

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT2859528

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | CHANGE OF NAME |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| AVANEX CORPORATION | 07/07/2009 |
| RECEIVING PARTY DATA | |
| Name: | OCLARO (NORTH AMERICA), INC. |
| Street Address: | 2560 JUNCTION AVENUE |
| City: | SAN JOSE |
| State/Country: | CALIFORNIA |
| Postal Code: | 95134 |
| PROPERTY NUMBERS Total: 7 | |
| Property Type | Number |
| Patent Number: | 6304382 |
| Patent Number: | 6390633 |
| Patent Number: | 6478433 |
| Patent Number: | 6481861 |
| Patent Number: | 6471361 |
| Patent Number: | 6607278 |
| Patent Number: | 6717731 |
| CORRESPONDENCE DATA | |
| Fax Number: | (412)945-5933 |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i> | |
| Phone: | 4124718815 |
| Email: | assignments@webblaw.com |
| Correspondent Name: | THE WEBB LAW FIRM PC |
| Address Line 1: | ONE GATEWAY CENTER, 420 FT. DUQUESNE BLV |
| Address Line 2: | SUITE 1200 |
| Address Line 4: | PITTSBURGH, PENNSYLVANIA 15222 |
| ATTORNEY DOCKET NUMBER: | 7271-140293 |
| NAME OF SUBMITTER: | WILLIAM H. LOGSDON |
| SIGNATURE: | /William H. Logsdon/ |
| DATE SIGNED: | 05/16/2014 |

PATENT

Total Attachments: 79

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**RECORDATION FORM COVER SHEET
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Avanex Corporation

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of conveyance/Execution Date(s):**Execution Date(s) July 7, 2009

- ☐ Assignment ☐ Merger
☐ Security Agreement ☒ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

2. Name and address of receiving party(ies)Name: Oclaro (North America), Inc.

Internal Address: _____

Street Address: 2560 Junction AvenueCity: San JoseState: CaliforniaCountry: United States Zip: 95134Additional name(s) & address(es) attached? ☐ Yes ☒ No**4. Application or patent number(s):**☐ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

6,304,382 6,481,861 6,717,731
 6,390,633 6,471,361
 6,478,433 6,607,278

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: William H. LogsdonInternal Address: The Webb Law Firm

Street Address: One Gateway Center
420 Ft. Duquesne Blvd., Ste 1200

City: PittsburghState: PA Zip: 15222Phone Number: 412-471-8815Fax Number: 412-945-5933Email Address: assignments@webblaw.com**6. Total number of applications and patents involved: 7****7. Total fee (37 CFR 1.21(h) & 3.41) \$ 0**

- ☐ Authorized to be charged by credit card
☐ Authorized to be charged to deposit account
☐ Enclosed
☒ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers 1916
 Expiration Date 05/2015

b. Deposit Account Number 23-0650Authorized User Name William H. Logsdon**9. Signature:**

Signature

May 16, 2014

Date

William H. Logsdon

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

79

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
 Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

Delaware

PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED ARE TRUE AND CORRECT COPIES OF ALL DOCUMENTS ON FILE OF "OCLARO (NORTH AMERICA), INC." AS RECEIVED AND FILED IN THIS OFFICE.

THE FOLLOWING DOCUMENTS HAVE BEEN CERTIFIED:

CERTIFICATE OF INCORPORATION, FILED THE FIRST DAY OF DECEMBER, A.D. 1999, AT 3 O'CLOCK P.M.

CERTIFICATE OF AGREEMENT OF MERGER, FILED THE TWENTY-SIXTH DAY OF JANUARY, A.D. 2000, AT 3 O'CLOCK P.M.

RESTATED CERTIFICATE, FILED THE TWENTY-SIXTH DAY OF JANUARY, A.D. 2000, AT 3 O'CLOCK P.M.

RESTATED CERTIFICATE, FILED THE NINTH DAY OF FEBRUARY, A.D. 2000, AT 3 O'CLOCK P.M.

CERTIFICATE OF OWNERSHIP, FILED THE TWENTY-NINTH DAY OF JANUARY, A.D. 2001, AT 2 O'CLOCK P.M.

CERTIFICATE OF DESIGNATION, FILED THE TWENTY-THIRD DAY OF AUGUST, A.D. 2001, AT 4:30 O'CLOCK P.M.

CERTIFICATE OF AMENDMENT, FILED THE TWENTIETH DAY OF NOVEMBER, A.D. 2006, AT 2:18 O'CLOCK P.M.

CERTIFICATE OF AMENDMENT, FILED THE TWELFTH DAY OF AUGUST,

3134019 8100H

121139932

You may verify this certificate online
at corp.delaware.gov/authvar.shtml




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 9928102

DATE: 10-18-12

Delaware

PAGE 2

The First State

A.D. 2008, AT 8:52 O'CLOCK A.M.

CERTIFICATE OF MERGER, FILED THE TWENTY-SEVENTH DAY OF
APRIL, A.D. 2009, AT 4:13 O'CLOCK P.M.

CERTIFICATE OF AMENDMENT, CHANGING ITS NAME FROM "AVANEX
CORPORATION" TO "OCLARO (NORTH AMERICA), INC.", FILED THE
SEVENTH DAY OF JULY, A.D. 2009, AT 7:33 O'CLOCK P.M.

CERTIFICATE OF CHANGE OF REGISTERED AGENT, FILED THE
SIXTEENTH DAY OF NOVEMBER, A.D. 2009, AT 6:21 O'CLOCK P.M.

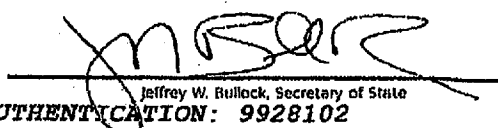
AND I DO HEREBY FURTHER CERTIFY THAT THE AFORESAID
CERTIFICATES ARE THE ONLY CERTIFICATES ON RECORD OF THE
AFORESAID CORPORATION, "OCLARO (NORTH AMERICA), INC.".

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You may verify this certificate online
at corp.delaware.gov/authver.shtml




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 9928102

DATE: 10-18-12

CERTIFICATE OF INCORPORATION

OF

AVANEX CORPORATION

Article I.

The name of the corporation is Avanex Corporation (the "Corporation").

Article II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, in the City of Wilmington, Delaware 19801, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

Article III.

The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

Article IV.

This Corporation is authorized to issue only one class of shares, designated Common Stock, \$.001 par value. The total number of shares of Common Stock which this Corporation shall have the authority to issue shall be 1,000.

Article V

The name and mailing address of the incorporator are as follows:

Mark Fleisher
c/o Wilson Sonsini Goodrich & Rosati
650 Page Mill Road
Palo Alto, CA 94304-1050

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IN:SNOS WOSTIM WVL:11 2631 1022

Article VI.

The Corporation is to have perpetual existence.

Article VII.

Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at the meeting and before voting begins or unless the Bylaws of the Corporation shall so provide

Article VIII.

The number of directors which constitute the whole Board of Directors of the Corporation shall be designated in the Bylaws of the Corporation.

Article IX.

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation.

Article X.

(a) To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders of monetary damages for breach fiduciary duty as a director.

(b) The Corporation shall indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director, officer or employee of the Corporation or any predecessor of the Corporation or serves or served at any other enterprise as a director, officer or employee at the request of the Corporation or any predecessor the Corporation.

Neither any amendment nor repeal of this Article X, nor the adoption of any provision of this Corporation's Certificate of Incorporation inconsistent with this Article X, shall eliminate or reduce the effect of this Article X, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article X, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

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Article XI.

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

Article XII.

Vacancies created by the resignation of one or more members of the Board of Directors and newly created directorships, created in accordance with the Bylaws of this Corporation, may be filled by the vote of a majority, although less than a quorum, of the directors then in office, or by a sole remaining director.

Article XIII.

Advance notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the Corporation.

Article XIV.

Following the effectiveness of the registration of any class of securities of the Corporation pursuant to the requirements of the Securities Exchange Act of 1934, as amended, no action shall be taken by the stockholders of the Corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws and no action shall be taken by the stockholders by written consent.

Article XV.

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

I, THE UNDERSIGNED, being the incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the Corporation Law of the State of Delaware, do make this certificate, hereby declaring and certifying, under penalties of perjury, that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 1st day of December 1999.

/s/ Mark E. Fleisher
Mark E. Fleisher, Incorporator

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NO 1578

WILSON CONSIGN

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**AGREEMENT AND PLAN OF MERGER OF
AVANEX CORPORATION
(a Delaware corporation)
AND
AVANEX CORPORATION
(a California corporation)**

THIS AGREEMENT AND PLAN OF MERGER dated as of January 26, 2000 (the "Agreement") is between Avanex Corporation, a Delaware corporation ("Avanex-Delaware"), and Avanex Corporation, a California corporation ("Avanex-California"). Avanex-Delaware and Avanex-California are sometimes referred to herein as the "Constituent Corporations."

RECITALS

A. Avanex-Delaware is a corporation duly organized and existing under the laws of the State of Delaware and has an authorized capital of 1,000 shares, \$.001 par value, of "Common Stock." As of December 3, 1999, 1,000 shares of Common Stock were issued and outstanding, all of which are held by Avanex-California.

B. Avanex-California is a corporation duly organized and existing under the laws of the State of California and has an authorized capital of 75,400,000 shares, \$.001 par value, of which 50,000,000 shares are designated as "Common Stock", 4,600,000 of which are designated as "Series A Preferred Stock", 6,350,000 of which are designated as "Series B Preferred Stock", 10,850,000 of which are designated "Series C Preferred Stock" and 3,600,000 of which are designated "Series D Preferred Stock." As of December 3, 1999, 13,334,554 shares of Common Stock, 4,530,080 shares of Series A Preferred Stock, 6,296,744 shares of Series B Preferred Stock, 9,032,169 shares of Series C Preferred Stock and 3,487,097 shares of Series D Preferred Stock were issued and outstanding.

C. The Board of Directors of Avanex-California has determined that, for the purpose of effecting the reincorporation of Avanex-California in the State of Delaware, it is advisable and in the best interests of Avanex-California and its shareholders that Avanex-California merge with and into Avanex-Delaware upon the terms and conditions herein provided.

D. The respective Boards of Directors of Avanex-Delaware and Avanex-California, the shareholders of Avanex-California and the sole stockholder of Avanex-Delaware have approved this Agreement and have directed that this Agreement be executed by the undersigned officers.

