARE's claim of

copyright. ADI shall at all times hereafter protect the PROGRAM, and all related technical information, data and materials supplied by AWARE, from transfer using measures at least as strong as those used by ADI in protecting its own proprietary data.

#### 7 - TRADEMARK

7.1 ADI acknowledges that AWARE asserts that it is critical that the goodwill associated with the TRADEMARK(s) be protected and enhanced and, toward this end, ADI shall not during the terms of this Agreement or thereafter intentionally:

- a. attach the title or any rights of AWARE in or to the TRADEMARK(s);
- b. apply to register or maintain any application or registration of the TRADEMARK(s) or any other mark confusingly similar thereto in any jurisdiction, domestic or foreign.
- c. use any colorable imitation of any of the TRADEMARK(s), or any variant form including variant design forms, logos, colors, or typestyles of the TRADEMARK(s) not specifically approved by AWARE.
- d. misuse the TRADEMARK;
- e. take any action that would bring the TRADEMARK(s) into public disrepute;
- f. use the TRADEMARK(s), or any mark or name confusingly similar thereto, in its corporate or trade name; or
- g. take any action that would tend to destroy or diminish the goodwill in the TRADEMARK(s).

7.2 All use by ADI of the TRADEMARK(s) shall inure to the benefit of AWARE.

7.3 ADI agrees to cooperate fully with AWARE in securing and maintaining the goodwill of AWARE in the TRADEMARK(s).

7.4 ADI agrees that it shall mark the LICENSED PRODUCTS or the containers of such LICENSED PRODUCTS to indicate the rights of AWARE in the TRADEMARK(s), including registration status of the TRADEMARK(s) and that the products are manufactured pursuant to license.

#### 8 - INFRINGEMENT

8.1 AWARE shall defend and indemnify ADI against all claims or suits against ADI for infringements of patents, copyrights, or trade secrets of third parties as a result of the use by ADI of the PROGRAMS and shall be liable for all awards against ADI, whether by judgment or settlement, as a result of such claims and suits, provided that AWARE is given prompt notice of any such claims or suits and has sole control over the defense and settlement of any such claims or suits, and provided further that no such claims or suits for infringement is based upon developments or changes made by ADI.

8.2 Each of AWARE and ADI agrees to notify the other promptly in writing when it learns of any patents, copyrights, or other proprietary rights which belong to third parties and which are allegedly being infringed by ADI's sale of the LICENSED PRODUCTS.

8.3 In the event AWARE does not provide the indemnity set forth in 8.1 above, then in the event that any third party shall claim or sue ADI for infringement of patents, copyrights, trade secrets, or any other proprietary rights, as a result of the manufacture, use or sale of LICENSED PRODUCTS by ADI, and shall allege in such claim or suit that the LICENSED PRODUCTS made, used or sold by ADI infringe such patents, copyrights, trade secrets or proprietary rights of such third party because of the inclusion of the PROGRAMS or parts thereof in the LICENSED PRODUCTS, ADI shall have the right to deduct from the royalties payable by ADI to AWARE, any amounts paid by ADI to such third party, whether by judgment or settlement, relating to such allegation.

8.4 Notwithstanding Paragraphs 8.1 and 8.3 above, AWARE shall have no liability for royalties paid pursuant to licenses required to practice the ANSI T1E1.4 ADSL standard.

#### 9 - PRODUCT LIABILITY

9.1 ADI shall at all times during the term of this Agreement and thereafter, indemnify, defend and hold AWARE, its officers, employees and affiliates, harmless against all claims and expenses, including legal expenses and reasonable attorney's fees, arising out of the death of or injury to any person or persons or out of any damage to property resulting from the production, manufacture, sale, use, lease, consumption or advertisement of the LICENSED PRODUCT(s), provided ADI is given prompt notice of any such claim and has sole control of any defense or settlement negotiations and provided further that such indemnity shall be limited to the extent of the amounts payable from ADI's product liability insurance carrier.

#### 10 - ASSIGNMENT

This Agreement is non-assignable and any attempt to do so shall be void.

#### 11 - TERMINATION

11.1 AWARE represents that it will take all steps necessary to register the COPYRIGHT(s) immediately in the Common Market, Japan, Canada, Korea, Taiwan, and any other country requested by ADI.

11.2 Should ADI fail to make any payment whatsoever due and payable to AWARE hereunder, this Agreement shall terminate effective on thirty (30) days' notice, unless ADI shall make all such payments to AWARE within said thirty (30) day period. Upon the expiration of the thirty (30) day period, If ADI shall not have made all such payments to AWARE, the rights, privileges and license granted hereunder shall automatically terminate.

11.3 Upon any material breach, breach or default of this Agreement by ADI, other than that set out in Paragraph 11.2, this

Agreement shall terminate and the rights, privileges and license granted hereunder effective on ninety (90) days' notice to ADI. Such termination shall become automatically effective unless ADI shall have cured any such material breach or default prior to the expiration of the ninety (90) day period.

11.4 Upon any material breach or default of this Agreement by AWARE, and such breach or default is not cured by AWARE within ninety (90) days after notice by ADI to AWARE, then any costs incurred by ADI as a direct result of such breach may be deducted from the amounts due to AWARE under this Agreement.

11.5 Upon termination of this agreement for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination.

## 12 - PAYMENTS, NOTICES AND OTHER COMMUNICATIONS

Any payments, notice or other communication pursuant to this Agreement shall be sufficiently made or given on the date of mailing if sent to such party be certified first class mail, postage prepaid, addressed to it at its address below or as it shall designate by written notice to the other party:

In the case of Aware

Robert P Mosher  
Chief Financial Officer  
Aware, Inc.  
One Memorial Drive  
Cambridge, MA 02142

In the case of ADI

Analog Devices, Inc.  
Three Technology Way  
P.O. Box 9106  
Norwood, MA 02062-9106  
Attn: President

## 13 - MISCELLANEOUS PROVISIONS

13.1 This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Massachusetts, USA, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

13.2 The parties hereto acknowledge that this Agreement and the Development Contract executed simultaneously herewith sets forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

13.3 No provision of this Agreement is intended to conflict with any law, and the provisions should be construed in a manner that will uphold their validity. In the event that any provision is found to be contrary to any law, it shall be deemed unenforceable, and the parties or the court shall substitute a lawful provision in its place which is equitable and which, to the extent possible, reflects the original intent of the parties. Unless it would be inequitable to do so, all other provisions of the Agreement shall remain in full force and effect.

13.4 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

13.5 In no event shall either party be liable for special, incidental or consequential damages due to any cause whatsoever. No suit or action shall be brought against one party by the other more than one year after the related cause of action has accrued. In no event shall the accrued total liability of a party from any lawsuit, claim, warranty or indemnity exceed the aggregate sum paid hereunder by ADI to AWARE.

IN WITNESS WHEREOF, the parties duly execute this Agreement the day and year set forth below.

/s/ Howard L. Resnikoff  
-----  
Howard L. Resnikoff  
Chief Executive Officer

Dated: 25 September, 93  
-----

/s/ Robert P. McAdam  
-----  
Analog Devices, Inc.  
Vice President

Dated: 9/24/93  
-----

Appendix 1 to License Agreement Between Aware and Analog Devices dated 25 September 1993, and effective as of this 10TH day of June 1994.

This Appendix 1 is intended to express the license rights and responsibilities of the parties to intellectual property described and to be developed under a certain Amendment To Development Contract dated as of the date of this Appendix 1. The following provisions are not in substitution of any similarly numbered provisions of the License Agreement but shall be deemed specific to the intellectual property produced pursuant to the terms of the Amendment to Development Contract.

1.8 PROGRAMS shall mean the SOFTWARE developed by AWARE (and all associated documentation) pursuant to the AMENDMENT TO THE DEVELOPMENT CONTRACT.

1.9 "LICENSED PRODUCTS" shall mean any product(s) of LICENSEE that incorporate the PROGRAM(S) or any part thereof, including the ADI/AWARE chipset developed under the AMENDMENT TO THE DEVELOPMENT AGREEMENT between ADI and AWARE of even date. This chipset includes digital and analog (baseband and RF) subsections.

1.10 "FIELD OF USE" shall mean "products and technology for data and voice services over fiber, coax and hybrid fiber/coax networks" (HEREINAFTER REFERRED TO AS "HFC").

In the ROYALTIES Section:

3.4 For the HFC rights, privileges and license granted hereunder, ADI shall pay a license fee and royalties to AWARE in the manner hereinafter provided or until this Amendment is terminated:

a. A license fee of [redact] payable as follows:

[redact] on June 1, 1994 to support Aware's on-going efforts on the system design. [redact] within one week of acceptance by LICENSEE of Milestone 2 as provided in Section 26 of the AMENDMENT TO DEVELOPMENT CONTRACT. [redact] within one week of acceptance by LICENSEE of Milestones 3 and 4 as provided in Section 26 of the AMENDMENT TO THE DEVELOPMENT CONTRACT.

b. Royalty payment shall be based on the net selling price of the HFC LICENSED PRODUCTS and shall be calculated as follows:

i. The royalty shall be [redact] of the net selling price.



If ADI can show that a royalty of [redact] does not allow it to compete in the marketplace, then the royalty rate shall be reduced. ADI and AWARE will engage in good faith negotiations to determine a new royalty rate.

In the event that the intellectual property owned by Aware becomes a de facto HFC standard or is licensed for HFC to other parties, Aware will pay [redact] of any royalties collected from third parties to ADI.

3.5 To maintain the exclusive license, ADI shall make minimum calendar royalty payments equal to royalties due on [redact] of the available market for HFC in said calendar year.

The balance of the minimum royalty payments shall be due on the 31 December each year and shall be credited against the sum due under Section 3.4 in the year in which said minimum royalty payments are due. Should ADI fail to make any such minimum royalty payment on 31 December of each year, AWARE or ADI may convert the exclusive license granted for HFC under section 2.1 to a non-exclusive license. In the event that the exclusive license is changed to a non-exclusive license, AWARE will not license any other party under terms more favorable than those given to ADI.

In witness whereof, the parties duly execute this agreement the day and year set forth below.

/s/ Howard L. Resnikoff

Dated: 10 June 1994

-----  
Howard L. Resnikoff  
Aware, Inc.

/s/ Russell Johnsen

Dated: June 28, 1994

-----  
Russell Johnsen  
Analog Devices, Inc

Appendix 2 to License Agreement Between Aware and Analog  
Devices, Inc.  
dated September 1993 and effective as of this 26th Day of  
September 1995.

This Appendix 2 is intended to express the license rights and responsibilities of the parties to intellectual property described and to be developed under a certain SECOND AMENDMENT TO DEVELOPMENT CONTRACT dated as of the date of this Appendix 2. The following provisions are not in substitution of any similarly numbered provisions of the License Agreement but shall be deemed specific to the intellectual property produced pursuant to the terms of the SECOND AMENDMENT TO DEVELOPMENT CONTRACT.

1.11 "PROGRAMS" shall mean the SOFTWARE developed by Aware (and all associated documentation) pursuant to the SECOND AMENDMENT TO THE DEVELOPMENT CONTRACT.

1.12 The term "LICENSED PRODUCTS" is amended to include all ADI products for the FIELDS OF USE (ADSL or VDSL) being developed by the ADI Division responsible for broadband communications (currently this is the responsibility of the Communications Division), including digital and analog chips for ADSL or VDSL (whether or not such chips incorporate the PROGRAMS or any part thereof.)

1.13 "FIELD OF USE" shall mean "products and technology for data, voice and video services over copper VDSL, VADSL, BDSL or other copper technologies used in Fiber to the Curb, Switched Digital Video, Fiber to the Building and Fiber to the Home architectures" (HEREINAFTER REFERRED TO AS "VDSL").

In the ROYALTY Section:

3.5 For the VDSL rights, privileges and license granted hereunder, ADI shall pay a license fee and royalties to Aware in the manner hereinafter provided or until this agreement is terminated.

a. A license fee of [redact] payable as follows:

[redact] upon execution of this agreement.

[redact] upon completion of the system design and chip set specification (MILESTONES I, 2 and 4 in SECOND AMENDMENT TO DEVELOPMENT AGREEMENT).

b. Royalty payment shall be based on the net selling price of the VDSL LICENSED PRODUCTS and shall be calculated as follows:

c. [redact] of the net selling price. Net selling price is defined as the selling price less any license fees paid to any other valid patent holder. Chips included in the calculation are all chips developed by and sold by ADI for this application.

To maintain the exclusive license, for Calendar years 1996 (CY1996) and 1997 (CY1997), ADI shall make prepaid royalty payments as follows:

For CY1996:

[redact] payable by 12/31/95. [redact] of this payment applies towards VDSL LICENSED PRODUCTS sold by ADI in CY 1996. The remaining [redact] applies toward VDSL LICENSED PRODUCT sold by ADI in CY 1997.

For CY1997:

[redact]

For CY 1998:

[redact] payable by 12/31/1997.

## DEVELOPMENT CONTRACT

## BETWEEN

AWARE, INC.  
ONE MEMORIAL DRIVE  
CAMBRIDGE, MA 02142

## AND

ANALOG DEVICES, INC.  
181 BALLARDVALE STREET  
WILMINGTON, MA 01887

This contract is entered into as of the 25 day of September 1993 by and between Aware, Inc. (hereinafter referred to as "AWARE") a corporation organized and existing under the laws of Massachusetts, with offices in Cambridge, Massachusetts and Analog Devices, Incorporated (hereinafter referred to as "ADI") a corporation organized and existing under the laws of Massachusetts, with offices in Wilmington, Massachusetts.

WHEREAS, ADI is about to engage in the business of providing products and technology for Asymmetric Digital Subscriber Loop (ADSL) and related areas in which equipment vendors will be provided with a transceiver solution compliant with the T1E1.4 ADSL standard consisting of chipsets, requisite software algorithms and hardware reference designs,

WHEREAS, AWARE is engaged in the business of providing system designs, algorithms and software implementations for ADSL and related areas,

WHEREAS, AWARE desires to grant to ADI a license to certain of its proprietary software, a copy of which is attached hereto and incorporated herein (hereinafter referred to as the "LICENSE AGREEMENT")

WHEREAS, ADI desires that AWARE demonstrate the integration of its system designs, algorithms and software on the ADI DSP chips, and

WHEREAS, ADI wishes to enable the building of a standard compliant discrete multitone (DMT) ADSL transceiver which will support all data rates and functions mandated in the T1E1.4 standard as of August 2, 1993, or as mutually agreed to in future revisions using ADI DSP chips.

NOW, THEREFORE, the parties agree as follows:

1. ADI will pay a license fee and royalties to AWARE as set forth in the License Agreement which is attached hereto and which is being executed simultaneously herewith.

2. AWARE agrees to provide ADI with software that will operate ADI microprocessors and implement all functions as specified in the ANSI T1E1.4 standard as of August 2, 1993 or as mutually agreed to in future revisions.

3. ADI will provide AWARE with development stations to program 21020, 21XX and Z3/Z5 DSPs. These may be either ADI or third party products. They are to be provided within seven (7) days of signing of this contract. Three development stations for the 21020 and Z3 will be provided and two for the 21XX. A list of specific development stations is set forth as Exhibit A which is attached hereto and incorporated herein.

4. ADI will provide on site DSP programming assistance at AWARE of one person one month starting on or about September 1, 1993.

5. ADI will provide DSP engines for the prototype in the quantities required by AWARE. AWARE will provide ADI with a delivery schedule three (3) months prior to the desired date of delivery unless ADI indicates that said engines are in inventory.

6. ADI is responsible for the delivery of an analog front end for the DMT transceiver prototype. This must be delivered to

AWARE by December 1, 1993 for integration with the remaining (digital) prototype functions. The analog front end must be capable of data rates up to 6 Mbps downstream and 384 kbps upstream. Frequency division multiplexing will be used to separate upstream and downstream data. In the event that the analog front end is not capable of operating a required data rate, AWARE will not be responsible for demonstrating the prototype at that data rate.

7. ADI will provide integrated semiconductor solutions to replace the DSP engines as demanded by mutual customers of AWARE and ADI.

8. AWARE and ADI are actively seeking participants for an ADSL development alliance. ADI agrees to pay AWARE 50% of Participation Fees within 10 days of receipt of received fees. If ADI must refund any portion of the participation fees, AWARE will refund 50% of that to ADI within ten (10) days of ADI's refund.

9. The timetable for the performance of the obligations of the parties hereunder is as follows: Both parties acknowledge that the following milestones will be attempted on a "best efforts basis". Failure to meet the milestones shall not be deemed a breach of this Agreement.

#### PROJECT MILESTONES

##### Goal:

Prototype units by March 1, 1994. Shippable units by July 1, 1994.

Project kickoff: August 10, 1993

Announcement to selected government agencies.

Week of August 16: Joint ADI/AWARE press announcement on ADSL product development.

Milestone 1: September 1, 1993

Hardware platform selected for prototype development.

This will be an off-the-shelf board with ADI microprocessors.

Specifications for steady state modules for transceiver functions.

Coding underway:.  
Modulating/demodulating transform  
FIR time-domain equalizer

Milestone 2: October 1, 1993  
Specification of modules complete

Coding of the following modules underway:  
Digital Interface:  
Reed Solomon codes  
Interleaving  
Data multiplexing

Steady state DSP functions  
S/P converter  
QAM encoder/decoder  
Frequency domain equalizers  
Synchronization symbol insertion  
Timing recovery phase lock loop  
Cyclic prefix insertion

Initialization functions  
TDQ. training  
Symbol synchronization  
SNR evaluation  
Bit allocation algorithm  
Exchange algorithm

Debugging of the following modules underway:  
Modulating/demodulating transform  
FIR time domain equalizer

Milestone 3: November 1, 1993  
Debugging underway (coding complete) of the following  
modules:  
Digital Interface:  
Interleaving

Steady state DSP functions  
S/P converter  
QAM encoder/decoder  
Frequency domain equalizers  
Synchronization symbol insertion  
Timing recovery phase lock loop  
Cyclic prefix

Coding still in progress of modules:

Digital Interface:

Reed Solomon codes

Data multiplexing

Initialization functions

TDQ. training

Symbol synchronization

SNR evaluation

Bit allocation algorithm

Exchange algorithm

Milestone 4: December 1, 1993

Completion of coding for all modules (not all in real-time)

Plan for transition to first shippable units complete

Coding underway, some debugging of the following  
modules:

Digital Interface:

Reed Solomon codes

Data multiplexing

Initialization functions

IDQ training

Symbol synchronization

SNR evaluation

Bit allocation algorithm

Exchange algorithm

Testing underway:

Steady state DSP operation



Milestone 5: December 31, 1993  
Real time demonstration of steady state operation.

Debugging continues for modules:  
Initialization functions  
TDQ training  
Symbol synchronization  
SNR evaluation  
Bit allocation algorithm  
Exchange algorithm

Testing underway for:  
Steady state DSP testing continues  
Some testing of initialization algorithms

Milestone 6: February 1, 1994  
Real time demonstration and test of steady state  
operation continues  
Testing of initialization algorithms continues.  
Debugging continues for some initialization functions

Milestone 7: March 1, 1994  
Real time demonstration of prototype transceiver. This  
will require the ADI A/D/A boards.  
Some site testing underway (Ameritech and/or NYNEX)

NOTE 1: Studies of trellis coding and echo cancellation  
algorithms will be performed in parallel with the above  
tasks. These are optional transceiver functions in the  
T1E1 standard.

NOTE 2: ADI agrees to have available Z3 DSP chips for  
first shippable units. ADI shall exercise reasonable  
commercial efforts to develop Z3 chips to meet currently  
projected specifications. First shippable units are  
expected by July 1, 1994. ADI agrees to make Z3 chips  
available to AWARE 90 days prior to date of first  
shippable unit availability.

10. AWARE will provide full support for its software including bug fixes consistent with standard software industry practices for four years. Any upgrades and enhancements of the software will be jointly considered by AWARE and ADI as the need for them arises.

11. The parties will jointly visit ADSL customers as reasonably required.

12. The parties will be sufficiently represented at all T1E1.4 committee meetings and will submit technical contributions as mutually agreed upon.

13. AWARE will be available for third party technical audits as requested by ADI provided that it receives two weeks notice in advance of such audits.

14. The parties agree that this is an exclusive teaming arrangement joining AWARE system designs, algorithms and software and ADI DSP platforms for the T1E1.4 DMT standard ADSL transceiver. Neither party shall enter into competing agreements with third parties unless the other party had defaulted in its obligations hereunder or unless the license granted under the LICENSE AGREEMENT becomes non-exclusive as provided therein.