NOW, THEREFORE, in consideration of the mutual agreements and covenants set forth herein, Avanex-Delaware and Avanex-California hereby agree, subject to the terms and conditions hereinafter set forth, as follows:

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1. **MERGER**

(a) **Merger.** In accordance with the provisions of this Agreement, the Delaware General Corporation Law and the California General Corporation Law, Avanex-California shall be merged with and into Avanex-Delaware (the "**Merger**"), the separate existence of Avanex-California shall cease and Avanex-Delaware shall be, and is herein sometimes referred to as, the "**Surviving Corporation**," and the name of the Surviving Corporation shall be Avanex Corporation

(b) **Filing and Effectiveness.** The Merger shall become effective when the following actions shall have been completed:

(i) An executed Certificate of Merger or an executed counterpart of this Agreement meeting the requirements of the Delaware General Corporation Law shall have been filed with the Secretary of State of the State of Delaware; and

(ii) An executed Certificate of Merger or an executed counterpart of this Agreement meeting the requirements of the California General Corporation Law shall have been filed with the Secretary of State of the State of California.

The date and time when the Merger shall become effective, as aforesaid, is herein called the "**Effective Date of the Merger**."

(c) **Effect of the Merger.** Upon the Effective Date of the Merger, the separate existence of Avanex-California shall cease and Avanex-Delaware, as the Surviving Corporation, (i) shall continue to possess all of its assets, rights, powers and property as constituted immediately prior to the Effective Date of the Merger, (ii) shall be subject to all actions previously taken by its and Avanex-California's Boards of Directors, (iii) shall succeed, without other transfer, to all of the assets, rights, powers and property of Avanex-California in the manner as more fully set forth in Section 259 of the Delaware General Corporation Law, (iv) shall continue to be subject to all of its debts, liabilities and obligations as constituted immediately prior to the Effective Date of the Merger, and (v) shall succeed, without other transfer, to all of the debts, liabilities and obligations of Avanex-California in the same manner as if Avanex-Delaware had itself incurred them, all as more fully provided under the applicable provisions of the Delaware General Corporation Law and the California General Corporation Law.

2. **CHARTER DOCUMENTS DIRECTORS AND OFFICERS**

(a) **Restated and Amended Certificate of Incorporation.** The Restated and Amended Certificate of Incorporation in the form attached hereto as **Exhibit A** (the "**Certificate of Incorporation**") shall be the Certificate of Incorporation of the Surviving Corporation until duly amended in accordance with the provisions thereof and applicable law.

(b) **Bylaws.** The Bylaws of Avanex-Delaware as in effect immediately prior to the Effective Date of the Merger shall continue in full force and effect as the Bylaws of the Surviving Corporation until duly amended in accordance with the provisions thereof and applicable law.

(c) Directors and Officers. The directors and officers of Avanex-Delaware immediately prior to the Effective Date of the Merger shall be the directors and officers of the Surviving Corporation until their successors shall have been duly elected and qualified or until as otherwise provided by law, the Certificate of Incorporation of the Surviving Corporation or the Bylaws of the Surviving Corporation.

3. MANNER OF CONVERSION OF STOCK

(a) Avanex-California Common Stock. Upon the Effective Date of the Merger, every two shares of Common Stock of Avanex-California issued and outstanding immediately prior thereto shall, by virtue of the Merger and without any action by the Constituent Corporations, the holder of such shares or any other person, be converted into and exchanged for three shares (rounded up to the nearest whole share) of fully paid and nonassessable Common Stock, \$0.001 par value, of the Surviving Corporation.

(b) Avanex-California Preferred Stock. Upon the Effective Date of the Merger, every two shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock of Avanex-California issued and outstanding immediately prior thereto shall, by virtue of the Merger and without any action by the Constituent Corporations, the holder of such shares or any other person, be converted into and exchanged for three shares of fully paid and nonassessable Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock, \$0.001 par value, respectively, of the Surviving Corporation. Fractional shares will be rounded up to the nearest whole share.

(c) Avanex-Delaware Common Stock. Upon the Effective Date of the Merger, each share of Common Stock, \$0.001 par value, of Avanex-Delaware issued and outstanding immediately prior thereto shall, by virtue of the Merger and without any action by Avanex-Delaware, the holder of such shares or any other person, be canceled and returned to the status of authorized but unissued shares.

(d) Stock Options and Warrants. At the Effective Date of the Merger, the Avanex-California 1998 Stock Plan (the "Plan"), and all options and stock purchase rights relating to Common Stock (each a "Avanex Option") then outstanding under such plan, and all rights to acquire stock pursuant to any outstanding warrants of Avanex-California (each a "Avanex Warrant"), or otherwise, shall be assumed by Avanex-Delaware in accordance with provisions described below.

(i) At the Effective Date of the Merger, each outstanding and unexercised option, warrant and other right to purchase shares of capital stock of Avanex-California shall be assumed by the Surviving Corporation and shall become an option, warrant or right to purchase a number of shares equal to 1.5 times that number of shares subject to Avanex-California's option (rounded down to the nearest share), at the exercise price equal to the exercise price of Avanex-California's option multiplied by 2/3 (rounded up to the nearest cent) and each existing and effective employee stock benefit plan of Avanex-California (the "Stock Plans") shall similarly be assumed by the Surviving Corporation for all intents and purposes as if such plan, including the reservation of shares of Common Stock for issuance pursuant thereto (multiplied by 1.5), had been originally adopted and authorized by the Surviving Corporation.

(ii) Each Avanex Option and Avanex Warrant so assumed by Avanex-Delaware under this Agreement shall continue to have, and be subject to, the same terms and conditions set forth in the Plan and/or as provided in the respective agreements governing such Avanex Option or Avanex Warrant immediately prior to the Effective Date of the Merger.

(iii) It is the intention of the parties that the Avanex Options assumed by Avanex-Delaware qualify following the Effective Date of the Merger as incentive stock options as defined in Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), to the extent the Avanex Options qualified as incentive stock options immediately prior to the Effective Date of the Merger.

(iv) Promptly following the Effective Date of the Merger, Avanex-Delaware will issue to each holder of an outstanding Avanex Option and Avanex Warrant a document evidencing the foregoing assumption of such Avanex Option and Avanex Warrant by Avanex-Delaware.

(v) At the Effective Date of the Merger, Avanex-California shall assign to Avanex-Delaware any and all rights of repurchase pertaining to shares of Avanex-California Common Stock issued upon exercise of stock options, pursuant to stock purchase agreements or otherwise.

(c) Exchange of Certificates. After the Effective Date of the Merger, each holder of an outstanding certificate representing shares of Avanex-California Common Stock may, at such stockholder's option, surrender the same for cancellation to such institution as Avanex-Delaware shall appoint at the time to act as exchange agent (the "Exchange Agent"), and each such holder shall be entitled to receive in exchange therefor a certificate or certificates representing the number of shares of the Surviving Corporation's Common Stock into which the surrendered shares were converted as herein provided. Until so surrendered, each outstanding certificate theretofore representing shares of Avanex-California Common shall be deemed for all purposes to represent the number of whole shares of the Surviving Corporation's Common Stock into which such shares of Avanex-California Common were converted in the Merger.

The registered owner on the books and records of the Surviving Corporation or the Exchange Agent of any such outstanding certificate shall, until such certificate shall have been surrendered for transfer or conversion or otherwise accounted for to the Surviving Corporation or the Exchange Agent, have and be entitled to exercise any voting and other rights with respect to and to receive dividends and other distributions upon the shares of Common Stock of the Surviving Corporation represented by such outstanding certificate as provided above.

Each certificate representing Common Stock of the Surviving Corporation so issued in the Merger shall bear the same legends, if any, with respect to the restrictions on transferability as the certificates of Avanex-California so converted and given in exchange therefor, unless otherwise determined by the Board of Directors of the Surviving Corporation in compliance with applicable laws.

If any certificate for shares of the Surviving Corporation's Common Stock is to be issued in a name other than that in which the certificate surrendered in exchange therefor is registered, it shall be a condition of issuance thereof that the certificate so surrendered shall be properly endorsed and otherwise in proper form for transfer, that such transfer otherwise be proper and that the person requesting such transfer pay to the Exchange Agent any transfer or other taxes payable by reason of the issuance of such new certificate in a name other than that of the registered holder of the certificate surrendered or establish to the satisfaction of the Surviving Corporation that such tax has been paid or is not payable.

4. GENERAL

(a) Covenants of Avanex-Delaware. Avanex-Delaware covenants and agrees that it will, on or before the Effective Date of the Merger:

- (i) Qualify to do business as a foreign corporation in the State of California and in connection therewith irrevocably appoint an agent for service of process as required under the provisions of Section 2105 of the California General Corporation Law;
- (ii) File any and all documents with the appropriate tax authority of the State of California necessary for the assumption by Avanex-Delaware of all of the corporate and/or franchise tax liabilities of Avanex-California; and
- (iii) Take such other actions as may be required by the California General Corporation Law.

(b) Further Assurances. From time to time, as and when required by Avanex-Delaware or by its successors or assigns, there shall be executed and delivered on behalf of Avanex-California such deeds and other instruments, and there shall be taken or caused to be taken by Avanex-Delaware and Avanex-California such further and other actions, as shall be appropriate or necessary in order to vest or perfect in or conform of record or otherwise by Avanex-Delaware the title to and possession of all the property, interests, assets, rights, privileges, immunities, powers, franchises and authority of Avanex-California and otherwise to carry out the purposes of this Agreement, and the officers and directors of Avanex-Delaware are fully authorized in the name and on behalf of Avanex-California or otherwise to take any and all such action and to execute and deliver any and all such deeds and other instruments.

(c) Abandonment. At any time before the Effective Date of the Merger, this Agreement may be terminated and the Merger may be abandoned for any reason whatsoever by the Board of Directors of either Avanex-California or Avanex-Delaware, or both, notwithstanding the approval of this Agreement by the shareholders of Avanex-California or by the sole stockholder of Avanex-Delaware, or by both.

(d) Amendment. The Boards of Directors of the Constituent Corporations may amend this Agreement any time prior to the filing of this Agreement (or certificate in lieu thereof) with the Secretaries of State of the States of California and Delaware, provided that subsequent to the

adoption of this Agreement by the shareholders of either Constituent Corporation, this Agreement shall not be amended except in compliance with the requirements of the California General Corporation Law and the Delaware General Corporation Law.

(e) Registered Office. The registered office of the Surviving Corporation in the State of Delaware is located at 1209 Orange Street, in the city of Wilmington, County of New Castle, and The Corporation Trust Company is the registered agent of the Surviving Corporation at such address.

(f) Agreement. Executed copies of this Agreement will be on file at the principal place of business of the Surviving Corporation at 40919 Encyclopedia Circle, Fremont, California 94538, and copies thereof will be furnished to any shareholder of either Constituent Corporation, upon request and without cost.

(g) Governing Law. This Agreement shall in all respects be construed, interpreted and enforced in accordance with and governed by the laws of the State of Delaware and the provisions of the California General Corporation Law.

(h) Counterparts. In order to facilitate the filing and recording of this Agreement, the same may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument.

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IN WITNESS WHEREOF, this Agreement, having first been approved by resolutions of the Boards of Directors of Avanex-Delaware and Avanex-California, is hereby executed on behalf of each of such two corporations and attested by their respective officers thereunto duly authorized.

AVANEX CORPORATION
a Delaware corporation

By: Walter Alessandrini
Walter Alessandrini, President and Chief Executive Officer

ATTEST:

Judith M. O'Brien
Judith M. O'Brien, Secretary

AVANEX CORPORATION
a California corporation

By: Walter Alessandrini
Walter Alessandrini, President and Chief Executive Officer

ATTEST:

Judith M. O'Brien
Judith M. O'Brien, Secretary

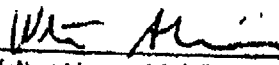
AVANEX CORPORATION
(California Corporation)

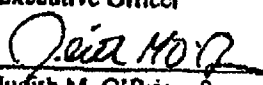
OFFICERS' CERTIFICATE

Walter Alessandrini and Judith M. O'Brien certify that:

1. They are the President and the Secretary, respectively, of Avanex Corporation, a corporation organized under the laws of the State of California.
2. The corporation has two authorized classes of stock, designated ☐ Common Stock ☐ and "Preferred Stock." There are authorized 50,000,000 shares of Common Stock and 25,400,000 shares of Preferred Stock, of which 4,600,000 shares are designated Series A Preferred Stock, 6,350,000 shares are designated Series B Preferred Stock, 10,850,000 shares are designated Series C Preferred Stock and 3,600,000 shares are designated Series D Preferred Stock.
3. There were 13,334,554 shares of Common Stock, 4,530,080 shares of Series A Preferred Stock, 6,296,744 shares of Series B Preferred Stock, 9,032,169 shares of Series C Preferred Stock and 3,487,097 shares of Series D Preferred Stock issued and outstanding as of the record date of the shareholders' approval of the Agreement and Plan of Merger attached hereto (the "Merger Agreement").
4. The principal terms of the Merger Agreement were approved by the Board of Directors and by the vote of a number of shares of each class of stock which equaled or exceeded the vote required.
5. The percentage vote required was more than 50% of the votes entitled to be cast by holders of outstanding shares of the Common Stock voting as a single class and more than 50% of the votes entitled to be cast by holders of outstanding shares of Preferred Stock voting as a single class.
6. Walter Alessandrini and Judith M. O'Brien further declare under penalty of perjury under the laws of the State of California that each has read the foregoing certificate and knows the contents thereof and that the same is true of their own knowledge.

Executed in Fremont, California on January 26, 2000.


Walter Alessandrini, President and Chief
Executive Officer


Judith M. O'Brien, Secretary

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01/28/00 09:52 1 510 897 4292
1-28-00: 0.52AM.
21/27/00 13:11 WILSON SONSINI - 1 510 897 4292

NO. 752 P002

1 510 897 4292
NO. 752 P003/00

AVANEX CORPORATION
(Surviving Corporation)
OFFICERS' CERTIFICATE

Paul Jiang and Judith M. O'Brien certify that:

1. They are the Vice President and the Secretary, respectively, of Avanex Corporation, a corporation organized under the laws of the State of Delaware.
2. The corporation has one authorized class of stock, designated "Common Stock." There are authorized 1,000 shares of Common Stock.
3. There are 1,000 shares of Common Stock outstanding and entitled to vote on the Agreement and Plan of Merger attached hereto (the "Merger Agreement").
4. The principal terms of the Merger Agreement were approved by the Board of Directors and by the vote of a number of shares of each class of stock which equaled or exceeded the vote required.
5. The percentage vote required was more than 50% of the votes entitled to be cast by the sole Stockholder of outstanding shares of Common Stock.
6. Paul Jiang and Judith M. O'Brien further declare under penalty of perjury under the laws of the State of California that each has read the foregoing certificate and knows the contents thereof and that the same is true of their own knowledge.

Executed in Fremont, California on January 26, 2000.


Paul Jiang, Vice President, Manufacturing


Judith M. O'Brien, Secretary

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EXHIBIT A

RESTATED AND AMENDED CERTIFICATE OF INCORPORATION

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**RESTATED AND AMENDED
CERTIFICATE OF INCORPORATION
OF AVANEX CORPORATION**

Avanex Corporation, a corporation organized and existing under the laws of the State of Delaware, hereby certifies as follows:

- A. The name of the corporation is Avanex Corporation. The corporation was originally incorporated under the same name and the original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on December 1, 1999.
- B. This Certificate of Incorporation has been duly adopted in accordance with the provisions of the General Corporation Law of the State of Delaware by the Board of Directors and the Stockholders of the corporation.
- C. Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware, this Certificate of Incorporation restates and integrates and further amends the provisions of the Certificate of Incorporation of this corporation.
- D. The text of the Certificate of Incorporation is hereby amended and restated in its entirety to read as follows:

Article I

The name of this Corporation is Avanex Corporation.

Article II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, in the City of Wilmington, Delaware 19801, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

Article III

The purpose of this Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of Delaware.

Article IV

(a) Authorized Capital. This Corporation is authorized to issue two classes of stock, designated "Preferred Stock" and "Common Stock." The total number of shares which this Corporation shall have authority to issue is, 113,100,000 of which 75,000,000 shares shall be Common Stock, with a par value of \$.001 per share and 38,100,000 shares shall be Preferred Stock, with a par value of \$.001 per share. The Preferred Stock shall consist of four series designated Series A Preferred Stock (the "Series A Preferred"), consisting of 6,900,000 shares, Series B Preferred Stock (the "Series B Preferred"), consisting of 9,525,000 shares, Series C Preferred Stock (the "Series C Preferred"), consisting of 16,275,000 shares and Series D Preferred Stock (the "Series D Preferred"), consisting of 5,400,000 shares.

(b) Authorized Capital Following Automatic Conversion Event. Upon the automatic conversion of all outstanding shares of Preferred Stock in accordance with the provisions of this Article IV, Section (b)(3)(b) of this Restated and Amended Certificate of Incorporation (the "Automatic Conversion Event"), the Company shall immediately thereafter be authorized to issue two classes of stock to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of Common Stock which the Company shall have the authority to issue shall be 300,000,000, \$.001 par value, and the total number of shares of Preferred Stock the Company shall have the authority to issue shall be 10,000,000, \$.001 par value. Immediately following any Automatic Conversion Event, the Preferred Stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board). The Board of Directors is further authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock and to fix the number of shares of any series of Preferred Stock and the designation of any such series of Preferred Stock. The Board of Directors, within the limits and restrictions stated in any resolution or resolutions of the Board of Directors originally fixing the number of shares constituting any series, may increase or decrease (but not below the number of shares in any such series then outstanding), the number of shares of any series subsequent to the issue of shares of that series.

(c) Restatement of Certificate of Incorporation. Immediately following any Automatic Conversion Event, the Board of Directors of the Company is authorized, without the further consent or approval of the stockholders of the Company to amend and restate this Certificate of Incorporation to show the authorized classes of capital stock as set forth in the preceding paragraph and to eliminate all references in this Certificate of Incorporation to the rights, preferences, privileges and restrictions of the series of Preferred Stock including those set forth in this Article IV (and, in connection with any such amendment and restatement, to renumber the remaining Articles).

(d) Preferred Stock. A statement of the rights, preferences, privileges and restrictions granted to or imposed on the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock and the holders thereof is as follows:

(1) Dividends. The holders of the Series A Preferred Stock, the holders of the Series B Preferred Stock, the holders of the Series C Preferred Stock and the holders of the Series D Preferred Stock shall be entitled to receive, out of any funds legally available therefor, dividends at the rate of \$0.011, \$0.021, \$0.04 and \$0.192 respectively, per share, per annum, payable in preference and priority to any payment of any dividend on Common Stock when and as declared by the Board of Directors. After payment of such dividends, any additional dividends declared shall be distributed among all holders of Series A Preferred Stock, all holders of Series B Preferred Stock, all holders of Series C Preferred Stock, all holders of Series D Preferred Stock and all holders of Common Stock in proportion to the number of shares of Common Stock which would be held by each such holder if all shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock were converted into Common Stock at the then effective Conversion Prices (as defined in paragraph 3(a) below). The right to such dividends on the Preferred Stock shall not be cumulative, and no right shall accrue to holders of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock by reason of the fact that dividends on such shares are not declared or paid in any prior year.

In the event that the Corporation shall have declared but shall not have paid dividends outstanding immediately prior to, and in the event of, a conversion of the Preferred Stock (as provided in paragraph 3 hereof), the Corporation shall, at the option of each holder, pay in cash to each holder of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock subject to conversion the full amount of any such dividends or allow such dividends to be converted into Common Stock in accordance with, and pursuant to the terms specified in, paragraph 3 hereof.

(2) Liquidation Preference.

(a) In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock and the Series D Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Corporation to the holders of the Common Stock by reason of their ownership thereof, the amount of \$0.149 per share (as adjusted for stock splits, stock dividends, recapitalizations and the

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like) for each share of Series A Preferred Stock then held by them, \$0.267 per share (as adjusted for stock splits, stock dividends, recapitalizations and the like) for each share of Series B Preferred Stock then held by them, \$0.504 per share (as adjusted for stock splits, stock dividends, recapitalizations and the like) for each share of Series C Preferred Stock then held by them, \$3.833 per share (as adjusted for stock splits, stock dividends, recapitalizations and the like) for each share of Series D Preferred Stock then held by them, and, in addition, an amount equal to all declared but unpaid dividends on each such share of Preferred Stock. 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 the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock the full preferential amounts to which they respectively shall be entitled pursuant to this Section 2(a), then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock in proportion to the full liquidation preference to which such holder is entitled.

(b) After payment has been made to the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock of the respective amounts to which they shall be entitled as provided in Section 2(a) above, the remaining assets of the corporation available for distribution to stockholders shall be distributed ratably among the holders of the Common Stock.