15. ADI agrees to sell to AWARE up to 5% of the annual production of ADI chipsets used for ADSL at market pricing.

16. It is understood and agreed that system designs, algorithms and software developed by AWARE will be owned by AWARE and that chipsets developed by ADI will be owned by ADI. Intellectual property created by AWARE or ADI shall be the property of the company that created it. Intellectual property developed jointly by AWARE and ADI shall be owned jointly by AWARE and ADI.

17. If AWARE, in its sole discretion, decides to sell a derivative work based on the PROGRAM(s) as described in the LICENSE AGREEMENT and that derivative work implements AWARE's discrete wavelet transform in place of the Fourier Analysis utilized

in the PROGRAM(s), then AWARE will license this derivative work to ADI under substantially the same terms as contained in the LICENSE AGREEMENT with the following addition:

a. ADI will market the derivative work in a manner that allows AWARE to collect a royalty above and beyond that in the LICENSE AGREEMENT from either the end user or ADI.

18. This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Massachusetts, USA, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

19. The parties hereto acknowledge that the Agreement and the LICENSE AGREEMENT which is being executed simultaneously herewith sets forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

20. No provision of the Agreement is intended to conflict with any law, and the provisions should be construed in a manner that will uphold their validity. In the event that any provision is found to be contrary to any law, it shall be deemed unenforceable, and the parties or the court shall substitute a lawful provision in its place which is equitable and which, to the extent possible, reflects the original intent of the parties. Unless it would be inequitable to do so, all other provisions of the Agreement shall remain in full force and effect.

21. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

22. In no event shall either party be liable for special, incidental or consequential damages due to any cause whatsoever. No suit or action shall be brought against one party by the other more than one year after the related cause of action has accrued. In no event shall the accrued total liability of any party from any lawsuit, claim, warranty or indemnity exceed the aggregate sum paid by ADI to AWARE under the License Agreement by and between AWARE and ADI of even date.

IN WITNESS WHEREOF, the parties duly execute this Agreement the day and year set forth below.

/s/ Howard L. Resnikoff

Date: 25 Septembr, 1993

-----  
Howard L. Resnikoff  
Chief Executive Officer  
Aware, Inc.

/s/ Robert P. McAdam

Date: 9/24/93

-----  
Robert P. McAdam  
Analog Devices, Inc.  
Vice President

Amendment to Development Contract  
Between  
Aware and Analog Devices  
Dated 25 September 1993

By agreement of the parties hereto this amendment hereby modifies the DEVELOPMENT CONTRACT between Aware, Inc. and Analog Devices, Inc., dated 25 September 1993, a copy of which is attached, as set forth below.

WHEREAS, ADI is about to engage in the business of providing "products and technology for data and voice services over fiber, coax and hybrid fiber/coax networks" (HEREINAFTER REFERRED TO AS "HFC") with a transceiver solution utilizing multicarrier technology and consisting of ASIC and programmable chipsets, baseband and RF components, requisite software, system and hardware reference designs,

WHEREAS, Aware is engaged in the business of providing system designs, algorithms and software implementations for HFC,

WHEREAS Aware desires to grant ADI a license to use certain of its system designs, algorithms and proprietary software, a copy of which is attached hereto and incorporated herein (hereinafter referred to as the "AMENDMENT TO THE LICENSE AGREEMENT")

WHEREAS, ADI desires that Aware integrate certain system designs, algorithms and software on ADI DSP chips and that Aware provide system design and algorithms descriptions for ADI's ASIC chip developments, and

WHEREAS ADI wishes to enable the building of HFC using ADI ASICs, DSP and analog chips.

WHEREAS ADI and AWARE desire to make HFC defacto standards and will jointly work towards this.

NOW, THEREFORE, the parties agree to amend the DEVELOPMENT CONTRACT of 25 September 1993 by the addition of the following sections:

23. For HFC ADI will pay Aware a license fee and royalties to Aware as set in the AMENDMENT to LICENSE AGREEMENT, which is attached hereto and is being executed simultaneously herewith.

24. Aware agrees to provide ADI with software, system designs and algorithms that will operate on ADI DSPs and enable the development of ADI ASICs to implement HFC.

25. In the event that ADI and Aware seek participants for an HFC Alliance or development program, ADI and Aware shall share any fees equally. The party receiving

any fees associated with joining said alliance or development program shall pay 50% to the other party within 10 days of receiving such fees.

#### 26. Timetable.

Both parties acknowledge that the following milestones will be attempted on a best efforts basis. Failure to meet milestones will not be considered a breach of this Agreement.

#### Project Milestones:

Milestone 1: June 1, 1994  
Project Kickoff.

Milestone 2: July 1, 1994  
Preliminary digital subsection system design complete  
Algorithm definitions for ADI ASIC complete

Milestone 3: August 1, 1994  
Steady state table-top demonstration of digital section  
- Head-end to multiple H-ISUs

Milestone 4: November 1, 1994  
Fully functional table top demonstration of digital section  
- hands-off ranging functionality, etc.  
- integrated with existing analog system  
- M-ISU functions (96 channels, order wire plus 86 DS0+)  
Full system design and algorithm specification for ADI ASIC.

27. The parties will jointly visit appropriate customers as reasonably required.

28. The parties agree that this is an exclusive teaming agreement joining AWARE system designs, algorithms and software and ADI ASIC, DSP and analog components for HFC. Neither party shall enter into competing agreements with third parties unless the other party had defaulted in its obligations hereunder or unless the license granted under the AMENDMENT TO LICENSE AGREEMENT becomes non-exclusive as provided therein.

29. ADI agrees to sell to Aware 5% of the annual production of ADI HFC PRODUCTS at market pricing.

30. Aware agrees that in the event the technology developed under this program and owned by Aware becomes a standard for HFC then Aware will license that technology on fair, equitable and non-discriminatory terms. Similarly, ADI agrees that in the event the technology developed under this program and owned by ADI becomes a standard for HFC then ADI will license that technology on fair, equitable and non-discriminatory terms.

Except as herein modified, the terms and conditions of the original DEVELOPMENT CONTRACT are unchanged and in full force and effect.

In witness whereof, the parties duly execute this agreement the day and year set forth below.

/s/ Howard L. Resnikoff

Dated: 10 June 1994

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Howard L. Resnikoff  
Aware, Inc.

/s/ Russell Johnsen

Dated: June 28, 1994

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Russell Johnsen  
Analog Devices, Inc

Second Amendment to Development Contract  
Between Aware and Analog Devices

By agreement of the parties hereto this amendment hereby modifies the DEVELOPMENT CONTRACT between Aware, Inc. and Analog Devices, Inc: dated 25 September 1993, a copy of which is attached, as set forth below:

WHEREAS, ADI and Aware are about to engage in the business of providing "products and technology for Very High Speed ADSL (VDSL) transmission technologies utilized in Fiber to the Curb (FTTC) and Switched Digital Video (SDV) for the delivery of voice, data and video over networks that use a hybrid of fiber and copper wire twisted pair" (HEREINAFTER REFERRED TO AS "VDSL"). Products will include transceiver solutions utilizing a variety of modulation technologies including QAM, CAP, QPSK, DMT and DWMT and could consist of DSP's, ASIC's, baseband analog and IF/RF components and firmware.

WHEREAS, Aware is engaged in the business of providing system designs, algorithms and software implementations for telecommunications.

WHEREAS, ADI and Aware desire to codevelop transceiver chips and chip sets for VDSL.

WHEREAS, Aware desires to grant ADI a license to use certain of its system designs, algorithms and software, a copy of which is attached hereto and incorporated herein (HEREINAFTER REFERRED TO AS THE "AMENDMENT TO THE LICENSE AGREEMENT").

WHEREAS ADI desires that Aware integrate certain system designs, algorithms and software on ADI DSP chips and that Aware provide system design and algorithm descriptions for ADI's ASIC chip developments,

Now, THEREFORE, the parties agree to amend the DEVELOPMENT CONTRACT of 25 September 1993 by the addition of the following sections:

31. For the development of VDSL, ADI will pay Aware a license fee and royalties as set forth in the AMENDMENT TO THE LICENSE AGREEMENT, which is attached hereto and is being executed simultaneously herewith.

32. Aware agrees to provide ADI with all software, system designs and algorithms necessary to jointly develop prototypes and support production integrated circuits for ADSL and VDSL. Aware and ADI shall provide each



other with all pertinent system simulations in a format (e.g. source code and hardcopy) that is immediately usable to the other party.

33. In the event that ADI and Aware seek participants and lead users for the VDSL development effort which result in the payment of NRE, ADI and Aware shall share any received fees equally. It is understood at this time that the goal of this effort is not to charge fees for lead users unless said users required custom software or integrated circuits.

#### 34. Timetable.

MILESTONE 1: Prototype Design/System Design 10/95  
 MILESTONE 2: Chipset Spec 12/95  
 MILESTONE 3: Prototype Complete 2/96  
 MILESTONE 4: Chipset Software Spec 3/96  
 MILESTONE 5: Chipset Design (Tapeout) 6/96  
 MILESTONE 6: Chipset Samples 9/96  
 MILESTONE 7: Chipset release 1/97

The above timetable is preliminary. Aware and Analog Devices will mutually agree upon a Final Timetable by November 15, 1995. This will include a detailed description of each milestone with designation of responsibility to Aware and/or Analog Devices as appropriate.

If either ADI or Aware misses any of the milestones in the above timetable by more than 12 months, then either ADI or Aware may convert the exclusive license granted under Section 2 of the AMENDMENT TO THE LICENSE AGREEMENT to a non-exclusive license.

35. The parties agree that this is an exclusive teaming agreement joining Aware system designs, algorithms and software with ADI DSP and integrated circuits for ADSL and VDSL being developed by the ADI Division responsible for broadband communications (currently this is the responsibility of the Communications Division). Neither party shall enter into a competing agreement with third parties unless the other party had defaulted in its obligations hereunder or unless the license granted under the AMENDMENT TO LICENSE AGREEMENT becomes non-exclusive as provided herein.

36. Both parties acknowledge that at any time ADI may enter into a similar agreement with a provider of single carrier modulation technology such as CAP, QAM, and/or QPSK for this application. If this occurs it will not be in violation of para. 35.

37. Aware acknowledges that at any time, ADI may have to hire, contact or acquire third party developers and consultants to complete the work for this contract, In that event, Aware will agree to work openly with said third parties. If necessary, appropriate confidentiality and Non-Disclosure Agreements will be mutually executed between said third parties and Aware.

38. Both parties agrees that in the event the technology developed under this program and owned by the parties becomes a standard for VDSL then each party will license to third parties that technology on a fair, equitable and non-discriminatory basis.

39. ADI agrees to sell Aware up to 5% of the annual production of ADI chipsets used for VDSL at market prices.

40. ADI and Aware agree to allow one another to review patents applications that are relevant to VDSL before they are filed.

In witness whereof, the parties duly execute this agreement the day and year set forth below.

/s/ James Bender

Dated:

- -----

James Bender  
CEO and President  
Aware, Inc.

/s/ Russell Johnsen

Dated: September 26, 1995

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Russell Johnsen  
Vice President & General Manager  
Communications Division  
Analog Devices, Inc.

APPENDIX 2 TO LICENSE AGREEMENT BETWEEN AWARE AND ANALOG  
DEVICES, INC.  
DATED SEPTEMBER 1993 AND EFFECTIVE AS OF THIS 26TH DAY OF  
SEPTEMBER 1995.

This Appendix 2 is intended to express the license rights and responsibilities of the parties to intellectual property described and to be developed under a certain SECOND AMENDMENT TO DEVELOPMENT CONTRACT dated as of the date of this Appendix 2. The following provisions are not in substitution of any similarly numbered provisions of the License Agreement but shall be deemed specific to the intellectual property produced pursuant to the terms of the SECOND AMENDMENT TO DEVELOPMENT CONTRACT.

1.11 "PROGRAMS" shall mean the SOFTWARE developed by Aware (and all associated documentation) pursuant to the SECOND AMENDMENT TO THE DEVELOPMENT CONTRACT.

1.12 The term "LICENSED PRODUCTS" is amended to include all ADI products for the FIELDS OF USE (ADSL or VDSL) being developed by the ADI Division responsible for broadband communications (currently this is the responsibility of the Communications Division), including digital and analog chips for ADSL or VDSL (whether or not such chips incorporate the PROGRAMS or any part thereof.)

1.13 "FIELD OF USE" shall mean "products and technology for data, voice and video services over copper VDSL, VADSL, BDSL or other copper technologies used in Fiber to the Curb, Switched Digital Video, Fiber to the Building and Fiber to the Home architectures" (HEREINAFTER REFERRED TO AS "VDSL").

In the ROYALTY Section:

3.5 For the VDSL rights, privileges and license granted hereunder, ADI shall pay a license fee and royalties to Aware in the manner hereinafter provided or until this agreement is terminated.

a. A license fee of \$[redact] payable as follows:

\$[redact] upon execution of this agreement.

[redact] upon completion of the system design and chip set specification (MILESTONES I, 2 and 4 in SECOND AMENDMENT TO DEVELOPMENT AGREEMENT).

b. Royalty payment shall be based on the net selling price of the .VDSL LICENSED PRODUCTS and shall be calculated as follows:

c. [redact] of the net selling price. Net selling price is defined as the selling price less any license fees paid to any other valid patent holder. Chips included in the calculation are all chips developed by and sold by ADI for this application.

To maintain the exclusive license, for Calendar years 1996 (CY1996) and 1997 (CY1997), ADI shall make prepaid royalty payments as follows:

For CY1996:

[redact] payable by 12/31/95. 50% of this payment applies towards VDSL LICENSED PRODUCTS sold by ADI in CY 1996. The remaining 50% applies toward VDSL LICENSED PRODUCT sold by ADI in CY 1997.

For CY1997:

[redact]

For CY 1998:

[redact] payable by 12/31/1997.

These are prepaid royalties. In the event that royalties due Aware exceed this amount ADI will start making payments quarterly based on the amount of royalties due Aware above and beyond the prepaid amount.

In addition, to maintain the exclusive license, ADI shall make minimum calendar year royalty payments equal to royalties due on [redact] of the available non-captive market for VDSL transceivers based on the Aware/ADI approach. The balance of the minimum royalty payments shall be due on the 31st of December of each year.

Payment shall be made net 30 days from the above dates. If a payment is not made exclusivity granted under Section 2 will end one calendar year from the date of the last payment.

If ADI can show that a royalty of [redact] does not allow it to compete in the marketplace then reducing the royalty rate shall be discussed. ADI and AWARE will engage in good faith negotiations to determine the new royalty rate. Proof will be in the form of a Full factory cost calculation and market based selling prices. Full factory cost shall be based on industry standard practices. ADI agrees to provide Aware with the necessary information and formulae used in the calculation.

Additionally, as the market develops ADI and Aware jointly may desire to forward price early generation chip sets to gain market penetration. In this event ADI will reduce the selling price and Aware will reduce their royalty rate as appropriate and equitable.

Furthermore, ADI and Aware agree that success in this market may require ADI and Aware to develop multiple generations of the chip set and variations and customizations of the base technology. "Base technology" is defined as the VDSL technology implemented by Aware and ADI under the SECOND AMENDMENT TO THE DEVELOPMENT CONTRACT.

In the event that Aware chooses, at its discretion, not to assist ADI in cost reductions and customizations the royalty payment will be reduced by [redact] or to [redact] whichever is lower and not go below [redact]. In the event that ADI customizes beyond the base technology without any material involvement by Aware, the royalty rate will not be reduced but will be based on the proportion of the chip set, as measured by die area, that incorporates the base codeveloped functionality. ADI will notify Aware, in writing, of its intention to perform the aforementioned cost reductions

and customizations. Aware will have 45 days to respond and choose to assist or not to assist ADI.

In the event that ADI does not make the minimum royalty payments, AWARE or ADI may convert the exclusive license granted for VDSL under section 2.1 to a non-exclusive license. In the event that the exclusive license is changed to a non-exclusive licenses, AWARE will not license any other party under terms more favorable than those given to ADI. In the event that any other party or parties must be granted a license, such as if the technology becomes a standard or a large customer requires a second source, the previous clause applies and Aware shall pay ADI 17.57 of all license fee and royalty payments.

Regarding REPRESENTATIONS AND WARRANTIES of Aware and indemnity for INFRINGEMENT (Sections 4 and 8 of the LICENSE AGREEMENT), the parties understand and agree that it may be necessary for ADI to obtain licenses from others to enable ADI to make, use and sell the LICENSED PRODUCTS.

In witness whereof. the parties duly execute this agreement the day and year set forth below.

/s/ James Bender

Dated: September 26, 1995

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James Bender  
CEO and President  
Aware, Inc.

/s/ Russell Johnsen

Dated: September 26, 1995

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- -----

Russell Johnsen  
Vice President & General Manager  
Communications Division  
Analog Devices, Inc.

AGREEMENT  
BETWEEN

AWARE, INC.  
ONE OAK PARK  
BEDFORD, MA 01734

AND

DSC TELECOM L.P.  
1000 COLT ROAD  
PLANO, TX 75075

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This Agreement is entered into as of the sixth day of March, 1996 by and between AWARE, Inc. (hereinafter referred to as "AWARE") a corporation organized and existing under the laws of Massachusetts, with offices in Bedford, MA and DSC TELECOM L.P. (hereinafter referred to as "DSC"), a Texas limited partnership, with offices in Plano, Texas. Collectively, DSC and AWARE are hereinafter referred to as the "Parties."

WITNESSETH:

WHEREAS, DSC is engaged in the business of providing products and systems for Hybrid Fiber Coax (HFC) telephony and related areas in which telephone and cable television service providers will be supplied with system solutions;

WHEREAS, AWARE is engaged in the business of providing technology, systems designs, hardware designs, software algorithms and implementations for HFC telephony and related areas;

WHEREAS, AWARE agrees to develop proprietary computer software and hardware designs, together with associated documentation, (the "Licensed Product") based on AWARE'S proprietary discrete wavelet multitone (DWMT) modulation technology that will permit integration of DSC's "Mediaspan" next generation digital loop carrier hybrid fiber coax telephony product line (the "DSC Product"), which will be based on DSC's current "Litespan" product line (as hereinafter defined), with certain third party chipsets; and

WHEREAS, Aware wishes to grant, and DSC wishes to obtain a license to manufacture and sell DSC Products that incorporate the Licensed Products;

NOW, THEREFORE, in consideration of the mutual covenants herein expressed and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby:, the Parties agree as follows:

A.STATEMENT OF GENERAL PURPOSE

The purpose of this Agreement is to establish a framework for a working relationship between DSC and AWARE to jointly develop DSC's proposed Mediaspan Hybrid Fiber Coax telephony extension of the Litespan product line.