(c) For purposes of this paragraph 2, (i) any acquisition of the Corporation by means of merger or other form of corporate reorganization in which more than fifty percent (50%) of the outstanding shares of the Corporation are exchanged for securities or other consideration issued, or caused to be issued, by the acquiring corporation or its subsidiary (other than a transaction solely for the purpose of reincorporating the Corporation pursuant to the laws of another jurisdiction) or (ii) the sale of all or substantially all of the assets of the Corporation, shall be treated as a liquidation, dissolution or winding up of the Corporation.

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

(a) Right to Convert. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time, into such number of fully paid and nonassessable shares of Common Stock, in the case of the Series A Preferred Stock, as is determined by dividing \$0.149 by the then applicable Series A Conversion Price (as defined below), in the case of the Series B Preferred, as is determined by dividing \$0.267 by the then applicable Series B Conversion Price (as defined below), in the case of the Series C Preferred, as is determined by dividing \$0.504 by the then applicable Series C Conversion Price (as defined below) and in the case of the Series D Preferred, as is determined by dividing \$3.833 by the then applicable Series D Conversion Price (as defined below) determined as hereinafter provided.

The price at which shares of Common Stock shall be deliverable upon conversion of the Series A Preferred Stock (the "Series A Conversion Price") shall initially be

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\$0.149 per share of Common Stock, the price at which shares of Common Stock shall be deliverable upon conversion of shares of Series B Preferred Stock (the "Series B Conversion Price"), shall initially be \$0.267 per share of Common Stock, the price at which shares of Common Stock shall be deliverable upon conversion of shares of Series C Preferred Stock (the "Series C Conversion Price"), shall initially be \$0.504 per share of Common Stock and the price at which shares of Common Stock shall be deliverable upon conversion of shares of Series D Preferred Stock (the "Series D Conversion Price"), shall initially be \$3.833 per share of Common Stock (the Series A Conversion Price, the Series B Conversion Price, the Series C Conversion Price and the Series D Conversion Price being collectively referred herein as the "Conversion Prices"). Such initial Conversion Prices shall be subject to adjustment as hereinafter provided.

(b) Automatic Conversion. Each share of Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, (i) in the event of the effectiveness 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 price per share of at least \$2.67 (as adjusted for stock splits, reverse stock splits and the like) and an aggregate offering price to the public of not less than \$10,000,000, or (ii) at the election of the holders of at least a majority of the outstanding shares of Preferred Stock (voting on an as converted basis). In the event of such an offering, the person(s) entitled to receive the Common Stock issuable upon such conversion of Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such underwritten public offering.

(c) Mechanics of Conversion. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional share to which a holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of the Common Stock as determined by the Board of Directors. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Preferred Stock, and shall give written notice to the Corporation at such office that he elects to convert the same. Such notice shall also state whether the holder elects, pursuant to paragraph (1) hereof, to receive declared but unpaid dividends on the Preferred Stock proposed to be converted in cash, or to convert such dividends into shares of Common Stock at their fair market value as determined by the Board of Directors. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid and a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into a fractional share of Common Stock, and any declared but unpaid dividends on the converted Preferred Stock which the holder elected to receive in cash. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the

record holder or holders of such shares of Common Stock on such date. If the conversion is in connection with an underwritten public offering of securities registered pursuant to the Securities Act of 1933, as amended, the conversion shall be conditioned upon the closing of such public offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to such closing.

(d) Adjustments to Conversion Price for Diluting Issues.

(i) Special Definitions. For purposes of this paragraph (3)(d), the following definitions shall apply.

(1) "Options" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire either Common Stock or Convertible Securities.

(2) "Convertible Securities" shall mean any evidences of indebtedness, shares (other than Common Stock, Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock) or other securities convertible into or exchangeable for Common Stock.

(3) "Series A Original Issue Date" shall mean the date on which the first share of Series A Preferred Stock was first issued.

(4) "Series B Original Issue Date" shall mean the date on which the first share of Series B Preferred Stock was first issued.

(5) "Series C Original Issue Date" shall mean the date on which the first share of Series C Preferred Stock was first issued.

(6) "Series D Original Issue Date" shall mean the date on which the first share of Series D Preferred Stock was first issued.

(7) "Additional Shares of Common Stock" shall mean all shares of Common Stock issued (or, pursuant to paragraph 3(d)(iii), deemed to be issued) by the Corporation after the Original Issue Date other than shares of Common Stock issued or issuable:

(A) upon conversion of shares of the Preferred Stock;

(B) to officers or employees of, or consultants to, the Corporation pursuant to a stock grant, option plan or purchase plan or other employee stock incentive program (collectively, the "Plans") approved by the Board of Directors.

Stock;

(C) as a dividend or distribution on the Preferred

(D) upon exercise or conversion of warrants to purchase shares of Common Stock issued in connection with equipment lease financing transactions, bank financing transactions or real estate leasing transactions approved by the Board of Directors, where the issuance of such warrants is not principally for the purpose of raising additional equity capital for the Corporation; and

(E) by way of dividend or other distribution on shares of Common Stock excluded from the definition of Additional Shares of Common Stock by the foregoing clauses (A), (B), (C) and (D) or on shares of Common Stock so excluded.

(ii) No Adjustment of Conversion Price. No adjustment in the Series A Conversion Price, the Series B Conversion Price, the Series C Conversion Price or the Series D Conversion Price shall be made in respect of the issuance of Additional Shares of Common Stock unless the consideration per share for an Additional Share of Common Stock issued or deemed to be issued by the Corporation is less than the Series A Conversion Price. Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, in effect on the date of, and immediately prior to such issue. No adjustment in the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price shall be made pursuant to paragraph (iv) below as a result of any stock dividend or subdivision which causes an adjustment in the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price pursuant to Section 3(e) below.

(iii) Deemed Issue of Additional Shares of Common Stock. In the event the Corporation at any time or from time to time after the Series A Original Issue Date with respect to the Series A Preferred Stock, after the Series B Original Issue Date with respect to the Series B Preferred Stock, after the Series C Original Issue Date with respect to the Series C Preferred Stock and after the Series D Original Issue Date with respect to the Series D Preferred Stock shall issue any Options or Convertible Securities or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number) of Common Stock issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date, provided that Additional Shares of Common Stock shall not be deemed to have been issued: with respect to the Series A Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less than the Series A Conversion Price; with respect to the Series B Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less

than the Series B Conversion Price; with respect to the Series C Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less than the Series C Conversion Price; or with respect to the Series D Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less than the Series D Conversion Price, as applicable, in effect on the date of and immediately prior to such issue, or such record date, as the case may be, and provided further that in any case in which Additional Shares of Common Stock are deemed to be issued:

(A) no further adjustment in the Series A Conversion Price, the Series B Conversion Price, the Series C Conversion Price or the Series D Conversion Price, as applicable, shall be made upon the subsequent issue of Convertible Securities or shares of Common Stock upon the exercise of such Options or conversion or exchange of such Convertible Securities;

(B) if such Options or Convertible Securities by their terms provide, with the passage of time or otherwise, for any increase or decrease in the consideration payable to the Corporation, or increase or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto), and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options or the rights of conversion or exchange under such Convertible Securities; and

(C) on the expiration or cancellation of any Options or the termination of the right to convert or exchange any Convertible Securities which shall have not been exercised, if the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, shall have been adjusted upon the original issuance thereof or shall have been subsequently adjusted pursuant to clause (B) above, the Series A Conversion Price, Series B Conversion Price, the Series C Conversion Price or Series D Conversion Price, as applicable, shall be recomputed as if:

(1) in the case of Convertible Securities or Options for Common, the only Additional Shares of Common Stock issued were shares of Common, if any, actually issued upon the exercise of such Options or the conversion or exchange of such Convertible Securities, and the consideration received therefor was the consideration actually received by the corporation for the issue of all such Options, whether or not exercised, plus the consideration actually received by the Corporation upon such exercise, or for the issue of all such Convertible Securities which were actually converted or exchanged plus the consideration actually received by the corporation upon such conversion or exchange, if any, and

(2) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued upon the exercise thereof were issued at the time of issue of such Options and the consideration received by the Corporation for the Additional Shares of Common Stock deemed to have been then issued was the consideration actually received by the corporation for the issue of all such Options, whether or not exercised, plus the consideration deemed to have been received by the Corporation upon the issue of the Convertible Securities with respect to which such Options were actually exercised;

(D) no readjustment pursuant to clauses (B) and (C) above shall have the effect of increasing the Series A Conversion Price, Series B Conversion Price, the Series C Conversion Price or the Series D Conversion Price, as applicable, to an amount which exceeds the lower of (i) the initial Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, or (ii) the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, that would have resulted from any issuance of Additional Shares of Common Stock between the original adjustment date and such readjustment date.

(iv) Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event this Corporation shall issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to paragraph 3(d)(iii)) without consideration or for a consideration per share less than the Series A Conversion Price, Series B Conversion Price, the Series C Conversion Price and/or the Series D Conversion Price in effect on the date of and immediately prior to such issue, then and in such event, the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price and/or the Series D Conversion Price, as applicable, shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price and/or the Series D Conversion Price, as applicable, by a fraction, the numerator of which shall be the sum of (i) the number of shares of Common Stock outstanding or Common Stock issuable upon conversion of the Preferred Stock outstanding immediately prior to such issue (excluding shares of Common Stock deemed issued pursuant to paragraph 3(d)(iii) but not actually issued and outstanding) plus (ii) the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common Stock so issued would purchase at such Conversion Price; and the denominator of which shall be the sum of (A) the number of shares of Common Stock outstanding or Common Stock issuable upon conversion of the Preferred Stock outstanding immediately prior to such issue (excluding shares of Common Stock deemed issued pursuant to paragraph 3(d)(iii) but not actually issued and outstanding) plus (B) the number of such Additional Shares of Common Stock so issued.

(v) Determination of Consideration. For purposes of this paragraph 3(d), the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(1) Cash and Property. Such consideration shall:

(A) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation;

(B) insofar as it consists of securities (i) if the securities are then traded on a national securities exchange or the NASDAQ Stock Market (or a similar national quotation system), then the value shall be computed based on the average of the closing prices of the securities on such exchange or system over the thirty-day period ending three (3) days prior to receipt by the Corporation, (ii) if the securities are actively traded over-the-counter, then the value shall be computed based on the average of the closing bid prices over the thirty-day period ending three (3) days prior to the receipt by the Corporation, and (iii) if there is no active public market, then the value shall be computed based on the fair market value thereof on the date of receipt by the Corporation, as determined in good faith by the Board of Directors of the Corporation;

and securities, be computed at the fair value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(D) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (A), (B) and (C) above, as determined in good faith by the Board of Directors.