## B. DEFINITIONS

For the purposes of this Agreement, each of the following words and phrases shall have the meanings; set forth in the adjacent column'

TERM	DEFINITION
AWARE Bus	The portion of the coax bank backplane that interconnects the AWARE designed components: RF between CLUH and CST; timing / control between CLUH and CST.
CBIU	DSC's Coax Bank Interface Unit. This unit is the interface between Litespan common control and the CLUHs in a coax bank.
CBPS	DSC's Coax Bank Power Supply. This unit produces all the voltages necessary for coax bank operation.
CBPT	DSC's Coax Bandwidth management, Processor, Timing. This unit distributes the Litespan signal from the CLUR to the channel cards in a CNU-24.
CLUH	DSC's Coax Line Unit, Head end. This unit is installed in a coax bank and converts the CBIU Litespan signal into an RF signal.
CLUR	DSC's Coax Line Unit, Remote. This unit is installed in a CNU-24 and converts the RF signal from the HFC network into a CBPT Litespan signal.
CNUPS	DSC's Coax Network Unit Power Supply. This unit powers the CNU-24.
CNU-24	DSC's Coax Network Unit, 24 lines. This unit has six slots for standard Litespan channel cards, the 24 assumes using quad line units.
Coax Bank	DSC's Litespan bank assembly that interfaces with Litespan common control and provides RF modem services. The coax bank houses four types of PCB assemblies: CBIUs, CLUHs, CSTs, CBPSs.
Chipset	A group of integrated circuits that form the core of the DWMT RF modem. This group of integrated circuits is used one per modem. 1 chipset is used per modem.
Chipset for CLUH	The DWMT chipsets and associated software utilized in the Coax Bank plug-in modem units (CLUH)
Chipset for CLUR	The DWMT chipsets and associated software utilized in the CNU-24 plug-in modem unit (CLUR)
Chipset for CTU	The DWMT chipsets and associated software utilized in the CTU-x units

CST	DSC's Combiner / Splitter and Timing reference. This unit serves two separate functions. (1) It combines the outputs from all the CLUHS into a single bank output signal and splits the received RF signal for distribution to the CLUHS. (2) It produces the clock references necessary for the CLUHS.
CTU-2	DSC's Coax Terminal Unit, 2 POTS lines. This is a side-of-house box that passes through broadcast video signals and also provides two lines of telephone service.
DSC Product	DSC's "Mediaspan" next generation digital loop carrier hybrid fiber coax telephony product line, which will be based on DSC's current "Litespan" product line
DSC Bus	DSC specific portion of the coax bank or CNU-24 backplane: CBIU to CLUH, CBPS status, CLUR to CBPT
DWMT	Discrete Wavelet Multi Tone. Aware's proprietary, method that will be used by the Mediaspan RF modems to transport digital data across an HFC network. Each one of hundreds of separate tones, or frequencies, per modem carry a portion of the total digital information between the head-end HDT and remote CTU or CNU. If interference occurs, one or more tones may be deleted without affecting the data carried on the remaining tones.
Final Fit Hardware	Final fit hardware are PCB assemblies that conform mechanically to the intended production product.
HFC	Hybrid Fiber Coax. A transmission plant characterized by a fiber optic distribution / coax feeder topology. This plant is a bus architecture, i.e. all subscribers share access to the transmission media.
Litespan	A DSC proprietary next generation digital loop carrier (NGDLC) product. Litespan distributes telephony services such as voice and data remotely throughout a service provider's area via fiber optic connected electronic equipment. Litespan's architecture separates common control and services into different bank assemblies. Bank assemblies are metal cages that hold PCB assemblies. References in this Agreement to Litespan include Litespan and all its derivatives including, but not limited to Airspan[trademark], Metrospan and iMTNs. Litespan, Metrospan, and iMTN are registered trademarks of DSC.
PCB Assemblies	Printed Circuit Board assemblies are electronic units that contain the physical embodiment of a hardware and software design.

RF Modem	A combination of hardware and software that transports digital data across a coax or HFC network within Radio Frequency (RF) channels. Different modems use different RF channels (frequency division multiplexing) on a shared coax media.
Unit, System Test	Unit level test evaluates a single hardware PCB assembly or software module. System test evaluates the multiple combination of hardware and/or software.
Production Quality	A level of design completeness such that all material customer, engineering, marketing and manufacturing requirements are substantially satisfied.
Mediaspan	The registered DSC trademark that is planned to be used in marketing the DSC Product.
"LICENSED PRODUCT(s)"	AWARE's proprietary computer software and board level hardware designs, together with associated documentation, based on AWARE'S proprietary discrete wavelet multitone (DWT) modulation technology, that will permit integration of DSC's "Mediaspan" next generation digital loop carrier hybrid fiber coax telephony product line with certain third party chipsets.
"TRADEMARK(S)"	The trademark "AWARE", WaveTel HFC and such other names or marks as AWARE may use from time to time in connection with the marketing of AWARE'S DWT technology.
"FIELD OF USE"	subassemblies, systems and products for data and voice services over HFC networks
PRIOR MATERIAL	Patents and copyrights (and all applications for the same), trade secrets and other proprietary rights relating to this development effort, designs, documentation, methods, processes, inventions, works and other design, development and manufacturing materials information which are in existence and owned by such party prior to the date of this Agreement all designs, documentation, methods, processes, inventions, works and other design, development and manufacturing materials information which are in existence and owned by such the parties prior to the date of this Agreement.

#### C. MARKETING AND SALES

DSC will have exclusive marketing and sales responsibility for the DSC Product. AWARE will support DSC in its sales and marketing efforts, as reasonably requested, to assist in the successful application of the product in the marketplace. Customer pricing for the DSC Product will be set by DSC. Order

entry, manufacturing, and customer service (including technical support) will be provided by DSC.

#### D. MANUFACTURING

DSC will perform the assembly, test, and shipping of the assemblies developed as a result of this Agreement. AWARE will provide expertise during the development of the assemblies. Quality functions regarding the manufactured product, including but not limited to repair and return, will reside with DSC.

#### E. PROCUREMENT OF COMPONENTS

This agreement does not provide for the actual procurement of the modem chipset components. Such procurement will be negotiated separately and may be procured by DSC directly from the chip set manufacturer. AWARE will direct the chipset manufacturer to permit direct acquisition of the chipsets.

#### F. DESIGN AND DEVELOPMENT OF PRODUCTS:

##### 1. Pre-production Hardware

AWARE agrees to provide DSC with hardware pre-production assemblies for the coax bank subsystem, CNU-24 and CTU-2 of the DSC Product for the purpose of finalizing the systems level design. Aware expects to provide limited quantities of these pre-production units. Pricing will be determined as requirements are better specified. These assemblies will contain software and chipsets previously developed by AWARE to implement DWMT for HFC telephony and new software to interface AWARE designed DWMT chipsets to DSC's hardware. These assemblies are detailed in Attachment D "Specifications" which will be attached when agreed by the parties.

##### 2. Production-level Hardware

AWARE and DSC agree to jointly develop production quality printed circuit board (PCB) assemblies

In performing the design and development, both hardware and software/firmware, of ASICs and Printed Wiring Board Assemblies AWARE shall use commercially reasonable efforts to comply with any necessary quality requirements including the following if applicable:

- Bellcore TR-NWT-000078 (Generic Physical Design Requirements for Telecommunications Products and Equipment),
- Bellcore TR-NWT-000357 (Generic Requirements for Assuring the Reliability of Components Used in Telecommunications Equipment),

- Bellcore TR-NWT-000179 (Quality System Generic Requirements for Software),
- ISO 9001 (Quality Systems-Model for quality assurance in design/development, production, installation and servicing),
- ISO 9000-3 (Quality Management and Quality Assurance Standards - Part 3: Guidelines for the Application of ISO 9000 to the Development, Supply and Maintenance of Software),
- DSC procedure 003-4000-005 (PWB Design Rules and Guidelines).

In addition, AWARE is to select parts for design from the DSC Approved Vendor List (AVL). DSC approval must be obtained prior to use of parts that are neither "Q" (qualified) or "S" (Ship-to-Stock) status on the DSC AVL.

### 3. Reference designs

AWARE agrees to provide DSC with hardware reference designs and requisite software for the coax bank, CNU-24 and CTU-2 of the DSC Products. These assemblies contain software and chipsets previously developed by AWARE to implement DWMT for HFC telephony and new software to interface AWARE designed DWMT chipsets to DSC hardware. These assemblies are detailed in Attachment A of this Agreement.

### 4. DSC equipment for use by aware

DSC will install and configure (at DSC's cost) a full Litespan Host Digital Terminal (HDT) with engineering debug capability at AWARE by March 15, 1996. The equipment will be subject to the terms of a Equipment Loan Agreement attached hereto as Attachment F.

### 5. System development and integration

System development and integration will occur in both Petaluma, CA and Bedford, MA. AWARE's development contribution will concentrate on RF modem coax performance and DSC's development contribution will concentrate on telephony system performance. A staged integration plan will be developed mutually by AWARE and DSC.

### 6. AWARE support for DSC manufacturing test programs

AWARE will provide engineering expertise reasonably sufficient for DSC to produce a complete manufacturing test in a timely manner. Commercially reasonable efforts to adhere to design for testability, timely completion of FDS, and participation in design reviews (FDR), LR, and PDR (as specified in Attachment B) will be required of AWARE.

## 7. Timetable

Both parties acknowledge that the milestones set forth in this Agreement and on Attachment B will be attempted on a "commercially reasonable efforts" basis. Failure to meet the milestones on the dates set forth shall not be deemed a breach of this Agreement unless it is the result of substantial abandonment, or redirection of a significant amount of the resources, of the effort by one of the parties. The timetable for the performance of the obligations of the parties hereunder is as shown in Attachment B.

## 8. Project milestones

Major planned project milestones are detailed in Attachment B.

## 9. AWARE support activities

### a. Technical Support

AWARE will provide full support for software developed under this Agreement, including problem corrections consistent with standard telephony equipment industry practices, for four years. Support thus rendered will be limited to incidents directly associated with the maintenance, troubleshooting, diagnostics, and "patching" (software fixes) of DSC Product and LICENSED PRODUCT. Technical Support via telephone will be provided to DSC from Aware 24 hours a day, 7 days a week. Aware will provide, on a regular basis, current after hour technical assistance information to include on-call assignments and a comprehensive escalation list with contact instructions. Such information will be used by DSC CTAC for direct contact with Aware designated employees in the event that any 3rd party answering service or other Aware call out procedures fails to meet DSC response requirements.

### b. Integration and Manufacturing Support

During system integration and after DSC's release to manufacture, AWARE will provide system integration support in the form of consulting services. These will be billed as time and materials (plus reasonable expenses). Reimbursable, travel expenses will be per DSC's corporate travel policy. Senior engineers will be billed at \$800/day, engineers at \$500/day and engineering technicians at \$350/day. Senior engineers have an understanding of system level hardware and software issues. Engineers have an understanding of card level hardware and software issues. Engineering technicians are utilized for card level hardware modifications. Customer support requests at Aware will initially be directed to engineers and, if necessary, re-directed to senior engineers.

c. Upgrades and Enhancements

Subject to DSC's approval, upgrades and enhancements to the LICENSED PRODUCTS will be jointly considered by AWARE and DSC as the need arises. Examples of these include a CNU-24 capable of more than one T1 transport as well as POTS transport, or use of a CLUR-like card in ONU-96 or other upgrades to the CNU-24. Prices and other terms and conditions for such upgrades shall be as mutually agreed by the parties.

d. Change Notice

AWARE will inform DSC in a timely manner of any product hardware or software defects which are reported to AWARE regarding the DSC Product or LICENSED PRODUCTS, or are discovered by AWARE, to enable DSC to perform timely resolution. AWARE will notify DSC of hardware and software changes in the LICENSED PRODUCT initiated by AWARE prior to implementation and deployment. Such proposed changes require DSC's approval to the extent that the LICENSED PRODUCT's fit, form, function, performance, safety or reliability will be affected by the change. AWARE will provide compatibility, dependency, and user impact analysis for all such changes.

AWARE will provide with all software changes, including patches, a software Icad description document ("release notes") that includes, as appropriate: a list and description of the major features of the release, description of changes to system software and related hardware, man-machine interface information, list of deliverables, resolved and open problems, and installation procedures.

AWARE will provide DSC all documentation regarding user impact of design changes (software/hardware) that affect the operation and maintenance of the LICENSED PRODUCT.

10. Customer visits

AWARE will be available for customer visits as reasonably required to assist in technical marketing of the product and to gain a first hand understanding of the customer requirements.

11. Intellectual property

a. Right, Title and Interest

All right, title and interest in and to all copyrights, patents, trade secrets, trademarks, or other proprietary rights in and to the Licensed Products is and shall remain the sole property of AWARE. DSC shall be the sole owner of the DSC Product subject to AWARE's rights in the LICENSED PRODUCTS. In



general, intellectual property developed by AWARE or DSC shall be the property of the company that developed it. Each party shall continue to retain sole title to and ownership of all Prior Materials. Each party shall continue to retain sole title to and ownership of all designs, documentation, methods, processes, inventions, works and other design, development and manufacturing materials information which, regardless of creation date, are not related to the development effort which is the subject matter of this Agreement (collectively the "Unrelated Materials"). Except as required for the operation of the Agreement or as authorized by the party owning the same, in writing, all such Prior Materials and all copies thereof shall be returned to the owner upon the termination of this Agreement. Aware will deposit Confidential Materials relating to its Background Materials and all INTELLECTUAL PROPERTY (in the form of, including but not limited to, schematics, bills of material, prototype cards, and source code) developed pursuant to this Agreement with an escrow agent, the terms of the release of the materials to DSC is described in Section 11b, prior to payment at each Milestone. The parties shall promptly negotiate, in good faith, such escrow agreement, substantially similar to Attachment E: Escrow Agreement, provided however, that DSC shall be the only "Participating User", as defined therein, with respect to the LICENSED PRODUCTS. If no such escrow agreement is negotiated, then the terms and conditions of Attachment E shall apply, with the following modifications - (i) the terms and conditions stated in this Paragraph shall control any conflicting terms and condition in Attachment E, (ii) DSC shall be the only Participating User unless otherwise agreed by DSC, (iii) an "Event of Release" includes any event expressly stated in this Agreement, and AWARE's failure to support the product which would otherwise entitle DSC to terminate this Agreement, (iv) AWARE shall be required to appoint a substitute escrow agent under Section 10 of Attachment E, and (v) in Section 11 of Appendix C of Attachment E, the requirement that DSC obtain AWARE's prior written consent is deleted, provided that such export or re-export is in compliance with all United States laws.

b. Escrow of AWARE Background Materials

In the event of a proper release of any Confidential Materials under the Escrow Agreement, AWARE grants to DSC, effective upon such release of Confidential Materials, a limited, nontransferable, nonexclusive, worldwide license to use such Confidential Materials to perform AWARE's obligations under this Agreement as if AWARE were still required to perform them, but only as the obligations relate to customers to whom DSC sells Product under the terms of this Agreement which protect the intellectual property of AWARE. DSC may set-off against its obligation to make royalty payments, expenses incurred to remedy the breach by Aware that caused the release under the Escrow Agreement.

Purchaser will use all such Confidential Materials released under this Section 11b solely for the purposes contemplated under this Agreement, and Purchaser acknowledges and agrees that title to all such Confidential Materials shall remain with Supplier at all times, and that all such Confidential Materials shall remain confidential and proprietary to AWARE and shall be treated in accordance with Section G.11b of this Agreement entitled "Confidentiality".

c. Ownership

Except as otherwise provided in this Agreement, intellectual property jointly developed by the Parties will be jointly owned by the Parties, each party owning an undivided one half interest therein. Each party shall have the right to practice the jointly owned intellectual property in any field and to grant rights, licenses and other privileges as the party deems appropriate or necessary. Except as set forth in Paragraph (a) above, neither party shall have any duty to account to the other party with respect to the proceeds of any intellectual property jointly owned by them. Each party shall have such other rights with respect to such jointly owned intellectual property as may be prescribed by applicable law.

d. Manufacturing Rights

In consideration of the funding by DSC to assist in the design and development of the hardware and software necessary for the pre-production units (for assemblies CLUH, CLUR, CTU-2 and CST, as defined in Attachment A), the manufacturing rights for assemblies CLUH, CLUR, CTU-2, and CST shall be owned exclusively by DSC.

e. Software Specific to Mediaspan

Tone management software implemented specifically for the DSC Product, and tone management hardware designs for the CLUH, CTU-2, CLUR and CST will be exclusively owned by DSC.

f. DSC Prior Material

The following, without limiting the generality of subparagraph (a) above, shall be considered DSC Prior Material:

- CTU-2 line circuit, power supply and mechanical design
- Litespan system architecture and design
- CNU-24 backplane and mechanical design
- Coax bank backplane, CBIU, CBPS and mechanics

g. AWARE Prior Material

The following, without limiting the generality of subparagraph (a) above, shall be considered AWARE Prior Material:

- Analog front-end and RF circuit designs for DWMT modems
- Digital designs for DWMT modems
- DWMT modem software and all other DWMT technology
- Generic tone management software for DWMT modems

12. CAD Agreements

All AWARE bills of material (BOM) will be screened and approved by DSC component engineering and loaded into the DSC component database by DSC. All designs will use DSC part numbers or APR numbers.

AWARE will do the initial layout of the CLUH, CST, CTU-2 and CLUR due to the critical placement and routing requirements of these designs. These initial prototype designs will be fabricated and manufactured either by AWARE or DSC (whichever is more expedient). As the schematics, placement and layouts are created, they will be transferred to DSC CAD by DSC CAD personnel.

13. Product Validation

Full PQA and HQA product validation of the designs transferred to DSC CAD, will be performed by DSC. This includes all software functionality, hardware performance and modem RF operation.

In order for DSC to properly test the complete system, AWARE will provide functional design specifications on all assemblies in a timely manner.

14. Manufacturing Support Agreement

AWARE will provide engineering expertise sufficient for DSC to produce a complete manufacturing test solution.

G. LICENSE:

1. License Grant

a. AWARE hereby grants to DSC the royalty-bearing, non-exclusive licenses:

- 1) to make, have made, use, demonstrate, distribute, and sell LICENSED PRODUCTS as integrated into the DSC Products in the FIELD OF USE; and

- 2) to use the TRADEMARKS in connection with the marketing and sale of the LICENSED PRODUCTS as integrated into the DSC Products in the FIELD OF USE; and
  - 3) to copy the computer software, hardware designs and documentation included in the LICENSED PRODUCTS solely for the purpose of the license set forth in sub-paragraph 1) above.
- b. The license granted hereunder shall not be construed to confer any rights upon DSC by implication, estoppel or otherwise, as to any intellectual property not specifically included herein.

## 2. FEES and ROYALTIES

For the rights, privileges and license granted hereunder, DSC shall pay AWARE non-recurring engineering fees, license fees and royalties as follows:

### a. Non-Recurring Engineering Fee

A non-recurring engineering fee of [redact] shall be payable upon the completion of each milestone as shown in the table in section G.2b and in the table in Attachment B

### b. License Fees

License fees for the license set forth in Section G.1 shall be payable upon execution of this Agreement and upon completion of Milestones 1, 2 and 4, as shown below. Any invoice dated during 1996 and paid prior to execution of this Agreement will be offset against the License fees.

[redact]

c. Royalties

Royalty payments shall be based upon the quantity of chipsets purchased by DSC or its affiliates, sublicensees, or distributors for use in production of DSC Products and will be calculated as follows:

For each Chipset utilized by DSC for use in DSC Products, royalties will be paid to AWARE when DSC Products are transferred to DSC Finished Goods or sold (whichever comes first), as shown in the following schedule, continuing for the length of time in which the Chipsets are used in DSC Products:

[redact]

The royalties will be reported on a monthly basis to AWARE and payments will be made net thirty (30) days following the end of the month for which royalties are due.

d. Payments

Except as otherwise provided herein, all DSC payments must be invoiced by AWARE in US dollars. DSC will pay AWARE in US dollars no later than thirty (30) days from the invoice date.

e. Reports and Accounting

DSC shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amounts payable to AWARE hereunder. Said books of account shall be kept at DSC's principal place of business or the principal place of business of the appropriated division of DSC to which this Agreement relates. Said books and the supporting data shall be open at all reasonable times for one (1) year following the end of the calendar year to which they pertain to the inspection of AWARE or its agents of the purpose of verifying DSC's royalty statement or compliance in other respects with this Agreement. Records of any year may be inspected given reasonable notice and only once. The results of such inspection shall be provided promptly to DSC. If the agreed results of such inspection show that DSC has under paid AWARE by ten percent (10%) or more, then DSC shall pay AWARE such underpayment and pay the reasonable cost of such audit, and to allow an

inspection of the records of the prior three (3) years. If the agreed results of such inspection show that DSC has over paid AWARE by ten percent (10%) or more, then Aware shall reimburse DSC such overpayment. All records to be inspected shall be kept confidential pursuant to the NDA.

- 1) DSC, within sixty (60) days after March 31, June 30, September 30 and December 31, of each year, shall deliver to AWARE true and accurate reports, giving such particulars of the business conducted by DSC during the preceding three-month period under this Agreement as shall be pertinent to a royalty accounting hereunder. These shall include at least the following:
  - a. descriptions of DSC Products integrating LICENSED PRODUCTS;
  - b. number of DSC Products integrating LICENSED PRODUCTS sold by or for DSC;
  - c. total royalties due.
- 2) With each such report submitted, DSC shall pay to AWARE the royalties due and payable under this Agreement. If no royalties shall be due, DSC shall so report.

f. Late Payments

The royalty payments set forth in this Agreement on amounts due under Paragraph G2 shall, if overdue, bear interest until payment at a per annum rate two percent (2%) above the prime rate in effect at the Chase Manhattan Bank (N.A.) on the due date. The payment of such interest shall not foreclose AWARE from exercising any other rights it may have as a consequence of the lateness of any payment.

g. Most Favored Prices

AWARE agrees that if, during the term of this Agreement, the prices, discounts, non-recurring engineering fees, license fees, and/or royalty rates for the same or substantially similar services, licenses, or products, or other terms offered by AWARE to DSC are or become less favorable than those given by AWARE to any other customer purchasing the same or substantially similar services, licenses, and or products in the FIELD OF USE in similar or lesser quantities and under similar terms, AWARE shall immediately provide such prices, discounts and other terms to DSC.

### 3. AWARE REPRESENTATIONS AND WARRANTIES

#### a. Rights

AWARE represents and warrants that it owns the LICENSED PRODUCTS or otherwise has the right to grant the LICENSES granted hereunder.

#### b. Warranty

AWARE warrants that the designs developed by AWARE under this Agreement will perform substantially in accordance with jointly written and agreed performance specifications, as developed pursuant to Attachment B. AWARE warrants that it will perform all services under this Agreement in a skillful and workmanlike manner.

#### c. LIMITATIONS OF WARRANTY

EXCEPT AS EXPRESSLY SET FORTH ABOVE, AWARE MAKES NO WARRANTY WITH RESPECT TO THE LICENSED PRODUCTS, THE PERFORMANCE OF SERVICES HEREUNDER, OR OTHERWISE IN CONNECTION WITH THIS AGREEMENT. EXCEPT AS EXPRESSLY SET FORTH ABOVE, THE LICENSED PRODUCTS ARE PROVIDED TO DSC "AS IS." AWARE MAKES NO OTHER WARRANTIES WHETHER EXPRESS, IMPLIED OR ARISING BY CUSTOM OR TRADE USAGE, AND SPECIFICALLY DISCLAIMS OTHER WARRANTIES OF TITLE, NON INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### 4. COPYRIGHT

DSC acknowledges that title to the LICENSED PRODUCTS (including copyright) shall remain with AWARE and that any copies of the LICENSED PRODUCTS and related documentation, or portions thereof, made by DSC shall include an AWARE copyright notice thereon the following form: "Copyright 199-, AWARE, Inc. All Rights Reserved". DSC shall also affix such other notices as AWARE may reasonably require from time to time, including trademark, patent, and government restricted rights notices. All notices shall be affixed to all copies or portions thereof in such manner and location as to give reasonable notice of AWARE's claim of copyright. DSC shall at all times hereafter protect the LICENSED PRODUCTS, and all related technical information, data and materials supplied by AWARE, from transfer using measures at least as strong as those used by DSC in protecting its own proprietary software.

### 5. TRADEMARK and GOODWILL

DSC agrees that it is critical that the goodwill associated with the TRADEMARK(s) be protected and, toward this end, DSC shall not during the

term of this Agreement or thereafter: apply to register or maintain any application or registration of the TRADEMARK(s) or any other mark confusingly similar thereto in any jurisdiction, domestic or foreign; use any colorable imitation of any of the TRADEMARK(s). or any variant form including variant design forms, logos, colors, or type styles of the TRADEMARK(s) not specifically approved by AWARE; misuse the TRADEMARK(s); take any action that would bring the TRADEMARKS(s) into public disrepute; use the TRADEMARK(s), or any mark or name confusingly similar thereto, in its corporate or trade name; or take any action that would tend to destroy or diminish the goodwill in the TRADEMARK(s). All use by DSC of the TRADEMARK(s) shall inure to the benefit of AWARE.

DSC agrees to reasonably cooperate with AWARE in securing and maintaining the goodwill of AWARE in the TRADEMARK(s).

All LICENSED PRODUCTS shall be designed and manufactured to the quality standard inherent in DSC's product portfolio.

DSC agrees that it shall mark the LICENSED PRODUCTS to indicate the rights of AWARE in the TRADEMARK(s), including registration status of the TRADEMARK(s) and that the products are manufactured pursuant to a license.

AWARE agrees to maintain the goodwill of DSC.

Neither party will take any action which may destroy or diminish the goodwill of the other.

## 6. INFRINGEMENT AND INDEMNITIES

### a. Indemnity

AWARE will defend, at its own expense, and hold DSC harmless from any action brought against DSC to the extent that it is based on a claim that any PROGRAMS, DESIGNS, COPYRIGHTS, PATENTS, or TRADEMARKS supplied by AWARE pursuant to this Agreement constitutes a direct infringement of a patent issued prior to the execution of this Agreement, copyright or trademark, or intellectual property right of a third party. AWARE will pay all damages and costs finally awarded against DSC in such action which are attributable to such actions provided that AWARE is promptly informed in writing and furnished a copy of each communication, notice, or any other action and provided that DSC does not make any admissions against AWARE's interest relating to the alleged infringement and is given authority, information, and assistance at AWARE's expense necessary to defend or settle such claim. AWARE shall have sole control of the defense of any such action and all negotiations for its settlement or



compromise. DSC shall cooperate fully with AWARE in the defense, settlement or compromise of any such action. Prior to DSC's requesting that AWARE honor its defense and hold harmless obligations described above, DSC shall make a reasonable, good-faith effort, with AWARE's advice and consultation, to determine the actual basis of the claim, that is, whether or not AWARE has liability under this Paragraph, subject to the limitations in this Paragraph. DSC shall bear its own costs prior to making such determination. If DSC determines that the actual basis of the claim is not substantially based upon matters for which AWARE is required to defend and hold harmless DSC, then DSC shall have sole control of the defense of any such action and all negotiations for its settlement or compromise, and AWARE shall cooperate fully with DSC in the defense, settlement or compromise of any such action. DSC and AWARE shall bear damages and costs in proportion to their respective liability for such claims. Should the PROGRAMS, DESIGNS, COPYRIGHTS, PATENTS, or TRADEMARKS become, or in AWARE's opinion be likely to become, the subject of a claim of infringement of a patent, copyright or trademark, or intellectual property right of a third party, then AWARE may, at its sole option, either procure for DSC the right to use such PROGRAMS, DESIGNS, COPYRIGHTS, PATENTS, or TRADEMARKS free of any liability for infringement; or replace or modify such PROGRAMS, DESIGNS, COPYRIGHTS, PATENTS, or TRADEMARKS so that they become noninfringing, but functionally and cost equivalent. Notwithstanding any language to the contrary in this Paragraph, AWARE shall have no liability to DSC under this Paragraph to the extent that any infringement or claim thereof is based upon AWARE's compliance with designs, specifications or instructions provided by DSC.

THE FOREGOING STATES THE SOLE AND EXCLUSIVE LIABILITY OF AWARE AND THE SOLE AND EXCLUSIVE REMEDIES OF DSC TO THIS AGREEMENT FOR PATENT, COPYRIGHT, TRADEMARK INFRINGEMENT OR INTELLECTUAL PROPERTY RIGHT INFRINGEMENT, AND IS IN LIEU OF ALL CONDITIONS OR WARRANTIES, EXPRESSED, IMPLIED, OR STATUTORY, IN REGARD THERETO.

b. Notification

Each of AWARE and DSC agrees to notify the other promptly in writing when it learns of any patents, copyrights or other proprietary rights belonging to third parties which are allegedly being infringed by the manufacture, use, sale or other disposition of products licensed under this Agreement.

c. Rights

In the event AWARE is unable or unwilling to provide the indemnity indicated in Paragraph(a) above, DSC shall have the right to offset royalties otherwise

payable under this Agreement against costs incurred by DSC in defending any claim or suit of the type specified in (a) and/or in the settlement thereof or the payment of any judgment or award or royalty arrangement to a third party resulting therefrom. Any funds remaining in such escrow on the completion of all claims and action and the payments of all expenses, award and the like resulting therefrom shall be promptly paid to AWARE. To the extent DSC is at any time obligated to pay royalties for the continued right to sell products licensed under this Agreement as a result of infringement of third party intellectual property rights based on the manufacture, use or sale by DSC of hardware or software developed and/or provided by AWARE under this Agreement, DSC shall have the right to deduct from the royalties payable by DSC to AWARE under this Agreement any amounts so paid by DSC.

d. Indemnification

Each Party ("Indemnifying Party") hereby indemnifies and holds the other Party ("Indemnified Party"), its directors, officers, agents, and employees harmless against any and all claims, actions, damages, liabilities, or expenses, including reasonable attorney's fees and other legal costs for injury to or death of any person, and for loss of or damage to any and all property arising out of the negligent or willful wrongful acts or omissions of the Indemnifying Party, its employees, agents, subcontractors, or representatives.

e. Limitation of Liability

IN NO EVENT SHALL EITHER PARTY OR ITS THIRD PARTY LICENSORS OR SUPPLIERS BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LEGAL FEES, LOSS OF DATA, LOSS OF USE, LOSS OF PROFITS OR LOSS RESULTING FROM BUSINESS DISRUPTION, EVEN IF SUCH PARTY OR ITS THIRD PARTY LICENSORS OR SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NO SUIT OR ACTION SHALL BE BROUGHT AGAINST ONE PARTY BY THE OTHER MORE THAN ONE YEAR AFTER THE RELATED CAUSE OF ACTION HAS ACCRUED, OR IN THE CASE OF AN INDEMNIFIABLE CLAIM MORE THAN ONE YEAR AFTER RECEIPT OF NOTICE OF THE CLAIM. EXCEPT FOR INDEMNIFIED MATTERS, IN NO EVENT SHALL THE LIABILITY OF AWARE TO DSC, WHETHER ARISING IN TORT, CONTRACT, OR OTHERWISE, FOR ANY CLAIM, ACTION, SUIT OR PROCEEDING ARISING OUT OF OR RELATING TO THE LICENSED PRODUCTS OR THIS AGREEMENT, EXCEED THE FEES AND ROYALTIES PAID BY DSC TO AWARE UNDER THIS AGREEMENT.

## 7. PRODUCT LIABILITY

Subject to the indemnity stated in Paragraph G6, DSC shall at all times during the term of this Agreement and thereafter, indemnify, defend and hold AWARE, its officers, employees and affiliates, harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from the production, manufacture, sale use, lease, consumption or advertisement of the LICENSED PRODUCT(s) by DSC.

## 8. ASSIGNMENT

This Agreement shall not be assignable by either party without the prior written consent of the other party and any attempt to do so shall be void. Notwithstanding the preceding sentence, DSC may market and/or distribute the LICENSED PRODUCTS utilizing affiliated companies and other distributors, and may sublicense DSC's rights hereunder which are reasonably required for such marketing and distribution to such affiliated companies or distributors, without the requirement for such consent. Notwithstanding the foregoing, AWARE or DSC may assign the Agreement, to a wholly owned affiliate, and AWARE may assign this Agreement without restriction after completion of development of the LICENSED PRODUCTS, provided that AWARE shall not transfer any proprietary information of DSC to any competitor of DSC in connection with such assignment.

## 9. TERMINATION

### a. DSC Failure to make payment

Should DSC fail to make any payment whatsoever due and payable to AWARE hereunder unless contested in good faith, this Agreement shall terminate effective on thirty (30) days' notice, unless DSC shall make all such payments to AWARE within said thirty (30) day period. Upon the expiration of the thirty (30) day period, if DSC shall not have made all such payments to AWARE, the rights, privileges and license granted hereunder shall automatically terminate.

### b. Material Breach

Upon any material breach or default of this Agreement by Aware or DSC, other than that set out in Paragraph (a) above, this Agreement and the rights, privileges and license granted hereunder shall terminate effective ninety (90) days after notice from one party to the other, unless the other shall have cured any such material breach or default prior to the expiration of the ninety (90) day

period. A termination by DSC for convenience as described by paragraph 10c below shall not be considered a Material breach under this paragraph 10b.

c. Termination by DSC for Convenience

If DSC substantially abandons or redirects a significant amount of its resources and such abandonment or redirection causes a delay in the milestone schedule set forth on Attachment B, DSC shall pay Aware the NRE and license payments that would have been due for the current Milestone in process and all subsequent Milestones in complete satisfaction of its obligations to Aware.

d. Change of Control

Prior to completion of the development of the LICENSED PRODUCTS, DSC may terminate this Agreement without liability in the event that AWARE is acquired by, merged into, or sells more than 25% of any class of its stock to an entity that competes with DSC or could materially harm DSC through the inside information gained through the acquisition of AWARE. Prior to the completion of any such merger or acquisition, AWARE agrees to return all information, material, and DSC furnished or owned equipment. Upon such termination the license granted pursuant to Section G of this Agreement shall terminate, and DSC shall have no further right to make, have made, use, sell, copy, market or distribute DSC Products that integrate the LICENSED PRODUCTS. DSC's obligation to pay royalties shall survive any such termination.

e. Effect of Termination

Upon termination of this Agreement for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination, nor shall such termination affect the rights of DSC customers of the LICENSED PRODUCTS who have purchased such LICENSED PRODUCTS prior to such termination nor shall such termination effect the rights of DSC to provide service and support to DSC customers who had purchased such LICENSED PRODUCTS prior to such termination. Upon such termination the license granted pursuant to Section G of this Agreement shall terminate, and DSC shall have no further right to make, have made, use, sell, copy, market or distribute DSC Products that integrate the LICENSED PRODUCTS. DSC's obligation to pay royalties shall survive any such termination.

10. PAYMENT, NOTICES, AND OTHER COMMUNICATIONS

Any payments, notice or other communication pursuant to this Agreement shall be sufficiently made or given on the date of mailing if sent to such party by certified first class mail, postage prepaid, addressed to it at its address below or as it shall designated by written notice given to the other party;

In the case of AWARE:

AWARE, Inc.  
One Oak Park  
Bedford, MA 01730-1413  
Attn: James C. Bender

In the case of DSC:

Invoices:

DSC Communications Corporation  
Corporation  
1000 Coit Road  
Plano, TX 75075  
Attn: Accounts Payable

Other matters:

DSC Communications  
1000 Coit Road  
Plano, TX 75075  
Attn: Legal Department

#### 11. MISCELLANEOUS PROVISIONS

##### a. Applicable Laws

This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the State of Texas, without regard to its choice of laws rules, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

##### b. Confidentiality

All information exchanged between the parties under this Agreement, whether pre-existing or developed under this Agreement, shall come under, and shall be treated in accordance with, the terms and conditions of the Proprietary Information Agreement between DSC Communications Corporation and AWARE, dated March 17, 1995, and such Proprietary Information Agreement may, from time to time, be amended or extended. A copy of the Proprietary Information Agreement forms Attachment D to this Agreement. Notwithstanding the foregoing, or any language in such Proprietary Information Agreement to the contrary, for the purpose of exchanging information under this Agreement, (i) termination of such Proprietary Information Agreement shall only be coterminous with this Agreement, but termination of such Proprietary Information Agreement for other purposes shall be pursuant to such Proprietary Information Agreement, (ii) Proprietary Information (as defined in the Proprietary Information Agreement) exchanged in connection with the present Agreement or the discussion

associated with this Agreement, may be used by the Recipient thereof for, and only for, Recipient's performance under the present Agreement or such discussion, and (iii) the period of years in Section 5 of the Proprietary Information Agreement shall be five (5) years as applied to the Proprietary Information exchanged in connection with the present Agreement or such associated discussions. The source code component of the LICENSED PRODUCTS is and shall remain a proprietary trade secret of AWARE. DSC shall hold any such source code in its possession in strict confidence, notwithstanding the expiration or termination of this Agreement or the Proprietary Information Agreement.

c. No Publicity

Neither party shall use the name of the other party in any news release, public announcement, advertisement, or general publicity without the prior, written consent of such other party. Notwithstanding the foregoing, AWARE may use the name of DSC in connection with any offering of the securities of AWARE or, as may be required by law or regulation or for the purpose of borrowing capital from a financial institution.

d. Entire Agreement

The parties hereto acknowledge that this Agreement, and the Attachments hereto, set forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

e. Validity

No provision of the Agreement is intended to conflict with any law, and the provisions should be construed in a manner that will uphold their validity. In the event that any provision is found to be contrary to any law, it shall be deemed unenforceable, and the parties or the court shall substitute a lawful provision in its place which is equitable and which, to the extent possible, reflects the original intent of the parties. Unless it would be inequitable to do so, all other provisions of the Agreement shall remain in full force and effect.

f. Waiver of Rights

The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

## g. Relationship of the Parties

It is expressly understood that, except as otherwise provided herein, DSC, on the one hand, and AWARE, on the other hand, do not intend to undertake the relationship of principal and agent, or to create a joint venture or partnership between them or their respective successors in interests, but are and remain independent contractors. Except as otherwise provided herein, neither DSC, on the one hand, nor AWARE, on the other hand, shall have any authority to create or assume, in the name of or on behalf of the other party, any obligation, express or implied, nor to act or purport to act as the agent or the legally empowered representative of the other party hereto for any purpose whatsoever.

## h. Expenses

Except as stated in this Agreement, any and all costs, expenses, or liability to either AWARE or DSC caused by or arising out of this Agreement shall be borne by such party separately and individually, and neither party shall be liable or obligated to the other for any such costs, expenses, or liability, except to the extent that such costs, expenses, or liability are reimbursed, paid, or provided for under a subcontract, if any, entered into between the parties.

## i. Source Code Escrow

The parties agree to negotiate in good faith to establish a source code escrow agreement with respect to the LICENSED PRODUCTS within a reasonable time after execution of this Agreement.

In WITNESS WHEREOF, the parties duly execute this Agreement the day and year set forth below.

DSC TELECOM L.P.

AWARE, INC.

By: /s/ Scott Smith

By: /s/ James C. Bender

- -----

- -----

for

Name: Dave Ehreth

Name: James C. Bender

Title: VP of Finance

Title: Chief Executive Officer

Date: 3/6/96

Date: March 6, 1996

- -----

- -----

LICENSE AGREEMENT  
BETWEEN  
AWARE, INC.  
AND  
WESTELL, INC.

This Agreement is made and entered into this 5th day of September 1994, (the "Effective Date") by and between Aware, Inc. (hereinafter referred to as "AWARE") a corporation duly organized under the laws of the Commonwealth of Massachusetts with offices at One Memorial Drive, Cambridge MA and Westell, Inc. (hereinafter referred to as "WESTELL") a corporation duly organized under the laws of Illinois, with offices at 75 Executive Drive, Aurora, IL 60504 (hereinafter referred to as "LICENSEE" or "WESTELL").

WITNESSETH

WHEREAS, AWARE is the owner of certain rights, title and interest in the PROGRAM (as later defined herein) and the TRADEMARK (as later defined herein) and has the right to grant licenses thereunder;

WHEREAS, WESTELL desires to obtain a license to sell hardware incorporating the PROGRAM, and

WHEREAS, WESTELL and AWARE have entered into a separate DEVELOPMENT AGREEMENT, a copy of which is attached here to as Appendix A and incorporated herein.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

1 - DEFINITIONS

For the purposes of this Agreement, the following words and phrases shall have the following meanings;

1.1 "PROGRAM(s)" shall mean the software developed by AWARE (and all associated documentation) pursuant to the DEVELOPMENT AGREEMENT.

1.2 "LICENSED PRODUCT(s)" shall mean any product(s) that incorporate the PROGRAM(s) or any part thereof.

1.3 "COPYRIGHT(s)" shall mean AWARE's copyrights in the PROGRAM(s).

1.4 "INTELLECTUAL PROPERTY RIGHTS" shall mean any and all rights associated with the PROGRAMS including the COPYRIGHTS and any rights associated with the TRADEMARKS.

1.5 "TERRITORY" shall mean the world.



1.6 "TRADEMARK(s)" shall mean the AWARE trademark(s).

1.7 Asymmetric Digital Subscriber Line (ADSL) transceiver systems shall mean devices that are capable of transmitting and receiving high speed data over copper telephone lines.

1.8 "FIELD OF USE" shall mean Asymmetric Digital Subscriber Line transceivers.

1.9 "GROSS PROFIT" shall mean the Gross Sales price of the LICENSED PRODUCTS less discounts, less direct labor, less labor overhead, less direct material and less material overhead costs. All such costs and discounts to be calculated in conformity with generally accepted accounting principles.

## 2 - GRANT

2.1 AWARE hereby grants to WESTELL an exclusive license for one year and two weeks from Milestone 4 as described in Paragraph 4 of the Development Contract and a perpetual non-exclusive license thereafter to the INTELLECTUAL PROPERTY RIGHTS in the TERRITORY to:

- a. make, use, sell, have made and distribute LICENSED PRODUCT(s)
- b. use, at WESTELL's option the TRADEMARK in conjunction with the manufacture, use, sale and distribution of the LICENSED PRODUCT(s), and
- c. use and reproduce the PROGRAM(s) in conjunction with (a) and (b) above.

2.2 The license granted hereunder shall not be construed to confer any rights upon LICENSEE by implication, estoppel or otherwise, as to any intellectual property not specifically included in COPYRIGHT(s).