(2) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to paragraph 3(d)(iii), relating to Options and Convertible Securities, shall be determined by dividing

(x) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities by

(y) the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(e) Adjustments for Stock Dividends, Subdivisions, Combinations, or Consolidations. In the event the Corporation shall pay a stock dividend on the Common Stock, or the outstanding shares of Common Stock shall be subdivided, combined or consolidated, by reclassification, stock split or otherwise, into a greater or lesser number of shares of Common Stock, the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price and Series D Conversion Price in effect immediately prior to such dividend, subdivision, combination or consolidation shall, concurrently with the effectiveness of such dividend, subdivision, combination or consolidation, be proportionately adjusted.

(f) No Impairment. The Corporation will not, by amendment of its Amended and Restated Certificate of Incorporation or through any reorganization, transfer of assets, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation but will at all times in good faith assist in the carrying out of all the provisions of this paragraph (3) and in the taking of all such action as may be necessary or appropriate in order to protect the conversion rights of the holders of the Preferred Stock against impairment.

(g) Recapitalization. If at any time or from time to time there shall be a recapitalization of the Common Stock (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere in this paragraph (3) or paragraph (2)) provision shall be made so that the holders of the Preferred Stock shall thereafter be entitled to receive upon conversion of the Preferred Stock the number of shares of stock or other securities or property of the Corporation to which a holder of Common Stock deliverable upon conversion of each share of such Series would have been entitled on such recapitalization. In any such case, appropriate adjustment shall be made in the application of the provisions of this paragraph (3) with respect to the rights of the holders of the Preferred Stock after the recapitalization to the end that the provisions of this paragraph (3) (including adjustment of the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price then in effect and the number of shares purchasable upon conversion of the Preferred Stock) shall be applicable after that event as nearly equivalent as may be practicable.

(4) Voting Rights and Directors.

(a) Voting Rights. Except as otherwise required by law and as provided in paragraph (4)(b) below and paragraph (5) below, the holders of Preferred Stock and the holders of Common Stock shall be entitled to notice of any stockholders' meeting and to vote as a single class upon any matter submitted to the stockholders for a vote, as follows: (i) each holder of Preferred Stock shall have one vote for each full share of Common Stock into which its respective shares of Preferred Stock would be convertible on the record date for the vote and (ii) the holders of Common Stock have one vote per share of Common Stock.

(b) Directors.

(i) For so long as at least 6,750,000 shares of Preferred Stock are outstanding (as adjusted for stock splits, reverse splits, recapitalizations and the like), the holders of shares of Preferred Stock, voting as a separate class, shall be entitled to elect three directors. If, however, at least 2,250,000 shares of Preferred Stock (but less than 6,750,000 shares of Preferred Stock) are outstanding (as adjusted for stock splits, reverse splits, recapitalizations and the like), the holders of shares of Preferred Stock, voting as a separate class, shall be entitled to elect only two directors.

(ii) The holders of shares of Common Stock voting as a separate class shall be entitled to elect two directors.

(iii) The remaining directors shall be elected by the holders of the Preferred Stock and the holders of Common Stock voting as a single class.

(iv) In the case of a vacancy in the office of any director occurring among the directors elected by the Preferred Stock or the Common Stock or by the holders of the Preferred Stock and the holders of Common Stock voting as a single class, as the case may be, at any annual or special meeting or by unanimous written consent thereof, such vacancy shall be filled by the affirmative vote of the holders of such Preferred Stock or such Common Stock, or by the holders of the Preferred Stock and the holders of Common Stock voting as a single class, as the case may be, given at a special meeting of stockholders duly called or by an action by written consent for that purpose. Any director elected by the holders of a particular class or Series of stock may be removed during such director's term of office, either for or without cause, by and only by the affirmative vote of the holders of the outstanding shares of such class or Series of stock given at a special meeting of stockholders duly called or by an action by written consent for that purpose.

(v) At any time after the number of directors that the holders of the Preferred Stock are entitled to elect is reduced to two pursuant to (b)(i) above, the holders of 30% or more of the outstanding shares of Preferred Stock, have a right to call a special meeting of stockholders for the purpose of electing all of the members of the board of directors, such right to be exercisable by delivering a request in writing for the calling of the special meeting to the president or secretary, or to the chairman of the board or a vice-president if there be such. The officer receiving the request shall forthwith cause notice to be given to the stockholders entitled to vote that a meeting will be held at a time requested by the person or persons calling the meeting, not less than 35 nor more than 60 days after the receipt of the request. If the notice is not given within 20 days after receipt of the request, the stockholders calling the meeting shall have the rights accorded to them pursuant to subdivision (c) of Section 601 of the California Corporations Code. Upon the election of directors by the stockholders (voting in accordance with this Section IV(d) 4(b)) at a special meeting, the terms of all persons who were directors immediately prior thereto shall terminate and the directors elected by the Preferred Stock, together with the directors elected at the special meeting by the Common Stock, and the directors elected at the special meeting by the Preferred Stock and the Common Stock together voting as a single class shall constitute the directors of the corporation, to serve as such until the next annual meeting.

(5) Protective Provisions. In addition to any other rights provided by law and except as provided by law, so long as any Preferred Stock shall be outstanding, this Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of a majority of the outstanding shares of Preferred Stock, voting as a single class on an as-converted basis:

(a) authorize or issue shares of any class of stock having any preference or priority as to voting, dividends or upon liquidation superior to or on a parity with any such preference or priority of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock, or authorize or issue shares of stock of any class or any bonds, debentures, notes or other obligations convertible into or exchangeable for, or having option rights to purchase, any shares of stock of this Corporation having any preference or priority as to voting, dividends or upon liquidation superior to or on a parity with any such preference or priority of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock;

(b) declare or pay any dividends on the Common Stock other than dividends payable solely in Common Stock;

(c) redeem or purchase any of the Common Stock, provided, however, that this restriction shall not apply to the repurchase of shares of Common Stock at cost (unless a repurchase price other than cost is unanimously approved by the board of directors) from employees, officers, directors, consultants or other persons performing services for the Corporation upon the termination of the employment, consulting or other relationship between the Corporation and such persons in an amount not to exceed \$25,000 in any twelve-month period;

(d) increase the total number of authorized shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock;

(e) amend or repeal any provision of, or add any provision to, this Corporation's Certificate of Incorporation or Bylaws if such action would alter or change adversely the preferences, rights, privileges or powers of, or the restrictions provided for the benefit of, the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock;

(f) consummate a sale of all or substantially all of the Corporation's assets or any transaction or series of related transactions (including, without limitation, any reorganization, merger or consolidation) which would result in the holders of the outstanding voting equity securities of the Corporation immediately prior to such transaction holding less than fifty percent (50%) of the voting power of the surviving entity immediately following such transaction;

(g) redeem or purchase any Preferred Stock except in accordance with paragraph (9) below;

(h) effect a dissolution, liquidation or winding up of the Corporation; or

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dividends on such shares (the "Series C Redemption Price") and \$3.833 per share of Series D Preferred (as adjusted for any stock dividends, combinations or splits with respect to the Series D Preferred) plus all declared but unpaid dividends on such shares (the "Series D Redemption Price").

(b). At least fifteen (15) but no more than thirty (30) days prior to each Redemption Date, the Corporation shall mail, first class postage prepaid, written notice to each holder of record (at the close of business on the business day next preceding the day on which notice is given) of the Preferred Stock to be redeemed, at the address last shown on the records of the Corporation for such holder, notifying such holder of the redemption to be effected, specifying the number of shares of Series A Preferred, Series B Preferred, Series C Preferred or Series D Preferred to be redeemed from such holder (which shall be determined on a pro rata basis), the Redemption Date, the Series A Redemption Price, the Series B Redemption Price, the Series C Redemption Price and the Series D Redemption Price, the place at which payment may be obtained and calling upon such holder to surrender to the Corporation in the manner and at the place designated, his or her certificate or certificates representing the shares to be redeemed (the "Redemption Notice"). Except as provided in subparagraph 9(c), on or after the Redemption Date each holder of Preferred Stock to be redeemed shall surrender to this Corporation the certificate or certificates representing such shares, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price of such Preferred Stock shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof and each surrendered certificate shall be cancelled. In the event less than all shares represented by any such certificate or certificates are redeemed, a new certificate shall be issued representing the unredeemed shares.

(c) From and after the Redemption Date, unless there shall have been a default in payment of the Redemption Price in which case the holders of Preferred Stock shall not be required to redeem any outstanding shares of Preferred Stock and shall retain all rights as holders of such shares, all rights of the holders of Preferred Stock designated for redemption in the Redemption Notice as holders of Preferred Stock (except the right to receive the Redemption Price without interest upon surrender of their certificate or certificates) shall cease with respect to such shares, and such shares shall not thereafter be transferred on the books of the Corporation or be deemed to be outstanding for any purpose whatsoever. If the funds of the Corporation legally available for redemption of Preferred Stock on any Redemption Date are insufficient to redeem the total number of shares of Preferred Stock to be redeemed on such date, those funds which are legally available will be used to redeem the maximum possible number of shares ratably among the holders of such shares to be redeemed based upon their holdings of Preferred Stock. The shares of Preferred Stock not redeemed shall remain outstanding and entitled to all the right and preferences provided herein.

(d) On or prior to each Redemption Date, the Corporation shall deposit the Redemption Price of all shares of Preferred Stock designated for redemption in the Redemption Notice and not yet redeemed with a bank or trust corporation having an aggregate capital and surplus in excess of One Hundred Million Dollars (\$100,000,000) as a trust fund for the benefit of the respective holders of the shares designated for redemption and not yet redeemed, with irrevocable instructions and authority to the bank or trust corporation to pay the Redemption Price for such

shares to their respective holders on or after such Redemption Date upon receipt of notification from the Corporation that such holder has surrendered his share certificate to the Corporation pursuant to subparagraph 9(b) of this Article IV above. As of each Redemption Date, the deposit shall constitute full payment of the shares to their holders, and from and after such Redemption Date the shares so called for redemption shall be redeemed and shall be deemed to be no longer outstanding, and the holders thereof shall cease to be stockholders with respect to such shares and shall have no rights with respect thereto except the rights to receive from the bank or trust corporation payment of the Redemption Price of the shares, without interest, upon surrender of their certificate therefor. Such instructions shall also provide that any moneys deposited by the Corporation pursuant to this subparagraph 9(d) for the redemption of shares thereafter converted into shares of the Corporation's Common Stock pursuant to paragraph (3) of this Article IV prior to the applicable Redemption Date shall be returned to the Corporation forthwith upon such conversion. The balance of any moneys deposited by the Corporation pursuant to this subparagraph 9(d) remaining unclaimed at the expiration of two (2) years following the Redemption Date shall thereafter be returned to the Corporation upon its request expressed in a resolution of its Board of Directors.