## 3 - ROYALTIES

3.1 For the rights, privileges and license granted hereunder, WESTELL shall pay a license fee and royalties to AWARE in the manner hereinafter provided to the end of the term of the COPYRIGHT(s) or until this Agreement shall be terminated:

- a. [redact]

3.2 Royalty payments shall be paid in United States dollars in Cambridge, Massachusetts, or at such other place as AWARE may reasonably designate. If any currency conversion shall be required in connection with the payment of royalties hereunder, such

conversion shall be made by using the exchange rate prevailing at the Chase Manhattan Bank (N.A.) on the last business day of the calendar quarterly reporting period to which such royalty payments relate.

a. [redact]

#### 4 - AWARE REPRESENTATIONS AND WARRANTIES

4.1 AWARE represents and warrants that it shall be the legal owner of the PROGRAMS and all COPYRIGHTS associated therewith.

4.2 AWARE represents and warrants that the INTELLECTUAL PROPERTY RIGHTS shall not be subject to any liens, claims or entitlements on the part of any third party. AWARE represents and warrants that its employees are, and shall be, the original authors of the PROGRAMS.

4.3 AWARE represents and warrants that it does not know of any patents, copyrights or trade secrets or other proprietary rights which belong to third parties which will be infringed by the PROGRAMS after development by AWARE.

4.4 AWARE represents and warrants that it will provide full support for its software at AWARE's cost including bug fixes consistent with standard software industry practices for three years from date of each release.

#### 5- REPORTS AND RECORDS

5.1 WESTELL shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amounts payable to AWARE hereunder. Said books of account shall be kept at WESTELL's principal place of business or the principal place of business of the appropriated division of WESTELL to which this Agreement relates. Said books and the supporting data shall be open at all reasonable times for one (1) year following the end of the calendar year to which they pertain, to the inspection of AWARE or its agents of the purpose of verifying WESTELL's royalty statement or compliance in other respects with this Agreement. Records of any year may be inspected only once. However, should such inspection lead to the discovery of a greater than ten percent (10%) discrepancy in reporting, LICENSEE agrees to pay the full cost of such inspection and to allow a re-inspection of the records of the prior three(3) years. All records to be inspected shall be kept confidential pursuant to the AWARE/WESTELL Confidentiality Agreement of 25 June, 1993.

5.2 WESTELL, within sixty (60) days after March 31, June 30, September 30 and December 31, of each year, shall deliver to AWARE true and accurate reports, giving such particulars of the business conducted by WESTELL during the preceding three-month period under

this Agreement as shall be pertinent to a royalty accounting hereunder. These shall include at least the following:

- a. descriptions of LICENSED PRODUCTS;
- b. number of LICENSED PRODUCTS sold by or for LICENSEE;
- c. total royalties due.

5.3 With each such report submitted, WESTELL shall pay to AWARE the royalties due and payable under this Agreement. If no royalties shall be due, WESTELL shall so report.

5.4 The royalty payments set forth in this Agreement and amounts due under Paragraph 3 shall, if overdue, bear interest until payment at a per annum rate thrice percent (2%) above the prime rate in effect at the Chase Manhattan Bank (N.A.) on the due date. The payment of such interest shall not foreclose AWARE from exercising any other rights it may have as a consequence of the lateness of any payment.

#### 6 - COPYRIGHT

6.1 WESTELL acknowledges that title to the PROGRAM(s) (including copyright) shall remain with AWARE and that any copies of the LICENSED PRODUCTS and related documentation, or portions thereof, made by WESTELL shall include an AWARE copyright notice thereon the following form: "Copyright 199-, Aware, Inc. All Rights Reserved". The notice shall be affixed to all copies or portions thereof in such manner and location as to give reasonable notice of AWARE's claim of copyright. WESTELL shall at all times hereafter protect the PROGRAM, and all related technical information, data and materials supplied by AWARE, from transfer using measures at least as strong as those used by WESTELL in protecting its own proprietary software.

#### 7 - TRADEMARK

7.1 WESTELL agrees that it is critical that the goodwill associated with the TRADEMARK(s) be protected and enhanced and, toward this end, WESTELL shall not during the term of this Agreement or thereafter intentionally:

- a. attach the title or any rights of AWARE in or to the TRADEMARK(s);
- b. apply to register or maintain any application or registration of the TRADEMARK(s) or any other mark confusingly similar thereto in any jurisdiction, domestic or foreign;
- c. use any colorable imitation of any of the TRADEMARK(s), or any variant form including variant design forms, logos, colors, or type styles of the TRADEMARK(s) not specifically approved by AWARE;
- d. misuse the TRADEMARK(s):

- e. take any action that would bring the TRADEMARK(s) into public disrepute;
- f. use the TRADEMARK(s), or any mark or name confusingly similar thereto, in its corporate or trade name; or
- g. take any action that would tend to destroy or diminish the goodwill in the TRADEMARK(s).

7.2 All use by WESTELL of the TRADEMARK(S) shall inure to the benefit of AWARE.

7.3 WESTELL agrees to cooperate fully with AWARE in securing and maintaining the goodwill of AWARE in the TRADEMARK(s).

7.4 All LICENSED PRODUCTS shall be designed and manufactured to the quality standards inherent in WESTELL's product portfolio.

7.5 WESTELL agrees that it shall mark the LICENSED PRODUCTS to indicate the rights of AWARE in the TRADEMARK(s), including registration status of the TRADEMARK(s) and that the products are manufactured pursuant to license.

## 8 - INFRINGEMENT AND INDEMNITIES

8.1 Subject to the limitations in Paragraph 8.5 below Aware agrees to indemnify and defend WESTELL against all claims or suits against WESTELL for infringement of third party intellectual property rights based on the manufacture, use or sale by WESTELL of hardware or software incorporating INTELLECTUAL PROPERTY RIGHTS licensed under this Agreement, such indemnity to include payment of all expenses and of any award against WESTELL, whether by judgment or settlement, as a result of such claim or suit. The indemnity of this section shall be conditioned on WESTELL giving Aware prompt notice of any such claim or suit, on Aware having sole control over the defense and settlement of any such claim or suit and on such claim or suit not being based primarily on changes or enhancements made by WESTELL or WESTELL customers. Any settlement made by Aware shall not, without WESTELL's prior written consent, interfere with the right of WESTELL and its customers to continue to make, use and sell or otherwise dispose of products licensed under this Agreement. To the extent an injunction may issue against WESTELL or an WESTELL customer preventing the making, using or selling of any product licensed hereunder, Aware agrees to use its best efforts to develop an alternative, noninfringing product which is equivalent to the enjoined product both functionally and in terms of costs.

8.2 Each of Aware and WESTELL agrees to notify the other promptly in writing when it learns of any patents, copyrights or other proprietary rights belonging to third parties which are allegedly being infringed by the manufacture, use, sale or other disposition of products licensed under this Agreement.

8.3 In the event Aware is unable or unwilling to provide the indemnity indicated in Section 8.1a above, WESTELL shall have the right to escrow royalties otherwise payable under this Agreement and to apply such escrowed royalties against costs incurred by WESTELL in defending any claim or suit of the type specified in Section 8.1 and/or in the settlement thereof or the payment of any judgment or award resulting therefrom. Any funds remaining in such escrow

on the completion of all claims and action and the payments of all expenses, award and the like resulting therefrom shall be promptly paid to Aware. To the extent WESTELL is at any time obligated to pay royalties for the continued right to sell products licensed under this Agreement as a result of infringement of third party intellectual property rights based on the manufacture, use or sale by WESTELL of hardware or software developed and/or provided by Aware under this agreement, WESTELL shall have the right to deduct from the royalties payable by WESTELL to Aware under this Agreement any amounts so paid by WESTELL.

8.4 Aware's liability under this Section 8 shall be limited to the fees and royalties paid and payable by WESTELL under the agreement and subject to escrow.

#### 9 - PRODUCT LIABILITY

9.1 WESTELL shall at all times during the term of this Agreement and thereafter, indemnify, defend and hold AWARE, its officers, employees and affiliates, harmless against all claims and expenses, including legal expenses and reasonable attorneys' fees, arising out of the death of or injury to any person or persons or out of any damage to property and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from the production, manufacture, sale, use, lease, consumption or advertisement of the LICENSED PRODUCT(s) and/or LICENSED PROCESS(s) arising from any obligation of LICENSEE hereunder.

#### 10- ASSIGNMENT

10.1 This agreement is not assignable and any attempt to do so shall be void.

#### 11 - TERMINATION

11.1 Should WESTELL fail to make any payment whatsoever due and payable to AWARE hereunder unless contested in good faith, this Agreement shall terminate effective on thirty(30) days' notice, unless WESTELL shall make all such payments to AWARE within said thirty(30) day period. Upon the expiration of the thirty (30) day period, if WESTELL shall not have made all such payments to AWARE, the rights, privileges and license granted hereunder shall automatically terminate.

11.2 Upon any material breach, breach or default of this Agreement by WESTELL, other than that set out in Paragraph 11.1, this Agreement shall terminate and the rights, privileges and license granted hereunder effective on ninety (90) days' notice to WESTELL. Such termination shall become automatically effective unless WESTELL shall have cured any such material breach or default prior to the expiration of the ninety (90) day period.

11.3 Upon a material breach, defined as a breach of Paragraph 4.4 of this agreement or a violation by AWARE of the exclusivity section of paragraph 7 of the Development Contract, and such breach or default is not cured by AWARE within ninety (90) days after notice by WESTELL to AWARE, then all fees paid by WESTELL are due back from AWARE.

11.4 Upon violation of the exclusivity section of paragraph 7 of the Development Contract by WESTELL, WESTELL is still obligated for payment to AWARE of the next milestone as defined in section 4 of the Development Agreement.

11.5 Upon termination of this Agreement for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination.

## 12 - PAYMENT, NOTICES AND OTHER COMMUNICATIONS

12.1 Any payments, notice or other communication pursuant to this Agreement shall be sufficiently made or given on the date of mailing if sent to such party by certified first class mail, postage prepaid, addressed to it at its address below or as it shall designate by written notice given to the other party:

In the case of AWARE

Robert P. Mosher  
Chief Financial Officer  
Aware, Inc.  
One Memorial Drive  
Cambridge, MA 02142

In the case of WESTELL

- -----  
- -----  
- -----  
- -----  
- -----

## 13 - MISCELLANEOUS PROVISIONS

13.1 This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Massachusetts, U.S.A., except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

13.2 The parties hereto acknowledge that this Agreement and Development Contract executed simultaneously herewith sets forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

13.3 No provision of the Agreement is intended to conflict with any law, and the provisions should be construed in a manner that will uphold their validity. In the event that any provision is found to be contrary to any law, it shall be deemed unenforceable, and the parties or the court shall substitute a lawful provision in its place which is equitable and which, to the extent possible, reflects the original intent of the parties. Unless it would be inequitable to do so, all other

provisions of the Agreement shall remain in full force and effect.

13.4 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

13.5 In no event shall either party be liable for special, incidental or consequential damages due to any cause whatsoever. No suit or action shall be brought against one party by the other more than one year after the related cause of action has accrued, or in the case of an indemnifiable claim, more than one year after receipt of notice of the claim. In no event shall the accrued total liability of any party from any lawsuit, claim, warranty or indemnity exceed the aggregate sum paid hereunder by WESTELL to AWARE.

IN WITNESS WHEREOF, the parties duly execute this Agreement the day and year set forth below.

/s/ Howard L. Resnikoff

Dated: 14 October 94

-----

Howard L. Resnikoff  
Chief Executive Officer  
Aware, Inc.

/s/ William V. Rodey

Dated: 10/7/94

-----

William V. Rodey  
Westell, Incorporated

Aware, Inc. Company Confidential

8

Proprietary Information

DEVELOPMENT CONTRACT  
BETWEEN

AWARE, INC.  
ONE MEMORIAL DRIVE  
CAMBRIDGE, MA 02142

AND

WESTELL  
101 KENDALL POINT DRIVE  
OSWEGO, IL 60543

This contract is entered into as of the 5th day of September, 1994 by and between Aware, Inc. (hereinafter referred to as "AWARE") a corporation organized and existing under the laws of the Commonwealth of Massachusetts, with offices in Cambridge, Massachusetts and WESTELL, Incorporated (hereinafter referred to as "WESTELL") a corporation organized and existing under the laws of Illinois, with offices in Oswego, Illinois.

WHEREAS WESTELL is engaged in the business of providing products and technology for Asymmetric Digital Subscriber Line (ADSL) and related areas in which equipment vendors will be provided with transceiver solutions, and

WHEREAS AWARE is engaged in the business of providing system designs, algorithms and software implementations for ADSL and related areas, and

WHEREAS AWARE desires to grant to WESTELL a license to certain of its proprietary software, a copy of which is attached hereto and incorporated herein (hereinafter referred to as the "LICENSE AGREEMENT")

WHEREAS, WESTELL desires that AWARE demonstrate the integration of its system designs, algorithms and software on the Analog Devices (ADI) digital signal processing (DSP) chips, applicable ASICs, and

WHEREAS WESTELL wishes to enable the building of a standard compliant discrete multitone (DMT) ADSL transceiver that also includes a nonstandard discrete wavelet multitone (DWT) feature.

NOW THEREFORE, the parties agree as follows:

1. WESTELL will pay a license fee and royalties to AWARE as set forth in the License Agreement which is attached hereto and which is being executed simultaneously herewith.
2. AWARE agrees to provide WESTELL with software that will operate ADI DSPs and will implement DWT in Westell's FlexCap[Trademark] ADSL system.
3. WESTELL and AWARE will use their best efforts to publicize DWT and to create and expand the market for the LICENSED PRODUCTS as defined in the License Agreement.



4. The timetable for the performance of the obligations of the parties hereunder is as follows: Both parties acknowledge that the following milestones will be attempted on a "best efforts basis". Failure by WESTELL or AWARE to meet the milestones shall not be deemed a breach of this Agreement.

#### PROJECT MILESTONES

Goal:

-----

DWMT unit by April 14, 1995.

PROJECT KICKOFF: August 3, 1994

MILESTONE 1: OCTOBER 7, 1994

Contract Negotiations complete and contract executed.

MILESTONE 2: OCTOBER 31, 1994

Demonstration of DWMT code.

MILESTONE 3: December 30, 1994

Provide working model of DWMT on 2106x platform

MILESTONE 4: April 14, 1995

Provide 2106x DWMT firmware that integrates with Aware/ADI DMT DSP system.

MILESTONE 5: April 30, 1995

Testing by Westell of Milestone 4 deliverable is complete

5. AWARE will provide full support for its software including bug fixes consistent with standard software industry practices for three years from date of each release at Aware's cost. Any upgrades and enhancements of the software will be jointly considered by AWARE and WESTELL as the need for them arises. In addition, AWARE agrees to use its best efforts to identify a second source of integrated circuits for DMT and DWMT.

6. The parties will jointly visit ADSL customers as reasonably required.

7. The parties agree that this is a teaming arrangement joining AWARE system designs, algorithms and software and WESTELL platforms for a DWMT ADSL transceiver. In addition, the parties agree that there exists an exclusivity period for this teaming arrangement granted under the LICENSE AGREEMENT. Neither party shall enter into competing agreements with third parties unless:

- a. the other party had defaulted in its obligations hereunder or missed a milestone by more than 12 months;
- b. a third party joins the teaming arrangement under the terms of paragraph 9; or
- c. the exclusivity period granted under the LICENSE AGREEMENT has lapsed.

8. Intellectual property created by AWARE or WESTELL shall be the property of the company that created it. Intellectual property developed jointly by AWARE and WESTELL shall

be owned jointly by AWARE and WESTELL. Each party owning an undivided one-half interest therein. Each party shall have the right to practise the joint owned intellectual property in any field and to grant rights, licenses and other privileges as the party deems appropriate or necessary. It is understood and agreed that system designs, algorithms and software developed by AWARE will be owned by AWARE.

9. Two openings exist in the AWARE/ADI ADSL alliance. AWARE and WESTELL agree that they will consider allowing the unidentified members to participate in the DWTM teaming arrangement. If terms agreeable to both AWARE and WESTELL are negotiated with one or both of the new members, the fees set forth in section 3 of the LICENSE AGREEMENT, will be pro rated and the exclusivity period will be shared with the new member(s) of the teaming arrangement. Westell reserves the right to approve new members for the teaming arrangement.

10. The parties hereto acknowledge that this Agreement and the LICENSE AGREEMENT which is being executed simultaneously herewith sets forth the entire Agreement and understanding of the parties as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

11. No provision of the Agreement is intended to conflict with any law, and the provisions should be construed in a manner that will uphold their validity. In the event that any provision is found to be contrary to any law, it shall be deemed unenforceable, and the parties or the court shall substitute a lawful provision in its place which is equitable and which, to the extent possible, reflects the original intent of the parties. Unless it would be inequitable to do so, all other provisions of the Agreement shall remain in full force and effect.

12. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

13. In no event shall either party be liable for special, incidental or consequential damages due to any cause whatsoever. No suit or action shall be brought against one party by the other more than one year after the related cause of action has accrued. In no event shall the accrued total liability of any party from any lawsuit, claim, warranty or indemnity exceed the aggregate sum paid by WESTELL to AWARE under the License Agreement by and between AWARE and WESTELL of even date.

IN WITNESS WHEREOF, the parties duly execute this Agreement the day and year set forth below.

/s/ Howard L. Resnikoff  
 -----  
 Howard L. Resnikoff  
 Chief Executive Officer  
 Aware, Inc.

Dated: 14 October 94  
 -----

/s/ William V. Rodey  
 -----  
 William V. Rodey  
 Westell, Incorporated

Dated: 10/7/94  
 -----

Analog Devices, Aware, Westel International, Westell  
Development Agreement  
Low Cost DMT ADSL

Westell International Inc. (WIN), Westell Inc. (Westell), Analog Devices Inc. (ADI) and Aware Inc. (Aware) have been cooperating with each other to provide low cost DMT ADSL systems for British Telecom (BT) and other customers worldwide. It has been determined by the parties that the intentions of the Memorandum of Understanding dated 29 June 1994 should be modified given the current delivery schedule.

The purpose of this Development Agreement is to identify the agreed commitments of the parties necessary to accelerate the availability of low cost DMT ADSL systems, enable WIN and Westell to complete proposals for pricing and product availability as well as to communicate to customers the WIN and Westell ADSL DMT systems architecture, transceiver performance commitments, planned product migration as well as to provide commercial terms for the purchase of components from ADI.

1. WIN will continue to act as prime contractor for BT and other international customers.
2. WIN and Westell will continue to provide AWARE and ADI product definition documentation and systems design information according to the deliverables in the milestones schedule.
3. ADI and AWARE will supply WIN and Westell with relevant Digital Signal Processor (DSP), Applications Specific Integration Circuits (ASIC's) and standard ADI component parts with optimized AWARE ADSL firmware in order to meet the attached milestones.
4. ADI and AWARE each will be responsible to direct its own resources in connection with fulfilling the milestone schedules and will be responsible for the availability of a low cost ADSL transceiver and systems architecture and product offering.
5. ADI and AWARE will continue to participate in direct support of WIN and Westell customer discussions for the purposes of clarifying product requirements, support of worldwide standards activities and communication of project schedule updates. As appropriate, WIN and Westell will invite representatives from both ADI and AWARE to meetings in support of customer requirements.

Analog Devices Inc., Aware Inc., Westell International Inc., Westell Inc.  
Proprietary and Confidential

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Analog Devices, Aware, Westell International, Westell  
Development Agreement  
Low Cost DMT ADSL

6. ADI and AWARE will provide timely and mutually agreed reasonable levels of technical assistance and support at agreed upon venues to WIN and Westell that demonstrates progress being made towards agreed upon milestone deliverables.
7. WIN or Westell may terminate this agreement based on the BT cancellation of its development contract with WIN and/or ADI and AWARE failing to fulfill the milestone requirements in this Development Agreement. If termination is based on BT cancellation, payment by WIN or Westell to ADI and AWARE for achieved milestones are due and payable according to the terms of this agreement.
8. It is agreed by ADI, AWARE and WIN and Westell that pricing, technical performance and product availability benefits which arise from this Development Agreement can be made available to the ADI and AWARE consortium, as per the Participation Agreement dated 20 October 1993, unless specifically restricted under separate agreement by WIN, Westell, ADI and AWARE.
9. Licenses and Proprietary Information
  - (a) This Agreement does not grant to WIN or Westell by implication, estoppel or otherwise, a license to any patent or know-how owned by ADI or AWARE ("Developer"), other than the license to use such technology when resident in the devices that will be purchased from ADI subsequent to the completion of the work.
  - (b) All discoveries, developments, improvements, and inventions conceived or first reduced to practice in the performance of this Agreement by a Developer's employees shall be the sole and exclusive property of such Developer.
  - (c) All discoveries, developments, improvements, and inventions conceived or first reduced to practice in the performance of this Agreement by WIN or Westell employees shall be the sole and exclusive property of WIN and Westell.
  - (d) In the event that the employees of a Developer and WIN and/or Westell jointly invent devices, circuits, processes, apparatus, or systems relating to this Agreement, then the joint invention shall be jointly owned by the parties without accounting to either party.

Analog Devices, Aware, Westell International, Westell  
Development Agreement  
Low Cost DMT ADSL

In the event of a joint invention which is patentable, the patent expenses shall be divided equally between the parties, unless one party states in writing that it does not wish to join in the patent application in a given country in which case the non-joining party shall have no rights in that country.

10. The revised and modified Development Agreement between BT and WIN contains the following WIN Milestones:

WIN Milestones

- |   |           |   |
|---|-----------|---|
| A | 25 Sep 95 | Provide a platform to BT that allows core transceiver testing including 2 Mbps and 6 Mbps operation with a 96 kbps control channel including an active POTS filter. BT would test this platform for DMT transmission performance results and send the test results to WIN.  |
| B | 15 Dec 95 | Provide a first prototype system to BT that includes an access multiplexer and ADSL line cards to allow performance testing of the line cards and functional testing of the multiplexer in a static configuration. The system would consist of 1 shelf, 2 sets of common equipment cards and 2 sets of ADSL line cards. |
| C | 15 Mar 96 | Provide a pre-production reference model that passes performance testing and has been parametrically tested. This system would consist of the same number and type of components as milestone B and would be expected to pass the acceptance test plan established by that time.  |
| D | 28 Jun 96 | Provide pilot production systems to BT consisting of 2 multiplexers each equipped with two sets of line cards. These systems would be representative of production systems.   |
11. In order to accomplish the WIN Milestones, WIN requires the performance of ADI and AWARE to develop a DMT transceiver capable of at least 2.048 Mbps and 6.144 Mbps downstream in addition to a 96 kbps bi-direction control channel with associated ATM and ADSL overhead. This transceiver must be capable of the performance specified in BT "ADSL Product Requirements for BT/Westell Development Contract MC589932". In order to accomplish this, ADI and AWARE commits to the following Milestones:

Analog Devices, Aware, Westell International, Westell  
Development Agreement  
Low Cost DMT ADSL

ADI and AWARE Commitment Milestones

1. 12 May 95 ADI to provide WIN with complete schematics for a "generation one" DMT transceiver that includes the hybrid (using the AD815), the AFE (using the AD 870), the Digital Filter Integrated Circuit (DFIC), SHARC DSP (21061 or 21062) and Digital Interface ASIC (DIA) chips.
2. 12 May 95 ADI to provide all required IC documentation including pinouts and package mechanical data as well as electrical specifications.
3. 21 Jul 95 Aware to provide WIN with 0.5 Software with DBE 2 and AFE2 boards to support the transceiver configuration and operation at 2 Mbps and 6 Mbps (ATM) rates with 96 kbps bi-directional control channel.
4. 12 Aug 95 Aware to provide WIN with TICL interface software in order to support Westell hardware and software integration in Aurora, Illinois.
5. 21 Aug 95 ADI to provide WIN with samples of all IC's necessary to complete assembly of six transceivers (three lines).
6. 15 Sep 95 ADI to provide WIN with X-Grade IC's for eight transceivers (four lines).
7. 28 Sep 95 AWARE to provide WIN with 1.0 software capable of TICL controlled configuration, diagnostics and status required to support transceiver performance in accordance with the BT requirements.

The ADI and AWARE commitment milestones represent the minimum set of milestones necessary to execute the commitments for WIN and Westell DMT ADSL customers. Delay in keeping milestone commitments will impact WIN competitiveness in the marketplace and customer satisfaction.

Analog Devices Inc., Aware Inc., Westell International Inc., Westell Inc.  
Proprietary and Confidential

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Development Agreement  
Low Cost DMT ADSL

12. While it is recognized by the parties that the ADI and AWARE commitment milestones schedule do not represent an acceleration of availability of low cost DMT ADSL in the marketplace, it has been agreed that a level of remuneration based upon milestone achievements is appropriate. Therefore, WIN and Westell agree to make the following payments to ADI and AWARE based on milestone achievements and WIN's success in delivering against the BT contract and other WIN and Westell customer milestones:

[redact]

Each ADI and AWARE commitment milestone payout is based on performance versus the milestone. If the milestone deliverable is achieved, payment will be made within 45 days after receipt of an invoice from ADI and AWARE. If the milestone deliverable is not achieved, payment for the milestone will not be made.

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The WIN Milestones payouts are provided to identify the critical nature of the ADI and AWARE joint cooperation in achieving the WIN deliverables to BT. Achieving the WIN deliverables will require ADI and AWARE to provide appropriate and necessary levels of technical support to WEN. Category 1 and 2 is defined as ADSL product specifications according to the T1E1.4 ANSI standards committee.

- 13(a) In order to be competitive in the marketplace, WIN and Westell will require transceiver pricing which meets customers requirements. ADI agrees to supply WIN and Westell at an equivalent component purchase price of [redact] per line for each Low Cost DMT ADSL transceiver (Generation 1) ordered for delivery to WIN between the date of this agreement and 28 June 1996.
- (b) ADI agrees to supply WIN and Westell at an equivalent component purchase price per line according to the price schedule below for each Low Cost DMT ADSL transceiver (Generation 2 - a Category 2 compliant DMT processor with DFIC DSP and an integrated Category 1 AFE) ordered for delivery to WIN on or after 29 June 1996.
- (c) ADI agrees to supply WIN and Westell at an equivalent component purchase price per line according to the price schedule below for each Low Cost DMT ADSL transceiver (Generation 3 - comprised of the digital components of Generation 2 and a discrete category 2 AFE). Ordered for delivery to WIN on or after 1 Jan 1997.
- (d) ADI plans to supply WIN and Westell at an equivalent component purchase price per line according to the price schedule below for each Low Cost DMT ADSL transceiver (Generation 3+ - a reduced size Category 2 DMT processor with DFIC DSP and an integrated Category 2 AFE) with an expected availability date of 30 June 1997. WIN and Westell is authorized to make quotations in the marketplace for the Generation 3+ product offering based on the planned but not committed pricing and availability schedule.

[redact]

Pricing is per line for ADI provided components only and does not include any third party royalties to valid patent holders. Only Generation 1 pricing includes hybrid and line components and the line driving subsection



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14. ADI commits that its DMT Transceiver architecture with component parts, not including the hybrid and line driving subsection, will have a power consumption no greater than 3 watts per line effective June 30, 1996. This commitment will allow WIN and Westell to complete systems architecture and product development planning activities necessary to complete customer requests for proposals during 1995 and thereafter in order to meet customer requirements for systems level integration, network planning and product roll-out during 1996 and thereafter.

15. Confidentiality

The parties agree that any information, technical data or know how, which is furnished or has been already furnished to the other in written or tangible form by either party under or in connection with this Agreement and marked as "Proprietary Information" or "Confidential", will be maintained by the receiving party in confidence during the term of this Agreement and for a period of five (5) years thereafter and will not be used by the receiving party except to fulfill the receiving party's obligations under this Agreement.

Oral disclosure will be covered by this Agreement only if such disclosures are reduced to writing and transmitted by the disclosing party to the other within thirty (30) days of the original disclosure and marked as provided above. Neither party shall be under any obligation to maintain in confidence any portion of the information which is (i) already in the possession of the receiving party or its subsidiaries; (ii) independently developed by the receiving party or its subsidiaries; (iii) publicly disclosed by the disclosing party; (iv) rightfully received by the receiving party or its subsidiaries from a third party; (v) approved for release by written agreement with the disclosing party; (vi) available by the inspection of products marketed or offered for sale by either party hereto or others in the ordinary course of business; or (vii) disclosed pursuant to the requirement or request of a governmental agency or third party to the extent such disclosure is required by operation of law, regulation or court order.

16. Limitation of Claims

Except for warranty claims, No suit or action shall be brought against any party more than one (1) year after the related cause of action has occurred. As to warranty claims the applicable period shall be one year after the product warranty period which shall be one year.

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In no event, shall the accrued total liability of any party from any lawsuit, claim, warranty or indemnity exceed the aggregate sum paid or due to ADI and Aware under this development agreement. No party provides any indemnity from and against any liabilities, losses, damages and expenses (including attorney's fees) relating to claims for personal injuries, death or property damage.

In no event shall any party be liable for indirect, special, incidental, or consequential damages due to any breach of this Agreement or of any warranty or any other cause whatsoever.

17. Notices

Written notices hereunder are deemed to be given when telexed, faxed or mailed first class, postage prepaid, to the addresses of the parties as set forth herein, or such other addresses as shall be furnished in writing, by either party. All parties shall be copied on any notice for such notice to be effective.

Analog Devices Inc.  
181 Ballardvale Street  
Wilmington, MA 01887-1024  
Facsimile: +1-617-937-1022

Aware Inc.  
One Memorial Drive  
Cambridge, MA 02142-1301  
Facsimile: +1-617-577-1710

Westell International Inc.  
2701 N. Rocky Point Drive  
Suite 530  
Tampa, FL 33607  
Facsimile: +1-813-286-1957

Westell Inc.  
101 Kendall Point Drive  
Oswego, IL 60543  
Facsimile: +1-708-851-5299

18. Non - Assignability

Except for WIN assignments to Westell, this Agreement is not assignable by either party without the prior written consent of the other party. Any attempt to assign this Agreement without the prior written consent of the other party shall be void.

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19. Other Agreements

This Agreement contains the entire understanding of the parties with respect to the subject matter hereof and supersedes the June 29, 1994 MOU and all other agreements and understandings relating thereto, written or oral, between the parties, except for the Participation Agreement dated 20 October 1993. Amendments to this Agreement must be in writing, signed by the duly authorized officers of the parties. Except as provided herein, the parties agree that the terms and conditions of this Agreement shall prevail, notwithstanding contrary or additional terms, in any purchase order, sales acknowledgment, confirmation or any other document issued by either party including the Schedules attached hereto.

20. Miscellaneous Provisions

- (a) This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Massachusetts, USA, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.
- (b) No provision of this Agreement is intended to conflict with any law, and the provisions should be construed in a manner that will uphold their validity. In the event that any provision is found to be contrary to any law, it shall be deemed unenforceable, and the parties or the court shall substitute a lawful provision in its place which is equitable and which, to the extent possible, reflects the original intent of the parties. Unless it would be inequitable to do so, all other provisions of this Agreement shall remain in full force and effect.
- (c) The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

21. Force Majeure

Neither party shall be liable for delay in performance or failure to perform in whole or in part the terms of this Agreement due to strike, labor dispute, act of war, labor shortage, riot or civil commotion, act of public enemy, fire, flood or act of God or other cause beyond the control of such party.

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In WITNESS WHEREOF, Westell International, ADI and AWARE have executed this  
Development Agreement as of 12 May 1995.

ANALOG DEVICES, INC.

By: /s/ Russell K. Johnsen  
-----

Name: Russell K. Johnsen  
-----

Title: V.P./G.M. Communications Div.  
-----

Date: 7 June 1995  
-----

AWARE INC.

By: /s/ Michael Tzannes  
-----

Name: Michael Tzannes  
-----

Title: V.P. Telecommunications  
-----

Date: 26 May 95  
-----

WESTELL INTERNATIONAL INC.

By: /s/ Robert D. Faw  
-----

Name: Robert D. Faw  
-----

Title: President and CEO  
-----

Date: 15 May 1995  
-----

WESTELL INC.

By: /s/ William V. Rodey  
-----

Name: William V. Rodey  
-----

Title: V.P. Planning and Business Development  
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## TECHNOLOGY AGREEMENT

This Technology Agreement is made this tenth (10th) day of June, 1996 ("Effective Date"), by and between AWARE Inc., with offices at One Oak Park, Bedford, Massachusetts ("AWARE") and BROADBAND TECHNOLOGIES, INC., with offices at 4024 Stirrup Creek Drive, Durham, North Carolina ("BBT").

## RECITALS:

- A. Aware is a developer of copper based technology for high speed transmission systems.
- B. BBT designs, manufactures and markets telecommunications hardware and software that enables network operators to provide a switched digital fiber optic broadband network.
- C. Both parties desire to enter into an agreement whereby AWARE will develop and deliver to BBT, certain prototypes incorporating DWMT technology for upstream FTTC/VDSL applications in BBT's FLX platform.

Now therefore, in consideration of the mutual covenants contained herein, the parties agree as follows:

## 1. DEFINITIONS

- 1.1 "Agreement" means this Technology Agreement and its appendices attached hereto, as they be amended from time to time.
- 1.2 "DMT" means a modulation scheme that breaks available bandwidth into narrow subbands to ensure reliable data transmission, even when noise affects certain areas of the available spectrum.
- 1.3 "VDSL" means very high speed digital subscriber line.
- 1.4 "DWMT" means a modulation scheme similar to DMT that uses wavelet transformers rather than fast fourier transformers.
- 1.5 "FTTC" means fiber to the curb.
- 1.6 "Most Favored Customer" means that at all times that BBT is purchasing product based on Aware DWMT technology, Aware will make reasonable efforts to assist BBT with Aware's exclusive silicon foundry, with price, delivery dates and other terms and conditions not less favorable than the corresponding terms and conditions granted by Aware's exclusive silicon foundry to any other customer for the same or substantially similar product.

## 2. GENERAL SCOPE OF AGREEMENT

- 2.1 Scope. This Agreement covers the development of certain prototypes incorporating DWMT technology by Aware for the purpose of demonstrating the FTTC/VDSL application into the BBT FLX System. Design, development and production of final DWMT silicon for incorporation into the BBT FLX System and future products developed by BBT, if any, will be defined in a separate supplier agreement between BBT and Aware's silicon foundry.

## 3. TERM AND TERMINATION

- 3.1 Term. The term of this Agreement shall commence as of the Effective Date, and shall, except as provided in Section 3.2 below, continue in effect for five (5) years ("TERM").
- 3.2 Termination.
- (a) BBT may, in its sole discretion, terminate this Agreement at any time upon written notice to Aware.
  - (b) Aware may terminate this Agreement if BroadBand is in breach of any of the terms and conditions of this Agreement and fails to cure such breach within thirty (30) days after of written notice from Aware.
- 3.3 Effect of Termination.
- (a) In the event that BBT terminates due to Aware being unable to meet the delivery dates noted in Section 4.1, Aware Obligations, and prototype specifications of Appendix A, Aware shall immediately refund all payments to BBT, except the first [redact], required by Section 5.1, and provide BBT with all test results as of the date of termination, related to this Agreement.
  - (b) Within thirty (30) days of any termination of this Agreement or any of the licenses hereunder, each party shall return or destroy all Confidential Information of the other party provided hereunder and an officer of the other party shall certify to the other party in writing of compliance with the requirements of this Section 3.3(b).
- 3.4 No Liability For Termination. Neither Aware or BBT shall, by reason of the termination of this Agreement, be liable to the other for compensation, reimbursement or damages on account of any loss of prospective

profits or anticipated sales or on account of expenditures, investments, leases, or commitments made in connection with this Agreement or the anticipation of extended performance hereunder.

- 3.5 Survival of Terms. In the event of termination of this Agreement for any reason, the Sections 6, 7.1, 8 and 9 of this Agreement shall survive termination, cancellation, or expiration of this Agreement or any purchase order.

#### 4. AWARE OBLIGATIONS

- 4.1 DWMT Deliverables. Aware shall deliver five (5) sets of working prototypes and supporting documentation to BBT that meet the technological requirements as defined in Appendix A herein, no later than August 6, 1996. These prototypes will serve to demonstrate and test the DWMT technology for FTTC/VDSL application, facilitate bandwidth management software implementation and integration into the BBT FLX platform and serve as the prototypes for the production level DWMT chipset that will later be integrated with other silicon suppliers and BBT proprietary high speed transmission chipsets.
- 4.2 Commitment. Aware shall make commercially reasonable efforts to assist BBT to achieve Most Favorable Customer status with Aware's exclusive silicon foundry. In addition to the DWMT deliverables, Aware shall continue to do reasonable additional work with BBT as shall be necessary to develop a commercial product that can be manufactured by a third party foundry. Aware shall make commercially reasonable efforts to work with its exclusive silicon foundry to have chipsets available by April 1997.
- 4.3 Future Deliverables. Aware will advise BBT, prior to or in parallel with discussions with other potential Aware customers for future VDSL technology developed by Aware, under terms and conditions to be mutually agreed to by BBT and Aware.
- 4.4 Marketing and Technical Support. Aware agrees to provide marketing of their upstream technology and similar prototypes support for other customer applications on a global scale to legitimize the technology. Aware, at its own expense, will reasonably support end customers with DWMT product demonstrations and technical support to legitimize the technology worldwide and jointly with BBT support total solutions to network operators worldwide. Aware and BBT will mutually develop a test plan for DWMT by June 30, 1996 and provide reasonable ongoing support of these test plans for the Terms of this Agreement.

## 5. PAYMENTS

- 5.1 Payments by BBT. BBT will pay Aware a non-refundable amount of [redact] upon the signing of this Agreement. BBT further will pay Aware [redact] upon the delivery, testing and acceptance by BBT of five (5) DWMT prototypes in accordance with the specifications outlined in Appendix A by August 6, 1996. If there is a delay beyond August 6, 1996 on Aware's part, Aware will forfeit the [redact] payment.
- 5.2 Payments by Aware. Aware will pay BBT [redact] each for the next two (2) Aware customers for whom Aware performs services or provides prototypes similar to those provided or performed under this Agreement. Aware shall promptly notify BBT upon this event occurring, and specific testing (i.e. field and BBT lab trials) performed jointly with BBT shall be treated as BBT proprietary information. BBT, at Aware's request, may disclose this information to third parties.
- 5.3 Rebates to BBT. Aware shall pay BBT a [redact] per quad chipset rebate for each unit purchased by BBT from Aware's silicon foundry up to a maximum of [redact]. Additionally, Aware shall pay BBT a [redact] per quad chipset rebate up to a maximum of [redact] upon attainment of the first dollar amount noted herein. BBT shall invoice Aware on a quarterly basis based upon actual BBT purchase order receipts from Aware's silicon foundry for each quad chipset.
- 5.4 Terms of Payment. Payments shall be made net thirty (30) calendar days from the date of invoice for each party. Neither party shall consider the other party in default if payments are made net forty-five (45) calendar days unless there is evidence of repeated late payments after notice in writing to the late party.

## 6. WARRANTIES AND LIABILITIES

- 6.1 Warranty. Aware warrants to BBT that the DWMT prototypes will be free from defects in material and workmanship and conform in all material respects to the specifications defined in Appendix A until delivery of commercial DWMT VDSL chipsets. Aware will either repair or replace any product containing such a defect or failing so to conform within a reasonable timeframe, not to exceed ninety (90) days after BBT gives notice of the defect. Repair or replacement shall be the sole remedy for breach of the warranty set forth in this



Section 6.1, unless the defect is not remedied within ninety (90) days.

- 6.2 Infringement. Aware shall indemnify and save harmless BBT, its affiliates, its and their customers, and each of their officers, directors, employees, successors and assigns from and against any losses, damages, liabilities, fines, penalties, and expenses (including reasonable attorneys' fees) that arise out of or result from any claim of infringement of any patent, copyright, trademark or trade secret right, or other intellectual property right, private right, or any other proprietary or personal interest and which is caused by BBT's use of the prototypes delivered under this Agreement for the purposes set forth in this Agreement (an "Infringement Claim"), provided that the infringement Claim does not arise from Aware's adherence to BBT's written instructions or to the specifications. BBT shall provide Aware with the control of the defense or settlement of any such Infringement Claim, and BBT shall provide Aware with such documentation or assistance as Aware may request in connection with such defense or settlement. BBT shall have a right to participate in any action relating to an Infringement Claim against BBT, and Aware shall not enter into any settlement of an Infringement Claim that is materially adverse to BBT without BBT's prior written consent.
- 6.3 Warranty Disclaimer. EXCEPT AS SET FORTH IN SECTION 6.1 AND SECTION 6.2, AWARE MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PROTOTYPES TO BE DELIVERED UNDER THIS AGREEMENT OR WITH RESPECT TO ANY OTHER PRODUCTS OR SERVICES PROVIDED TO BBT BY AWARE. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, EXCEPT AS SET FORTH IN SECTION 6.1 AND SECTION 6.2, AWARE HEREBY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.
- 6.4 Limitation of Liability. EXCEPT WITH RESPECT TO INDEMNIFICATION FOR INFRINGEMENT, IN NO EVENT SHALL THE LIABILITY OF AWARE TO BBT, WHETHER ARISING IN TORT, CONTRACT, OR OTHERWISE, FOR ANY CLAIM, ACTION, SUIT OR PROCEEDING ARISING OUT OF OR RELATING TO THE PROTOTYPES OR THIS AGREEMENT EXCEED THE AMOUNT PAID BY BBT TO AWARE PURSUANT TO THIS AGREEMENT.