Article V

The Corporation is to have perpetual existence.

Article VI

Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at the meeting and before voting begins or unless the Bylaws of the corporation shall so provide.

Article VII

(a) The management of the business and the conduct of the affairs of the corporation shall be vested in its Board of Directors. The number of directors which constitute the whole Board of Directors of the corporation shall be designated in the Bylaws of the corporation.

(b) At such time as a Registration Statement regarding the sale of the corporation's Common Stock to the public is declared effective by the Securities and Exchange Commission, the Board of Directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders following the date hereof, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the date hereof, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the date hereof, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of

stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

(c) Notwithstanding the foregoing provisions of this Article, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

(d) Any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, or other causes shall be filled by either (i) the affirmative vote of the holders of a majority of the voting power of the then-outstanding shares of voting stock of the corporation entitled to vote generally in the election of directors ("Voting Stock") voting together as a single class; or (ii) by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors. Newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such newly created directorship shall be filled by the stockholders, be filled only by the affirmative vote of the directors then in office, even though less than a quorum of the Board of Directors. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified.

(e) The affirmative vote of sixty-six and two-thirds percent (66-2/3%) of the voting power of the then outstanding shares of Voting Stock, voting together as a single class, shall be required for the adoption, amendment or repeal of the following sections of the corporation's Bylaws by the stockholders of this corporation: 2.2 (Annual Meeting) and 2.3 (Special Meeting).

(f) No action shall be taken by the stockholders of the corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws.

(g) Any director, or the entire Board of Directors, may be removed from office at any time (i) with cause by the affirmative vote of the holders of at least a majority of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class; or (ii) without cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock.

Article VIII

Notwithstanding any other provisions of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Voting Stock required by law, this Certificate of Incorporation or any Preferred Stock Designation, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class, shall be required to alter, amend or repeal Article VII or this Article VIII.

CALCORP INCORPORATION, Amended and Restated Cert. of Incorporation, DMC (14699)

Article IX

The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in Article VIII of this Certificate, and all rights conferred upon the stockholders herein are granted subject to this right.

Article X

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation.

Article XI

(a) To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, no director of the Corporation or any subsidiary of the Corporation shall be personally liable to the Corporation or its stockholders and shall otherwise be indemnified by the Corporation for monetary damages for breach of fiduciary duty as a director of the Corporation, any predecessor of the Corporation or any subsidiary of the Corporation.

(b) The Corporation shall indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director or officer of the Corporation, any predecessor of the Corporation or any subsidiary of the Corporation or serves or served at any other enterprise as a director or officer at the request of the Corporation, any predecessor to the Corporation or any subsidiary of the Corporation.

(c) Neither any amendment nor repeal of this Article XI, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article XI, shall eliminate or reduce the effect of this Article XI, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article XI, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

Article XII

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

Article XIII

Advance notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the Corporation.

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Article XIV

Stockholders shall not be entitled to cumulative voting rights for the election of directors.

[SIGNATURE PAGE TO FOLLOW]

**RESTATED AND AMENDED
CERTIFICATE OF INCORPORATION
OF AVANEX CORPORATION**

Avanex Corporation, a corporation organized and existing under the laws of the State of Delaware, hereby certifies as follows:

A. The name of the corporation is Avanex Corporation. The corporation was originally incorporated under the same name and the original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on December 1, 1999.

B. This Certificate of Incorporation has been duly adopted in accordance with the provisions of the General Corporation Law of the State of Delaware by the Board of Directors and the Stockholders of the corporation.

C. Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware, this Certificate of Incorporation restates and integrates and further amends the provisions of the Certificate of Incorporation of this corporation.

D. The text of the Certificate of Incorporation is hereby amended and restated in its entirety to read as follows:

Article I

The name of this Corporation is Avanex Corporation.

Article II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, in the City of Wilmington, Delaware 19801. County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

Article III

The purpose of this Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of Delaware.

Article IV

(a) Authorized Capital. This Corporation is authorized to issue two classes of stock, designated "Preferred Stock" and "Common Stock." The total number of shares which this Corporation shall have authority to issue is, 113,100,000 of which 75,000,000 shares shall be Common Stock, with a par value of \$.001 per share and 38,100,000 shares shall be Preferred Stock, with a par value of \$.001 per share. The Preferred Stock shall consist of four series designated Series A Preferred Stock (the "Series A Preferred"), consisting of 6,900,000 shares, Series B Preferred Stock (the "Series B Preferred"), consisting of 9,525,000 shares, Series C Preferred Stock (the "Series C Preferred"), consisting of 16,275,000 shares and Series D Preferred Stock (the "Series D Preferred"), consisting of 5,400,000 shares.

(b) Authorized Capital Following Automatic Conversion Event. Upon the automatic conversion of all outstanding shares of Preferred Stock in accordance with the provisions of this Article IV, Section (b)(3)(b) of this Restated and Amended Certificate of Incorporation (the "Automatic Conversion Event"), the Company shall immediately thereafter be authorized to issue two classes of stock to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of Common Stock which the Company shall have the authority to issue shall be 300,000,000, \$.001 par value, and the total number of shares of Preferred Stock the Company shall have the authority to issue shall be 10,000,000, \$.001 par value. Immediately following any Automatic Conversion Event, the Preferred Stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board). The Board of Directors is further authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock and to fix the number of shares of any series of Preferred Stock and the designation of any such series of Preferred Stock. The Board of Directors, within the limits and restrictions stated in any resolution or resolutions of the Board of Directors originally fixing the number of shares constituting any series, may increase or decrease (but not below the number of shares in any such series then outstanding), the number of shares of any series subsequent to the issue of shares of that series.

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like) for each share of Series A Preferred Stock then held by them, \$0.267 per share (as adjusted for stock splits, stock dividends, recapitalizations and the like) for each share of Series B Preferred Stock then held by them, \$0.504 per share (as adjusted for stock splits, stock dividends, recapitalizations and the like) for each share of Series C Preferred Stock then held by them, \$3.833 per share (as adjusted for stock splits, stock dividends, recapitalizations and the like) for each share of Series D Preferred Stock then held by them, and, in addition, an amount equal to all declared but unpaid dividends on each such share of Preferred Stock. 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 the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock the full preferential amounts to which they respectively shall be entitled pursuant to this Section 2(a), then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock in proportion to the full liquidation preference to which such holder is entitled.

(b) After payment has been made to the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock of the respective amounts to which they shall be entitled as provided in Section 2(a) above, the remaining assets of the corporation available for distribution to stockholders shall be distributed ratably among the holders of the Common Stock.

(c) For purposes of this paragraph 2, (i) any acquisition of the Corporation by means of merger or other form of corporate reorganization in which more than fifty percent (50%) of the outstanding shares of the Corporation are exchanged for securities or other consideration issued, or caused to be issued, by the acquiring corporation or its subsidiary (other than a transaction solely for the purpose of reincorporating the Corporation pursuant to the laws of another jurisdiction) or (ii) the sale of all or substantially all of the assets of the Corporation, shall be treated as a liquidation, dissolution or winding up of the Corporation.

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

(a) Right to Convert. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time, into such number of fully paid and nonassessable shares of Common Stock, in the case of the Series A Preferred Stock, as is determined by dividing \$0.149 by the then applicable Series A Conversion Price (as defined below), in the case of the Series B Preferred, as is determined by dividing \$0.267 by the then applicable Series B Conversion Price (as defined below), in the case of the Series C Preferred, as is determined by dividing \$0.504 by the then applicable Series C Conversion Price (as defined below) and in the case of the Series D Preferred, as is determined by dividing \$3.833 by the then applicable Series D Conversion Price (as defined below) determined as hereinafter provided.

The price at which shares of Common Stock shall be deliverable upon conversion of the Series A Preferred Stock (the "Series A Conversion Price") shall initially be

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\$0.149 per share of Common Stock, the price at which shares of Common Stock shall be deliverable upon conversion of shares of Series B Preferred Stock (the "Series B Conversion Price"), shall initially be \$0.267 per share of Common Stock, the price at which shares of Common Stock shall be deliverable upon conversion of shares of Series C Preferred Stock (the "Series C Conversion Price"), shall initially be \$0.504 per share of Common Stock and the price at which shares of Common Stock shall be deliverable upon conversion of shares of Series D Preferred Stock (the "Series D Conversion Price"), shall initially be \$3.833 per share of Common Stock (the Series A Conversion Price, the Series B Conversion Price, the Series C Conversion Price and the Series D Conversion Price being collectively referred herein as the "Conversion Prices"). Such initial Conversion Prices shall be subject to adjustment as hereinafter provided.

(b) Automatic Conversion. Each share of Preferred Stock shall automatically be converted into shares of Common Stock at the then effective Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, (i) in the event of the effectiveness 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 price per share of at least \$2.67 (as adjusted for stock splits, reverse stock splits and the like) and an aggregate offering price to the public of not less than \$10,000,000, or (ii) at the election of the holders of at least a majority of the outstanding shares of Preferred Stock (voting on an as converted basis). In the event of such an offering, the person(s) entitled to receive the Common Stock issuable upon such conversion of Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such underwritten public offering.

(c) Mechanics of Conversion. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional share to which a holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of the Common Stock as determined by the Board of Directors. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Preferred Stock, and shall give written notice to the Corporation at such office that he elects to convert the same. Such notice shall also state whether the holder elects, pursuant to paragraph (1) hereof, to receive declared but unpaid dividends on the Preferred Stock proposed to be converted in cash, or to convert such dividends into shares of Common Stock at their fair market value as determined by the Board of Directors. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid and a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into a fractional share of Common Stock, and any declared but unpaid dividends on the converted Preferred Stock which the holder elected to receive in cash. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the

record holder or holders of such shares of Common Stock on such date. If the conversion is in connection with an underwritten public offering of securities registered pursuant to the Securities Act of 1933, as amended, the conversion shall be conditioned upon the closing of such public offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to such closing.

(d) Adjustments to Conversion Price for Diluting Issues.

(i) Special Definitions. For purposes of this paragraph (3)(d), the following definitions shall apply.

(1) "Options" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire either Common Stock or Convertible Securities.

(2) "Convertible Securities" shall mean any evidences of indebtedness, shares (other than Common Stock, Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock) or other securities convertible into or exchangeable for Common Stock.

(3) "Series A Original Issue Date" shall mean the date on which the first share of Series A Preferred Stock was first issued.

(4) "Series B Original Issue Date" shall mean the date on which the first share of Series B Preferred Stock was first issued.

(5) "Series C Original Issue Date" shall mean the date on which the first share of Series C Preferred Stock was first issued.

(6) "Series D Original Issue Date" shall mean the date on which the first share of Series D Preferred Stock was first issued.

(7) "Additional Shares of Common Stock" shall mean all shares of Common Stock issued (or, pursuant to paragraph 3(d)(iii), deemed to be issued) by the Corporation after the Original Issue Date other than shares of Common Stock issued or issuable:

(A) upon conversion of shares of the Preferred Stock;

(B) to officers or employees of, or consultants to, the Corporation pursuant to a stock grant, option plan or purchase plan or other employee stock incentive program (collectively, the "Plans") approved by the Board of Directors.

Stock;

(C) as a dividend or distribution on the Preferred

(D) upon exercise or conversion of warrants to purchase shares of Common Stock issued in connection with equipment lease financing transactions, bank financing transactions or real estate leasing transactions approved by the Board of Directors, where the issuance of such warrants is not principally for the purpose of raising additional equity capital for the Corporation; and

(E) by way of dividend or other distribution on shares of Common Stock excluded from the definition of Additional Shares of Common Stock by the foregoing clauses (A), (B), (C) and (D) or on shares of Common Stock so excluded.

(ii) No Adjustment of Conversion Price. No adjustment in the Series A Conversion Price, the Series B Conversion Price, the Series C Conversion Price or the Series D Conversion Price shall be made in respect of the issuance of Additional Shares of Common Stock unless the consideration per share for an Additional Share of Common Stock issued or deemed to be issued by the Corporation is less than the Series A Conversion Price. Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, in effect on the date of, and immediately prior to such issue. No adjustment in the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price shall be made pursuant to paragraph (iv) below as a result of any stock dividend or subdivision which causes an adjustment in the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price pursuant to Section 3(e) below.

(iii) Deemed Issue of Additional Shares of Common Stock. In the event the Corporation at any time or from time to time after the Series A Original Issue Date with respect to the Series A Preferred Stock, after the Series B Original Issue Date with respect to the Series B Preferred Stock, after the Series C Original Issue Date with respect to the Series C Preferred Stock and after the Series D Original Issue Date with respect to the Series D Preferred Stock shall issue any Options or Convertible Securities or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number) of Common Stock issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date, provided that Additional Shares of Common Stock shall not be deemed to have been issued: with respect to the Series A Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less than the Series A Conversion Price; with respect to the Series B Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less

than the Series B Conversion Price; with respect to the Series C Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less than the Series C Conversion Price; or with respect to the Series D Preferred Stock, unless the consideration per share (determined pursuant to paragraph 3(d)(v) hereof) of such Additional Shares of Common Stock would be less than the Series D Conversion Price, as applicable, in effect on the date of and immediately prior to such issue, or such record date, as the case may be, and provided further that in any case in which Additional Shares of Common Stock are deemed to be issued:

(A) no further adjustment in the Series A Conversion Price, the Series B Conversion Price, the Series C Conversion Price or the Series D Conversion Price, as applicable, shall be made upon the subsequent issue of Convertible Securities or shares of Common Stock upon the exercise of such Options or conversion or exchange of such Convertible Securities;

(B) if such Options or Convertible Securities by their terms provide, with the passage of time or otherwise, for any increase or decrease in the consideration payable to the Corporation, or increase or decrease in the number of shares of Common Stock issuable, upon the exercise, conversion or exchange thereof, the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto), and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options or the rights of conversion or exchange under such Convertible Securities; and

(C) on the expiration or cancellation of any Options or the termination of the right to convert or exchange any Convertible Securities which shall have not been exercised, if the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, shall have been adjusted upon the original issuance thereof or shall have been subsequently adjusted pursuant to clause (B) above, the Series A Conversion Price, Series B Conversion Price, the Series C Conversion Price or Series D Conversion Price, as applicable, shall be recomputed as if:

(1) in the case of Convertible Securities or Options for Common, the only Additional Shares of Common Stock issued were shares of Common, if any, actually issued upon the exercise of such Options or the conversion or exchange of such Convertible Securities, and the consideration received therefor was the consideration actually received by the corporation for the issue of all such Options, whether or not exercised, plus the consideration actually received by the Corporation upon such exercise, or for the issue of all such Convertible Securities which were actually converted or exchanged plus the consideration actually received by the corporation upon such conversion or exchange, if any, and

(2) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued upon the exercise thereof were issued at the time of issue of such Options and the consideration received by the Corporation for the Additional Shares of Common Stock deemed to have been then issued was the consideration actually received by the corporation for the issue of all such Options, whether or not exercised, plus the consideration deemed to have been received by the Corporation upon the issue of the Convertible Securities with respect to which such Options were actually exercised;

(D) no readjustment pursuant to clauses (B) and (C) above shall have the effect of increasing the Series A Conversion Price, Series B Conversion Price, the Series C Conversion Price or the Series D Conversion Price, as applicable, to an amount which exceeds the lower of (i) the initial Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, or (ii) the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price, as applicable, that would have resulted from any issuance of Additional Shares of Common Stock between the original adjustment date and such readjustment date.

(iv) Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event this Corporation shall issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to paragraph 3(d)(iii)) without consideration or for a consideration per share less than the Series A Conversion Price, Series B Conversion Price, the Series C Conversion Price and/or the Series D Conversion Price in effect on the date of and immediately prior to such issue, then and in such event, the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price and/or the Series D Conversion Price, as applicable, shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price and/or the Series D Conversion Price, as applicable, by a fraction, the numerator of which shall be the sum of (i) the number of shares of Common Stock outstanding or Common Stock issuable upon conversion of the Preferred Stock outstanding immediately prior to such issue (excluding shares of Common Stock deemed issued pursuant to paragraph 3(d)(iii) but not actually issued and outstanding) plus (ii) the number of shares of Common Stock which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common Stock so issued would purchase at such Conversion Price; and the denominator of which shall be the sum of (A) the number of shares of Common Stock outstanding or Common Stock issuable upon conversion of the Preferred Stock outstanding immediately prior to such issue (excluding shares of Common Stock deemed issued pursuant to paragraph 3(d)(iii) but not actually issued and outstanding) plus (B) the number of such Additional Shares of Common Stock so issued.

(v) Determination of Consideration. For purposes of this paragraph 3(d), the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(1) Cash and Property. Such consideration shall:

(A) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation;

(B) insofar as it consists of securities (i) if the securities are then traded on a national securities exchange or the NASDAQ Stock Market (or a similar national quotation system), then the value shall be computed based on the average of the closing prices of the securities on such exchange or system over the thirty-day period ending three (3) days prior to receipt by the Corporation, (ii) if the securities are actively traded over-the-counter, then the value shall be computed based on the average of the closing bid prices over the thirty-day period ending three (3) days prior to the receipt by the Corporation, and (iii) if there is no active public market, then the value shall be computed based on the fair market value thereof on the date of receipt by the Corporation, as determined in good faith by the Board of Directors of the Corporation;

(C) insofar as it consists of property other than cash and securities, be computed at the fair value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(D) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (A), (B) and (C) above, as determined in good faith by the Board of Directors.

(2) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to paragraph 3(d)(iii), relating to Options and Convertible Securities, shall be determined by dividing

(x) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities by

(y) the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(e) Adjustments for Stock Dividends, Subdivisions, Combinations, or Consolidations. In the event the Corporation shall pay a stock dividend on the Common Stock, or the outstanding shares of Common Stock shall be subdivided, combined or consolidated, by reclassification, stock split or otherwise, into a greater or lesser number of shares of Common Stock, the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price and Series D Conversion Price in effect immediately prior to such dividend, subdivision, combination or consolidation shall, concurrently with the effectiveness of such dividend, subdivision, combination or consolidation, be proportionately adjusted.

(f) No Impairment. The Corporation will not, by amendment of its Amended and Restated Certificate of Incorporation or through any reorganization, transfer of assets, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation but will at all times in good faith assist in the carrying out of all the provisions of this paragraph (3) and in the taking of all such action as may be necessary or appropriate in order to protect the conversion rights of the holders of the Preferred Stock against impairment.

(g) Recapitalization. If at any time or from time to time there shall be a recapitalization of the Common Stock (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere in this paragraph (3) or paragraph (2)) provision shall be made so that the holders of the Preferred Stock shall thereafter be entitled to receive upon conversion of the Preferred Stock the number of shares of stock or other securities or property of the Corporation to which a holder of Common Stock deliverable upon conversion of each share of such Series would have been entitled on such recapitalization. In any such case, appropriate adjustment shall be made in the application of the provisions of this paragraph (3) with respect to the rights of the holders of the Preferred Stock after the recapitalization to the end that the provisions of this paragraph (3) (including adjustment of the Series A Conversion Price, Series B Conversion Price, Series C Conversion Price or Series D Conversion Price then in effect and the number of shares purchasable upon conversion of the Preferred Stock) shall be applicable after that event as nearly equivalent as may be practicable.

(4) Voting Rights and Directors.

(a) Voting Rights. Except as otherwise required by law and as provided in paragraph (4)(b) below and paragraph (5) below, the holders of Preferred Stock and the holders of Common Stock shall be entitled to notice of any stockholders' meeting and to vote as a single class upon any matter submitted to the stockholders for a vote, as follows: (i) each holder of Preferred Stock shall have one vote for each full share of Common Stock into which its respective shares of Preferred Stock would be convertible on the record date for the vote and (ii) the holders of Common Stock have one vote per share of Common Stock.

(b) Directors.

(i) For so long as at least 6,750,000 shares of Preferred Stock are outstanding (as adjusted for stock splits, reverse splits, recapitalizations and the like), the holders of shares of Preferred Stock, voting as a separate class, shall be entitled to elect three directors. If, however, at least 2,250,000 shares of Preferred Stock (but less than 6,750,000 shares of Preferred Stock) are outstanding (as adjusted for stock splits, reverse splits, recapitalizations and the like), the holders of shares of Preferred Stock, voting as a separate class, shall be entitled to elect only two directors.

(ii) The holders of shares of Common Stock voting as a separate class shall be entitled to elect two directors.

(iii) The remaining directors shall be elected by the holders of the Preferred Stock and the holders of Common Stock voting as a single class.