7. GRANT OF RIGHTS

- 7.1 DWMT Technology. Subject to the terms and conditions of this Agreement, Aware grants to BBT and any wholly owned subsidiary, or affiliate of BBT, a non-exclusive, non-transferable, perpetual, worldwide, royalty-free

license without the right to sublicense, under Aware copyrights, patents and trade secrets covering the use of the DWMT technology to use the prototypes developed under this Agreement solely for evaluating the DWMT technology for use in the BBT FLX System and future products developed by BBT.

- 7.2 No Trademark Rights. No provision or term of this Agreement shall be construed as granting BBT any right or license to use Aware's name or any Aware trademark or trade name in connection with the DWMT technology or otherwise, except that BBT may indicate to the public that the DWMT technology is based on Aware technology.

## 8. CONFIDENTIALITY

- 8.1 Confidential Information. The parties acknowledge that the DWMT technology contains the confidential information of Aware and its silicon foundry and BBT's use of such information shall be pursuant to the terms of the Confidential Nondisclosure Agreement between Aware and BBT which is incorporated herein by reference. BBT shall not disclose any technical information owned by Aware to any third party, individual, corporation, or other entity, except to subcontractors of BBT under an obligation of confidentiality, without the prior written consent of Aware. BBT shall protect all technical information received from Aware by using at least the same degree of care, but no less than a reasonable degree of care, to prevent the unauthorized use, dissemination or publication of such information as Aware uses to protect its own confidential information of a like nature.
- 8.2 Confidentiality of Agreement. The parties hereto shall keep the terms of this Agreement confidential and shall not now or hereafter divulge these terms to any third party except:
- (a) with the prior written consent of the other party; or
  - (b) to any governmental body having jurisdiction to call therefor; or
  - (c) subject to (d) below, as otherwise may be required by law or legal process, including to legal and financial advisors in their capacity of advising a party in such matters; or
  - (d) during the course of litigation so long as the disclosure of such terms and conditions are restricted in the same manner as is the

confidential information of other litigating parties and so long as (a) the restrictions are embodied in a court-entered Protective Order and (b) the disclosing party informs the other party in writing in advance of the disclosure; or

- (e) in confidence to legal counsel, accountants, banks and financing sources and their advisors solely in connection with complying with financial transactions; or
- (f) to the extent reasonably necessary in connection with the completion of any investment memorandum, prospectus, or similar document disclosed to investors in connection with efforts of the party to obtain financing.

The parties shall cooperate in preparing and releasing an announcement, if any, relating to this Agreement.

## 9. MISCELLANEOUS CLAUSES

- 9.1 Notices. Any notice or demand which under the terms of this Agreement or under any statute must or may be given or made by BBT or Aware, shall be in writing and shall be given or made by confirmed facsimile or similar communication or by certified or registered mail addressed to the respective parties as follows:

To Aware:                      Aware, Inc.  
One Oak Park  
Bedford, Massachusetts

Attn: Michael Tzannes

To BBT:                         BroadBand Technologies, Inc.  
4024 Stirrup Creek Drive  
P.O. Box 13737  
Durham, NC 27709-3737

Attn: Mr. Tim Oakley, VP & CFO

and

Attn: Customer Service Department

Such notice or demand shall be deemed to have been given or made when sent by facsimile, or other communication or when deposited, postage prepaid in the U.S. mail. The above addresses may be changed at any time by giving prior written notice as above provided.

- 9.2 Force Majeure. Neither party will be liable for any failure to perform due to unforeseen circumstances or causes beyond the parties' reasonable control,

including, but not limited to, acts of God, war, riot, embargoes, acts of civil or military authorities, earthquakes, fire, flood, accident, strikes, inability to secure transportation, facilities, fuel, energy, labor or materials. Time for performance will be extended by Force Majeure.

- 9.3 Assignment. Each party shall have the right to assign this contract to any party that acquires substantially all of the business of such party without the consent of the other party.
  
- 9.4 Choice of Law. The construction, interpretation and performance of this Agreement and all transactions under it shall be governed by the laws of the State of North Carolina, excluding its choice of law rules and excluding the Convention for the International Sale of Goods. The parties agree that the provisions of the North Carolina Uniform Commercial Code apply to this Agreement and all transactions under it, including agreements and transactions relating to the furnishing of services, the lease or rental of equipment or material, and the license of software.
  
- 9.5 Jurisdiction. BBT and Aware agree that any action or legal proceeding arising out of this Agreement shall be brought only in a state or federal court of competent jurisdiction in the Commonwealth of Massachusetts and BBT and Aware expressly submits to, and accepts the jurisdiction of, any such court in connection with such action or proceeding and BBT and Aware further consent to the enforcement of any judgment against either party arising therefrom in any jurisdiction in which either party has or shall have any assets.
  
- 9.6 Severability. If any of the provisions of this Agreement shall be invalid or unenforceable, such invalidity or unenforceability shall not invalidate or render unenforceable the entire Agreement, but rather the entire Agreement shall be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligations of BBT and Aware shall be construed and enforced accordingly.
  
- 9.7 Mediation. If a dispute arises out of or relates to this Agreement, or its breach, and the parties have not been successful in resolving such dispute, the parties agree to attempt to resolve the dispute through mediation by submitting the dispute to a sole mediator selected by the parties or, at any time at the option of a party, to mediation by the American Arbitration Association ("AAA"). Each party shall bear its own expenses and an equal share of the expenses of the

mediator shall hold the existence, content and result of the mediation in confidence. If such dispute is not resolved by such mediation, within thirty (30) days after a party requests mediation, the parties shall have the right to resort to any remedies permitted by law. All defenses based on passage of time shall be tolled pending the termination of the mediation. Nothing in this clause shall be construed to preclude any party from seeking injunctive relief in order to protect its rights pending mediation. A request by a party to a court for such injunctive relief shall not be deemed a waiver of the obligation to mediate.

- 9.8 Relationship of the Parties. Neither party hereto will be deemed the agent or legal representative of the other for any purpose whatsoever and each party will act as an independent contractor with regard to the other in its performance under this Agreement. Nothing herein will authorize either party to create any obligation or responsibility whatsoever, express or implied, on behalf of the other or to bind the other in any manner, or to make any representation, commitment or warranty on behalf of the other.
- 9.9 Entire Agreement. This Agreement shall incorporate Appendix A and together with the Confidential Non- Disclosure Agreement between the parties shall constitute the entire agreement between them with respect to the subject matter of this Agreement. All references in these terms and conditions to this Agreement or equipment, products, software or information furnished under, in performance of, pursuant to, or in contemplation of, this Agreement shall also apply to any purchase orders issued pursuant to this Agreement. Printed provisions on the reverse side of Aware's purchase orders and all provisions of BBT's forms shall be deemed deleted. The provisions of this Agreement supersede all contemporaneous oral agreements and all prior oral and written quotation, communication, agreements and understandings of the parties with respect to the subject matter of this Agreement.

9.10 Counterparts. This Agreement may be executed in one or more counterparts.

Aware, Inc.

BroadBand Technologies, Inc.

By /s/ Michael Tzannes

By /s/ Leonard D. Hayes

Name (Print) Michael Tzannes

Name (Print) Leonard D. Hayes

Title Senior Vice President

Title Director -- Materials

Date 6/14/96

Date 6/17/96

## STANDARD COMMERCIAL LEASE

## 1. IDENTIFICATION

The Lease made as of March \_\_, 1995 by and between R. W. CONNELLY (the "Landlord"), having an address at 57 Bedford Street, Suite 100, Lexington, Massachusetts 02173, and AWARE, INCORPORATED, a Massachusetts corporation (the "Tenant") having an address at One Memorial Drive, Cambridge, Massachusetts 02142.

## 2. PREMISES

Tenant, which expression shall include its successors, executors, administrators, and assigns where the context so admits hereby leases the following described premises: Approximately 11,000 rentable square feet of floor area on the second floor situated in a certain building known as One Oak Park Drive, in the Town of Bedford, Middlesex County, Massachusetts, as more particularly described in Exhibit A, together with the right to use in common, with others entitled thereto, the hallways, stairways, and elevators, necessary for access to said leased premises, and lavatories nearest thereto.

## 3. TERM

The term of this lease shall be for Three (3) years commencing on June 1, 1995 and ending on May 31, 1998, unless earlier terminated under an Early Termination Option which allows the Tenant a one-time right to terminate the Lease at the end of the second year by providing six (6) months prior written notice and a payment for any unamortized transaction or fit-up costs and a termination payment of two (2) months rent of \$51,608.10 at the end of term.

The Tenant has the option to extend the term for two (2) one (1) year terms with six (6) month notice. (See Paragraph 5.)

## 4. CONSTRUCTION BY LANDLORD

The Landlord shall complete, at the Landlord's cost and expense, except as set forth herein, certain work in the Premise (the "Landlord's Work"). The Premise shall be built out in accordance with the plan agreed upon during the meeting of March 27, 1995, attached as Exhibit B.

The Tenant shall not unreasonably withhold or delay approval of any changes or amendment to the Landlord's work which the Landlord may from time to time propose, provided, however, that the Tenant need not approve any such proposed changes or amendment which materially adversely affect the value or quality or the Tenant's anticipated use of the premises.

The Landlord shall exercise all commercially reasonable efforts to substantially complete the Landlord's Work by May 15, 1996, such dates shall be automatically extended for the periods of (i) any delays caused by the Tenant's changes to the agreed upon plan,

and any other delays which are the responsibility of the Tenant (any and all such delays being referred to as "Tenant Delays"); (ii) any delays which result from strikes, inability to obtain materials, fire or other casualty and from any causes beyond the commercially reasonable control of the Landlord; (iii) and any delays caused by Tenant's failure to deliver a signed Lease by April 5, 1996.

The Landlord shall cause the Premise to be completed in a good and workmanlike manner using first-class materials and in compliance with all applicable laws, by-laws, ordinance, codes, rules, regulation orders and other lawful requirements of Governmental bodies having jurisdiction.

The Tenant shall reimburse the Landlord as and when the applicable items of work are completed and invoiced by the Landlord, (i) all incremental costs associated with change orders requested by the Tenant; (ii) the incremental costs of any work requested by Tenant not set forth in the agreed upon plan and specification; and (iii) any work exceeding the specifications set forth in the "building standard" description. All such work shall be reimbursed at the Landlord's cost plus ten percent (10%) for administrative services, overhead and general conditions.

#### 5. RENT

The Tenant shall pay to the Landlord rent at the rate of One hundred twenty-five thousand, five hundred ten (\$125,510.00) dollars per year, payable in advance in monthly installments of Ten thousand, four hundred fifty-nine and 17 cents (\$10,459.17).

If the Tenant exercises its right to extend the Lease for one (1) or two (2) additional years, the Tenant shall pay the Landlord rent at the rate of One hundred four thousand, five hundred (\$104,500.00) dollars per year payable in advance in monthly installments of Eight thousand, seven hundred eight and 33 cents (\$8,708.33).

#### 6. RENT ADJUSTMENT

##### ADDITIONAL RENT

Commencing June 1, 1996, the Tenant agrees to pay to the Landlord upon demand as Additional Rent fifty percent (50%) (or such other percentage as the rentable square footage of the Premises bears to the rentable square footage of the Building from time to time, currently 22,000 square feet) of the amount by which Common Expenses as hereinafter defined exceed, in the aggregate, the actual cost of three dollars and fifty cents (\$3.50) per rentable square foot. "Common Expenses" shall mean any and all reasonable charges, costs and expenses of every kind and nature whatever which the Landlord may from time to time actually incur and the reasonable value, based on competitive rates, of any materials and services which the Landlord may provide in good faith with respect to the ownership, operation and maintenance of the Building and the Property, including, without limitation, (i) "Taxes"; the Landlord shall pay any and all



real estate taxes, betterments and special assessment or amounts in lieu or in the nature thereof, (ii) making repairs to and undertaking maintenance of the Building and the property, including all alterations and improvements to the common areas of the Building; (iii) providing utilities, including heat, water, sewer, air conditioning and ventilation as provided in Paragraph 7 hereof, to the Premises and to the common areas of the Building; (iv) providing daily cleaning and rubbish removal; (v) providing watering, landscaping and lawn care for the Property; (vi) sanding, plowing and removal of snow and ice from the driveways, walkways and parking areas; (vii) maintaining casualty and liability insurance with respect to the Landlord, the Premises, the Building and the Property; and (viii) reasonable administrative and management costs of the Landlord, which shall be commensurate with those normally charged for suburban office buildings of this nature in the metropolitan Boston area.

Notwithstanding the foregoing, during the Term the Tenant shall pay on an annual basis the Tenant's percentage only if the amount by which Common Expenses and Taxes for the Building and the Property exceed three dollars and fifty cents (\$3.50) per rentable square foot.

If any payment of Basic Rent or Additional Rent is not paid to the Landlord within five days of its due date or within any applicable grace period, then at the Landlord's option, without notice and in addition to all other remedies hereunder, the Tenant shall pay upon demand to the Landlord as Additional Rent interest thereon at an annual rate equal to the corporate rate of the Bank of Boston from time to time in effect plus two (2) percent, such interest to be computed from the date such Basic Rent or Additional Rent was originally due through the date when paid in full.

Upon written notice from Tenant, the Landlord shall provide copies of documentation reasonably evidencing the costs incurred by the Landlord as Common Expenses and Taxes. The Landlord shall be obligated to provide such written summary and documentation only if Common Expenses and Taxes for the Building and Property exceed \$3.50 per rentable square foot;

Common Expenses shall exclude cost of repairs and general maintenance paid by proceeds of insurance or by Tenant or other third parties and alteration attributable solely to tenants of the building other than Tenant. The net amount of any abatement shall be deducted from the Real Estate taxes.

#### 7. UTILITIES

The Tenant shall pay, as they become due, all bills for electricity that are presently separately metered. The Landlord agrees to provide all other utility service and to furnish reasonably hot and cold water and reasonable heat and air conditioning (except to the extent that the same are furnished through separately metered utilities or separate fuel tanks as set forth above) to the leased premises, the hallways and stairways, and lavatories during normal business hours on regular business days of the heating and air conditioning seasons of each year, to light passageways and stairways during business hours, and to furnish such cleaning service as is customary in similar buildings in said city or town, all subject to interruption due to any accident, to the making of repairs,

alterations, or improvements, to labor difficulties, to trouble in obtaining fuel, electricity, service, or supplies from the sources from which they are usually obtained for said building, or to any cause beyond the Landlord's control.

Landlord shall have no obligation to provide utilities or equipment other than the utilities and equipment within the premises as of the commencement date of this lease. In the event Tenant requires additional utilities or equipment, the installation and maintenance thereof shall be the Tenant's sole obligation, provided that such installation shall be subject to the written consent of the landlord.

Tenant can choose his hours of operations for any 12-hour period and Landlord will set the clocks.

8. USE OF LEASED PREMISES

The Tenant shall use the leased premises only for the purpose of general office and R & D permitted under applicable law and by-law.

9. COMPLIANCE WITH LAWS

The Tenant acknowledges that no trade or occupation shall be conducted in the leased premises or use made thereof which will be unlawful, improper, noisy or offensive, or contrary to any law of any municipal by-law or ordinance in force in the city or town in which the premises are situated.

10. FIRE INSURANCE

The Tenant shall not permit any use of the leased premises which will make voidable any insurance on the property of which the leased premises are a part, or on the contents of said property or which shall be contrary to any law or regulation from time to time established by the New England Fire Insurance Rating Association, or any similar body succeeding to its powers. The Tenant shall on demand reimburse the Landlord, and all other tenants, all extra insurance premiums caused by the Tenant's use of the premises.

11. MAINTENANCE

A. Tenant's Obligations

The Tenant agrees to maintain the leased premises in good condition, damage by fire and other casualty only excepted, and whenever necessary, acknowledging that the leased premises are now in good order and the glass whole. The Tenant shall not permit the leased premises to be overloaded, damaged, stripped, or defaced, nor suffer any waster. Tenant shall obtain written consent of Landlord before erecting any sign on the premises. Tenant will follow the Town of Bedford By-laws regarding signage and make allowances for the use of any sign, the Tenant may erect, for an additional Tenant on the first floor of the building.

B. Landlord's Obligations

The Landlord agrees to maintain the Building and Property which the leased premises are a part in the same condition as it is at the commencement of the term or as it may be put in during the term of this lease, reasonable wear and tear, damage by fire and other casualty only excepted, unless such maintenance is required because of the Tenant or those for whose conduct the Tenant is legally responsible.

12. ALTERATIONS ADDITIONS

The Tenant shall not make structural alterations or additions to the leased premises, but may make non structural alterations provided the Landlord consents thereto in writing. All such allowed alterations shall be at Tenant's expense and shall be in quality at least equal to the present construction. Tenant shall not permit any mechanics' liens, or similar liens, to remain upon the leased premises for labor and material furnished to Tenant or claimed to have been performed at the direction of Tenant and shall cause any such lien to be released of record forthwith without cost to Landlord. Any alterations or improvements made by the Tenant shall become the property of the Landlord at the termination of occupancy as provided herein.

13. ASSIGNMENT SUBLEASING

The Tenant shall not assign or sublet the whole or any part of the leased premises without Landlord's prior written consent which shall not be unreasonably withheld or delayed. Notwithstanding such consent, Tenant shall remain liable to Landlord for the payment of all rent and for the full performance of the covenants and conditions of this lease.

14. SUBORDINATION

This lease shall be subject and subordinate to any and all mortgages, deeds of trust and other instrument in the nature of a mortgage, now or at any time hereafter, a lien or liens on the property of which the leased premises are a part and the Tenant shall, when requested, promptly execute and deliver such written instruments as shall be necessary to show the subordination of this lease to said mortgages, deeds of trust or other such instruments in the nature of a mortgage.

15. LANDLORD'S ACCESS

The Landlord or agents of the Landlord may, at reasonable times, enter to view the leased premises and may remove placards and signs not approved and affixed as herein provided, and make repairs and alterations as Landlord should elect to do and may show the leased premises to others, and at any time within six (6) months before the expiration of the term, may affix to any suitable part of the leased premises a notice for letting or selling the leased premises or property of which the leased premises are a part and keep the same so affixed without hindrance or molestation.

## 16. INDEMNITIES

The Tenant agrees to protect, defend (with counsel reasonably approved by the Landlord), indemnify and save the Landlord harmless from and against any and all claims and liabilities (other than claims and liabilities arising from the negligence or misconduct of the Landlord, his agents, contractors and employees) arising: (i) from the conduct or management of or from any work or thing whatsoever done in or about the Premises during the Term and from any condition existing, or any injury to or death of persons or damage to property occurring or resulting from an occurrence, during the Term in or about the Premises; and (ii) from any breach or default on the part of the Tenant in the performance of any covenant or agreement on the part of the Tenant to be performed pursuant to the terms of this Lease or from any negligent act or omission on the part of the Tenant or any of its agents, employees, subtenant, licensees, invitees or assignees. The Tenant further agrees to indemnify the Landlord from and against all costs, expenses (including reasonable attorneys' fees) and other liabilities incurred in connection with any such indemnified claim or action or proceeding brought thereon, any and all of which, if reasonably suffered, paid or incurred by the Landlord, the Tenant shall pay promptly upon demand to the Landlord as Additional Rent.

## 17. TENANT'S LIABILITY INSURANCE

The Tenant shall maintain with respect to the leased premises and the property of which the leased premises are a part comprehensive public liability insurance in the amount of \$1,000,000 with property damage insurance in limits of \$1,000,000 in responsible companies qualified to do business in Massachusetts and in good standing therein insuring the Landlord as well as Tenant against injury to persons or damage to property as provided. The Tenant shall deposit with the Landlord certificates for such insurance at or prior to the commencement of the term, and thereafter within thirty (30) days prior to the expiration of any such policies. All such insurance certificates shall provide that such policies shall not be canceled without at least ten (10) days prior written notice to each assured named therein.

## 18. FIRE CASUALTY -- EMINENT DOMAIN

Should a substantial portion of the leased premises, or of the property of which they are a part, be substantially damaged by fire or other casualty, or be taken by eminent domain, the Landlord may elect to terminate this lease. When such fire, casualty, or taking renders the leased premises substantially unsuitable for their intended use, a just and proportionate abatement of rent shall be made, and the Tenant may elect to terminate this lease if:

- (a) The Landlord fails to give written notice within thirty (30) days of intention to restore leased premises, or
- (b) The Landlord fails to restore the leased premises to a condition substantially suitable for their intended use within ninety (90) days of said fire, casualty or taking.

The Landlord reserves, and the Tenant grants to the Landlord, all rights which the Tenant may have to damages or injury to the leased premises for any taking by eminent domain, except for damage to the Tenant's fixtures, property, or equipment.

19. DEFAULT AND BANKRUPTCY

In the event that:

- (a) The Tenant shall default in the payment of any installment of rent or other sum herein specified and such default shall continue for ten (10) days after written notice thereof; or
- (b) The Tenant shall default in the observance or performance of any other of the Tenant's covenants, agreements, or obligations hereunder and such default shall not be corrected within thirty (30) days after written notice thereof; or
- (c) The Tenant shall be declared bankrupt or insolvent according to law, or, if any assignment shall be made of Tenant's property for the benefit of creditors,

then the Landlord shall have the right thereafter, while such default continues, to re-enter and take complete possession of the leased premises, to declare the term of this lease ended, and remove the Tenant's effects, without prejudice to any remedies which might be otherwise used for arrears of rent or other default. The Tenant shall indemnify the Landlord against all loss of rent and other payments which the Landlord may incur by reason of such termination during the residue of the term. If the Tenant shall default, after reasonable notice thereof, in the observance or performance of any conditions or covenants on Tenant's part to be observed or performed under or by virtue of any of the provisions in any article of this lease, the Landlord, without being under any obligation to do so and without thereby waiving such default, may remedy such default for the account and at the expense of the Tenant. If the Landlord makes any expenditures or incurs any obligations for the payment of money in connection therewith, including but not limited to, reasonable attorney's fees in instituting, prosecuting or defending any action or proceeding, such sums paid or obligations insured, with interest at the rate of P + 2 percent per annum and costs, shall be paid to the Landlord by the Tenant as additional rent.

20. NOTICE

Any notice from the Landlord to the Tenant relating to the leased premises or to the occupancy thereof, shall be deemed duly served, if left at the leased premises addressed to the Tenant, or if mailed to the leased premises, registered or certified mail, return receipt requested, postage prepaid, addressed to the Tenant with Attention "James Bender". Any notice from the Tenant to the Landlord relating to the leased premises or to the occupancy thereof, shall be deemed duly served, if mailed to the Landlord by registered or certified mail, return receipt requested, postage prepaid, addressed to the Landlord at such address as the Landlord may from time to time advise in writing. All

rent notices shall be paid and sent to the Landlord at 57 Bedford Street, Suite 100, Lexington, Massachusetts 02173.

21. SURRENDER

The Tenant shall at the expiration or other termination of this lease remove all Tenant's goods and effects from the leased premises, (including, without hereby limiting the generality of the foregoing, all signs and lettering affixed or painted by the Tenant, either inside or outside the leased premises). Tenant shall deliver to the Landlord the leased premises and all keys, locks thereto, and other fixtures connected therewith and all alterations and additions made to or upon the leased premises, in good condition, damage by fire or other casualty only excepted. In the event of the Tenant's failure to remove any of Tenant's property from the premises, Landlord is hereby authorized, without liability to Tenant for loss or damage thereto, and at the sole risk of Tenant, to remove and store any of the property at Tenant's expense, or to retain same under Landlord's control or to sell at public or private sale, without notice any or all of the property not so removed and to apply the net proceeds of such sales to the payment of any sum due hereunder, or to destroy such property.

22. BROKERAGE

The Broker's named herein, Meredith & Grew and Whittier Partners, warrant that they are duly licensed as such by the Commonwealth of Massachusetts, and join in this agreement and become a party hereto, insofar as any provisions of this agreement expressly apply to them, and to any amendments or modifications of such provisions to which they agree in writing.

Landlord agrees to pay the above-named Broker upon the term commencement date a fee for professional services of \_\_\_\_\_ or pursuant to Broker's attached commission schedule.

23. OTHER PROVISIONS

It is also understood and agreed that AWARE personnel shall be able to enter the Building during the construction phase to install phone and data lines providing that they do not hinder the work being performed for the Tenant.

24. BIND AND INSURE; LIMITED LIABILITY OF LANDLORD

All of the covenant, agreements, stipulations, provisions, conditions and obligations herein expressed and set forth shall be considered as running with the land and shall extend to, bind and inure to the benefit of the Landlord and the Tenant, which terms as used in this Lease shall include their respective successors and assigns where the context hereof so admits.

The Landlord shall not have any individual or personal liability for the fulfillment of the covenants, agreements and obligations of the Landlord hereunder, the Tenant's recourse

and the Landlord's liability hereunder being limited to the Property and the Building. The term "Landlord" as used in this Lease shall refer only to the owner or owners from time to time of the Property or the Building, it being understood that no such owner shall have any liability hereunder for matters arising from and after the date such owner ceases to have any interest in the Property or the Building. Subject to the provisions of this Paragraph 24, nothing herein shall limit or prohibit Tenant's right to specific performance, injunction or other equitable relief as remedies in the event of a default on the part of the Landlord hereunder.

In no event shall the Landlord be liable to the Tenant for any special, consequential or indirect damages suffered by the Tenant or any other person or entity by reason of a default by the Landlord under any provisions of this Lease.

IN WITNESS WHEREOF, the said parties hereunto set their hands and seals this 3rd day of April, 1995.

/s/ James C. Bender	/s/ Mark Connelly
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Tenant	Landlord
-----	-----
Tenant	Landlord

-----  
Broker

-----  
Broker

AWARE, INC.  
ONE MEMORIAL DRIVE  
CAMBRIDGE, MA 02142

October 27, 1994

Mr. James C. Bender  
272 Farley Road  
Hollis, New Hampshire 03049

Re: Employment Agreement

Dear Mr. Bender:

The purpose of this letter is to set forth our agreement with respect to your employment by Aware, Inc. (the "Company"), as follows:

1. TERM OF EMPLOYMENT. Subject to sections 5 and 6 of this agreement, the term of your employment shall begin on October 31, 1994, and end on December 31, 1997, except that the term shall be extended for up to ten one-year periods, the first to begin on January 1, 1998, unless the Company has given you written notice of non-extension at least twelve months before the date on which the one-year extension would otherwise begin.
2. SALARY AND BONUS. During the term of your employment, you shall be paid a salary at the annual rate of \$180,000.00, payable monthly. The Company, at the discretion of its board of directors, may award you a bonus based upon the Company's financial results and/or achievement of corporate objectives.
3. TITLE AND LINE OF AUTHORITY. The Company agrees that during the term of your employment you shall have the title "President" and "Chief Executive Officer" and agrees to use its best efforts to cause you to be appointed to its board of directors as soon as possible after the date of this agreement and to be reelected to the board at each election for directors held during the term of your employment. You agree to resign from the board of directors upon expiration of your term of employment or its termination in accordance with this agreement. You shall report to the Company's board of directors. Presently, the Board has designated Charles Stewart to act for the Board in this reporting arrangement.
4. EMPLOYEE BENEFITS. You shall be entitled to participate in all Company sponsored insurance or other employee benefit programs, on the same basis as other employees. If you elect not to participate in the Company's health insurance program, the Company shall reimburse you for such health insurance (medical/dental) as you elect to obtain from another source, up to reimbursement of \$500/month. The Company shall also pay or reimburse you for:



annual dues for your membership in the Harvard Club (Boston); access and use charges for one cellular telephone in each of two automobiles owned or leased by you; monthly and use charges for a telephone line for operation of a fax machine in your home and the cost of acquiring such machine; and other ordinary and necessary expenses incurred by you in pursuit of the Company's business for which you provide the Company with receipts appropriate to support deduction thereof by the Company for federal income tax purposes to the extent permitted by law. You shall be entitled to three (3) weeks paid vacation for each year of your employment.

5. TERMINATION:

(a) EXPIRATION OF TERM, ETC. The term of your employment shall end upon your death or your disability (as defined herein) or upon expiration of your term of employment on December 31, 1997, or as extended pursuant to #1. In the event of termination by reason of your death or disability, the Company shall continue your compensation and benefits for a period of six (6) months thereafter. All vested options may be exercised until the second anniversary of your death. All vested non-statutory options may be exercised until the third anniversary of your disability. All vested incentive options may be exercised until the first anniversary of your disability. For the purpose of the provision, "disability" shall mean your inability to perform any of the material duties of your position with the Company, continuously for a period of 90 calendar days or for 120 days in any one year period, as mutually determined by the Company and you or by a physician selected by the Company (for which purpose you agree to submit to an examination by any such physician).

(b) TERMINATION WITH CAUSE. The Company may terminate you for "cause" (as defined herein), provided that you have been given at least 10 days' prior written notice, specifying the cause in reasonable detail, and the opportunity to appear with your legal counsel at a meeting of the Company's board of directors or at a meeting of the Executive Committee of the Company's board of directors, at which at least a quorum is continuously present, to explain or refute the alleged actions or omissions specified in such notice. For the purpose of the provision, "cause" shall mean solely (i) negligent acts or omissions that have been or will be the sole or primary cause of material harm, financial or otherwise, to the Company, or (ii) conviction of a crime involving moral turpitude or conviction of a crime the principal victim of which is the Company.

6. TERMINATION WITHOUT CAUSE. The Company may terminate your employment at any time without cause, but in that event you shall be entitled to a severance payment upon such termination equal to the salary that you would have been paid pursuant to #2 of this agreement had your employment continued to the expiration of its term, but not less than \$180,000.00 nor more than \$270,000.00. Such payment shall be made irrespective of any other employment that you may have and any effort that you may, or may not, have made to seek or obtain other employment. For this purpose, the Company shall be deemed to have terminated your employment without cause if the Company materially changes any of your job titles or if there is a Change in Control of the Company. Change in Control means the occurrence during the Term of any of the following events:

(a) The Company is merged, consolidated or reorganized into or with another corporation (or other legal person) and as a result of such merger, consolidation or reorganization less than a majority of the combined voting power of the then-outstanding securities of such corporation (or person) immediately after such transaction are held in the aggregate by the holders of voting stock of the Company immediately prior to such transaction;

(b) The Company sells or otherwise transfers all or substantially all of its assets to another corporation (or other legal person) and as a result of such sale or transfer less than a majority of the combined voting power of the then-outstanding securities of such corporation (or person) immediately after such sale or transfer are held in the aggregate by the holders of voting stock of the Company immediately prior to such sale or transfer.

The dissolution of Novon, L.P. (or any other entity now holding stock in the Company) and the resulting distribution of the Company's stock to the holders of an interest in Novon, L.P. (or any other entity now holding stock in the Company) shall not constitute a Change in Control during the Term hereof. If the Company elects to terminate your employment without cause during the Term hereof, the effective date of termination of your employment for purposes of the exercise of your stock options shall be thirty days after written notice is given to you that the Company has elected to terminate your employment without cause, even though you are no longer receiving compensation during said thirty day period other than the severance pay referred to above.

7. STOCK OPTIONS: The Company does not currently have sufficient stock available in its stock option plan to grant you the stock options that you desire. The Company will use its best efforts to

have the stockholders agree to increase the amount of stock available in the Company's stock option plan. If the stockholders agree to the appropriate increase in the amount of stock available in the stock option plan, the Company will use its best efforts to have the Board of Directors grant you the following stock options:

(a) FIRST OPTION. an option to purchase 230,769 shares of its common stock for \$1.30/share. This option shall become exercisable cumulatively (i.e., "vest") at the rate of 6,410.25 shares at the end of each consecutive calendar month starting with November 1994, such that it shall be fully-vested and exercisable upon the last day of October 1997 and thereafter until expiration. The options to be granted pursuant to this #7(a) shall be incentive stock options as defined in Section 422 of the Internal Revenue Code of 1986 and shall be granted pursuant to the Company's Stock Option Plan.

(b) SECOND OPTION. an option to purchase 269,231 shares of its common stock for \$1.30/share. This option shall become exercisable cumulatively (i.e., "vest") at the rate of 7,478.64 shares at the end of each consecutive calendar month starting with November 1994, such that it shall be fully-vested and exercisable upon the last day of October 1997 and thereafter until expiration.

(c) THIRD OPTION. an option to purchase 300,000 shares of its common stock for \$1.30/share. This option shall become exercisable (i.e., "vest") at the rate of fifty (50) shares for each \$1,000 of pre-tax profit realized by the Company during the period October 1, 1994 - December 31, 1997, as such profit is shown on the statements of operations prepared by the Company for each year and examined and reported upon by such independent accountants as the Company engages for such purpose. If you are still employed by the Company, on January 15, 1998 this option shall become exercisable as to 150,000 shares, even if the Company has not realized a pre-tax profit.

(d) The options to be granted pursuant to this #7(b) and (c) shall be non-statutory stock options and shall be granted pursuant to the Company's Stock Option Plan. Prior to execution of this Agreement, the Company has provided you with a copy of the forms to be used for the options to be granted to you pursuant to this Agreement. The options shall be granted as of November 1, 1994 and expire on the eighth anniversary of their date of grant.

The options shall become exercisable in full (i.e., "vest") upon any Change of Control of the Company.

8. NON-COMPETITION, ETC. You agree to execute and be bound by the Company's standard "Employee Agreement" concerning inventions, confidentiality and non-competition. A copy of this Employee Agreement is attached hereto.

9. SECURITY CLEARANCE. If requested to do so by the Company, you agree to apply for a federal security clearance and to comply with all the regulations regarding the same.

10. INDEMNIFICATION. The Company has provided you with a copy of the provision(s) of its by-laws or articles of organization providing indemnification to officers and directors of the Company in respect of their acts and omissions as such. The Company agrees that you shall be entitled to the indemnification provided thereby. A copy of such provision(s) is attached hereto and incorporated herein.

11. ARBITRATION. Any dispute arising hereunder or related hereto shall be resolved exclusively by arbitration by a single arbitrator in Boston in accordance with the rules for commercial arbitration of the American Arbitration Association, except that the Company shall be entitled to seek injunctive relief from any Court of competent jurisdiction for any violation by you of your obligation under Sections 8 and 9. Such arbitration shall be final and binding. Judgment may be entered upon any arbitral award in any court of competent jurisdiction. No arbitrator may award punitive, multiple, statutory, or other non-compensatory damages.

12. MISCELLANEOUS. This Agreement is to be construed and enforced under the laws of Massachusetts. This Agreement expresses the complete understanding of the parties with respect to the subject matter hereto and is intended to supersede any prior or contemporaneous written or oral agreements.

AWARE, INC.

By:/s/ Charles Stewart

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Charles Stewart,  
Chairman of the Board

Accepted and agreed to:

/s/ James C. Bender

-----  
James C. Bender

## FORM OF INDEMNIFICATION AGREEMENT

This Indemnification Agreement is by and between Aware, Inc., a Massachusetts corporation ("Corporation") and ("Director"). In consideration of the covenants herein contained and in consideration of Director having served and continuing to serve as a member of the Board of Directors of Corporation, the parties hereby agree as follows:

The Corporation shall, to the fullest extent permitted by law, indemnify and hold harmless Director from and against any and all claims and liabilities to which he may be or become subject by reason of his being or having been an officer or a director of the Corporation or by reason of his alleged acts or omissions as an officer or director of the Corporation, except in relation to matters as to which Director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office. The Corporation shall indemnify and reimburse Director against and for any and all legal and other expenses reasonably incurred by him in connection with any such claims and liabilities, actual or threatened, whether or not, at or prior to the time when so indemnified, held harmless and reimbursed, he had ceased being an officer or a director of the Corporation, except in relation to matters as to which Director shall have been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office; provided, however, that the Corporation prior to such final adjudication may compromise and settle any such claims and liabilities and pay such expenses, if such settlement or payment or both appears, in the judgment of a majority of the Board of Directors, to be for the best interest of the Corporation, evidenced by a resolution to that effect adopted after receipt by the Corporation of a written opinion of counsel for the Corporation that Director has not been guilty of wilful malfeasance, bad faith, gross negligence or reckless disregard of his duties in the conduct of his office in connection with the matters involved in such compromise, settlement and payment. The right of indemnification herein provided shall not be exclusive of any other rights to which Director may otherwise be lawfully entitled.

In witness whereof, the parties have signed and sealed this Indemnification Agreement this \_\_\_\_ day of \_\_\_\_\_, 19\_\_.

AWARE, INC.

DIRECTOR

By:\_\_\_\_\_

## EXHIBIT 11.1

## AWARE, INC.

COMPUTATION OF PRO FORMA NET INCOME PER COMMON SHARE  
(IN THOUSANDS EXCEPT PER SHARE DATA)

	YEAR ENDED	THREE MONTHS ENDED	
	DEC. 31, 1995	MARCH 31, 1995	MARCH 31, 1996
Net Income (Loss).....	\$ (343)	\$ (87)	\$ 41
Weighted Average Number of Common and Common Equivalent Shares Outstanding:			
Common Stock.....	1,163	1,150	1,171
Common Stock Equivalent of Convertible Preferred.....	--	--	12,800
Common Stock Equivalent of Options.....	--	--	256
Subtotal.....	1,163	1,150	14,227
Effect of SAB 83.....	882	882	882
Total.....	2,045	2,032	15,109
Pro Forma Net Income per Common Share.....	\$(0.17)	\$ (0.04)	\$ 0.00

## INDEPENDENT AUDITORS' CONSENT

To the Board of Directors and Stockholders  
Aware, Inc.  
Bedford, Massachusetts

We consent to the use in this Registration Statement of Aware, Inc. on Form S-1 of our report dated April 26, 1996 (June 6, 1996 as to Note 9) appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to us under the headings "Selected Financial Data" and "Experts" in such Prospectus.

/s/ Deloitte & Touche LLP

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Boston, Massachusetts  
June 20, 1996

## CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the use in the Prospectus constituting part of this Registration Statement on Form S-1 of our report dated February 1, 1994, relating to the financial statements of Aware, Inc., for the year ended December 31, 1993 which appears in such Prospectus. We also consent to the references to us under the headings "Experts" and "Selected Financial Data" in such Prospectus. However, it should be noted that Price Waterhouse LLP has not prepared or certified such "Selected Financial Data".

/s/ Price Waterhouse LLP

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Price Waterhouse LLP

Boston, Massachusetts  
June 20, 1996



[Cesari and McKenna Letterhead]

June 25, 1996

Aware, Inc.  
One Oak Park  
Bedford, Massachusetts 01730

Ladies and Gentlemen:

We are familiar with the Registration Statement on Form S-1 (the "Registration Statement") filed by Aware, Inc., a Massachusetts corporation, with the Securities and Exchange Commission under the Securities Act of 1933, as amended. We consent to the reference to our firm under the heading "Legal Matters" in the prospectus forming part of the Registration Statement.

Very truly yours,  
Cesari & McKenna

By: /s/ Martin J. O'Donnell  
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1,000

12-MOS	3-MOS	
DEC-31-1995	DEC-31-1995	DEC-31-1996
DEC-31-1995	MAR-31-1996	
	2,154	2,047
	0	0
506		813
5		10
40		97
2,825		2,999
	1,884	1,890
1,481		1,538
3,228		3,351
309		382
	0	0
128		128
	0	0
	12	12
	2,779	2,829
3,228	3,351	
	1,443	653
3,260		962
	243	34
	2,987	745
726		199
0		0
111		23
(343)		41
	0	0
0		0
0		0
0		0
	0	0
(343)		41
(0.17)		0.00
(0.17)		0.00

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June 25, 1996

Securities and Exchange Commission  
450 Fifth Street  
Washington, DC 20549

Dear Ladies and Gentlemen:

We have read the second paragraph in "Changes in Independent Accountants" included in the Registration Statement of Aware, Inc. on Form S-1 to be filed with the Securities and Exchange Commission and are in agreement with the statements contained therein.

Yours very truly,

/s/ Price Waterhouse LLP

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June 25, 1996

Securities and Exchange Commission  
450 Fifth Street  
Washington, DC 20549

Dear Ladies and Gentlemen:

We have read the disclosures in "Changes in Independent Accountants" included in the Registration Statement of Aware, Inc. on Form S-1 to be filed with the Securities and Exchange Commission and are in agreement with the statements contained therein.

Yours very truly,

/s/ DiBenedetto & Company, P.A.