(iv) In the case of a vacancy in the office of any director occurring among the directors elected by the Preferred Stock or the Common Stock or by the holders of the Preferred Stock and the holders of Common Stock voting as a single class, as the case may be, at any annual or special meeting or by unanimous written consent thereof, such vacancy shall be filled by the affirmative vote of the holders of such Preferred Stock or such Common Stock, or by the holders of the Preferred Stock and the holders of Common Stock voting as a single class, as the case may be, given at a special meeting of stockholders duly called or by an action by written consent for that purpose. Any director elected by the holders of a particular class or Series of stock may be removed during such director's term of office, either for or without cause, by and only by the affirmative vote of the holders of the outstanding shares of such class or Series of stock given at a special meeting of stockholders duly called or by an action by written consent for that purpose.

(v) At any time after the number of directors that the holders of the Preferred Stock are entitled to elect is reduced to two pursuant to (b)(i) above, the holders of 30% or more of the outstanding shares of Preferred Stock, have a right to call a special meeting of stockholders for the purpose of electing all of the members of the board of directors, such right to be exercisable by delivering a request in writing for the calling of the special meeting to the president or secretary, or to the chairman of the board or a vice-president if there be such. The officer receiving the request shall forthwith cause notice to be given to the stockholders entitled to vote that a meeting will be held at a time requested by the person or persons calling the meeting, not less than 35 nor more than 60 days after the receipt of the request. If the notice is not given within 20 days after receipt of the request, the stockholders calling the meeting shall have the rights accorded to them pursuant to subdivision (c) of Section 601 of the California Corporations Code. Upon the election of directors by the stockholders (voting in accordance with this Section IV(d) 4(b)) at a special meeting, the terms of all persons who were directors immediately prior thereto shall terminate and the directors elected by the Preferred Stock, together with the directors elected at the special meeting by the Common Stock, and the directors elected at the special meeting by the Preferred Stock and the Common Stock together voting as a single class shall constitute the directors of the corporation, to serve as such until the next annual meeting.

(5) Protective Provisions In addition to any other rights provided by law and except as provided by law, so long as any Preferred Stock shall be outstanding, this Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of a majority of the outstanding shares of Preferred Stock, voting as a single class on an as-converted basis:

(a) authorize or issue shares of any class of stock having any preference or priority as to voting, dividends or upon liquidation superior to or on a parity with any such preference or priority of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock, or authorize or issue shares of stock of any class or any bonds, debentures, notes or other obligations convertible into or exchangeable for, or having option rights to purchase, any shares of stock of this Corporation having any preference or priority as to voting, dividends or upon liquidation superior to or on a parity with any such preference or priority of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock;

(b) declare or pay any dividends on the Common Stock other than dividends payable solely in Common Stock;

(c) redeem or purchase any of the Common Stock, provided, however, that this restriction shall not apply to the repurchase of shares of Common Stock at cost (unless a repurchase price other than cost is unanimously approved by the board of directors) from employees, officers, directors, consultants or other persons performing services for the Corporation upon the termination of the employment, consulting or other relationship between the Corporation and such persons in an amount not to exceed \$25,000 in any twelve-month period;

(d) increase the total number of authorized shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock;

(e) amend or repeal any provision of, or add any provision to, this Corporation's Certificate of Incorporation or Bylaws if such action would alter or change adversely the preferences, rights, privileges or powers of, or the restrictions provided for the benefit of, the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock;

(f) consummate a sale of all or substantially all of the Corporation's assets or any transaction or Series of related transactions (including, without limitation, any reorganization, merger or consolidation) which would result in the holders of the outstanding voting equity securities of the Corporation immediately prior to such transaction holding less than fifty percent (50%) of the voting power of the surviving entity immediately following such transaction;

(g) redeem or purchase any Preferred Stock except in accordance with paragraph (9) below;

(h) effect a dissolution, liquidation or winding up of the Corporation; or

(i) permit any subsidiary of the Corporation to issue or sell, or obligate itself to issue or sell, except to the Corporation or any wholly-owned subsidiary, any stock of such subsidiary.

(6) Status of Converted Stock. In the event any shares of Preferred Stock shall be converted into Common Stock pursuant to paragraph (3) hereof, the shares of Preferred Stock so converted shall be canceled and shall not be issuable by the Corporation, and the Certificate of Incorporation of this Corporation shall be appropriately amended to effect the corresponding reduction in the Corporation's authorized capital stock.

(7) Residual Rights. All rights accruing to the outstanding shares of this Corporation not expressly provided for to the contrary herein shall be vested in the Common Stock.

(8) Consent for Certain Repurchases of Common Stock Deemed to be Distributions. Each holder of Preferred Stock shall be deemed to have consented, for purposes of Section 502, 503 and 506 of the California Corporations Code, to distributions made by the Corporation in connection with the repurchase of shares of Common Stock issued to or held by employees or consultants upon termination of their employment or services pursuant to agreements providing for such right of repurchase between the Corporation and such persons.

(9) Redemption.

(a) On December 31 of each year (the "Redemption Date") beginning December 31, 2004 and continuing until all shares of Preferred Stock have been redeemed, at the option of the holders of a majority of the then-outstanding Preferred Stock and upon the receipt by the Corporation on or before the date which is thirty (30) days prior to each Redemption Date of a written request for redemption from each holder of Preferred Stock requesting redemption, the Corporation shall redeem, from any source of funds legally available therefor, the number of shares of Preferred Stock (i) set forth in such holder's written request; provided, however, that the maximum number of shares the Corporation is required to redeem from all holders of Preferred Stock requesting redemption is that number of shares determined by multiplying 0.25 by the number of shares of Preferred Stock outstanding on the first Redemption Date, plus (ii) all shares of Preferred Stock which such holders had requested to redeem on any prior Redemption Date but were not redeemed by the Corporation; plus, all declared but unpaid dividends on such shares of Preferred Stock. The Corporation shall effect such redemptions on the applicable Redemption Date by paying in cash in exchange for the Preferred Stock to be redeemed a sum equal to \$0.149 per share of Series A Preferred (as adjusted for any stock dividends, combinations or splits with respect to the Series A Preferred) plus all declared but unpaid dividends on such shares (the "Series A Redemption Price"), \$0.267 per share of Series B Preferred (as adjusted for any stock dividends, combinations or splits with respect to the Series B Preferred) plus all declared but unpaid dividends on such shares (the "Series B Redemption Price"), \$0.504 per share of Series C Preferred (as adjusted for any stock dividends, combinations or splits with respect to the Series C Preferred) plus all declared but unpaid

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(d) On or prior to each Redemption Date, the Corporation shall deposit the Redemption Price of all shares of Preferred Stock designated for redemption in the Redemption Notice and not yet redeemed with a bank or trust corporation having an aggregate capital and surplus in excess of One Hundred Million Dollars (\$100,000,000) as a trust fund for the benefit of the respective holders of the shares designated for redemption and not yet redeemed, with irrevocable instructions and authority to the bank or trust corporation to pay the Redemption Price for such

shares to their respective holders on or after such Redemption Date upon receipt of notification from the Corporation that such holder has surrendered his share certificate to the Corporation pursuant to subparagraph 9(b) of this Article IV above. As of each Redemption Date, the deposit shall constitute full payment of the shares to their holders, and from and after such Redemption Date the shares so called for redemption shall be redeemed and shall be deemed to be no longer outstanding, and the holders thereof shall cease to be stockholders with respect to such shares and shall have no rights with respect thereto except the rights to receive from the bank or trust corporation payment of the Redemption Price of the shares, without interest, upon surrender of their certificate therefor. Such instructions shall also provide that any moneys deposited by the Corporation pursuant to this subparagraph 9(d) for the redemption of shares thereafter converted into shares of the Corporation's Common Stock pursuant to paragraph (3) of this Article IV prior to the applicable Redemption Date shall be returned to the Corporation forthwith upon such conversion. The balance of any moneys deposited by the Corporation pursuant to this subparagraph 9(d) remaining unclaimed at the expiration of two (2) years following the Redemption Date shall thereafter be returned to the Corporation upon its request expressed in a resolution of its Board of Directors.

Article V

The Corporation is to have perpetual existence.

Article VI

Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at the meeting and before voting begins or unless the Bylaws of the corporation shall so provide.

Article VII

(a) The management of the business and the conduct of the affairs of the corporation shall be vested in its Board of Directors. The number of directors which constitute the whole Board of Directors of the corporation shall be designated in the Bylaws of the corporation.

(b) At such time as a Registration Statement regarding the sale of the corporation's Common Stock to the public is declared effective by the Securities and Exchange Commission, the Board of Directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders following the date hereof, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the date hereof, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the date hereof, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of

stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

(c) Notwithstanding the foregoing provisions of this Article, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

(d) Any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, or other causes shall be filled by either (i) the affirmative vote of the holders of a majority of the voting power of the then-outstanding shares of voting stock of the corporation entitled to vote generally in the election of directors ("Voting Stock") voting together as a single class; or (ii) by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors. Newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such newly created directorship shall be filled by the stockholders, be filled only by the affirmative vote of the directors then in office, even though less than a quorum of the Board of Directors. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified.

(e) The affirmative vote of sixty-six and two-thirds percent (66-2/3%) of the voting power of the then outstanding shares of Voting Stock, voting together as a single class, shall be required for the adoption, amendment or repeal of the following sections of the corporation's Bylaws by the stockholders of this corporation: 2.2 (Annual Meeting) and 2.3 (Special Meeting).

(f) No action shall be taken by the stockholders of the corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws.

(g) Any director, or the entire Board of Directors, may be removed from office at any time (i) with cause by the affirmative vote of the holders of at least a majority of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class; or (ii) without cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock.

Article VIII

Notwithstanding any other provisions of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Voting Stock required by law, this Certificate of Incorporation or any Preferred Stock Designation, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class, shall be required to alter, amend or repeal Article VII or this Article VIII.

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Article IX

The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in Article VIII of this Certificate, and all rights conferred upon the stockholders herein are granted subject to this right.

Article X

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation.

Article XI

(a) To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, no director of the Corporation or any subsidiary of the Corporation shall be personally liable to the Corporation or its stockholders and shall otherwise be indemnified by the Corporation for monetary damages for breach of fiduciary duty as a director of the Corporation, any predecessor of the Corporation or any subsidiary of the Corporation.

(b) The Corporation shall indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director or officer of the Corporation, any predecessor of the Corporation or any subsidiary of the Corporation or serves or served at any other enterprise as a director or officer at the request of the Corporation, any predecessor to the Corporation or any subsidiary of the Corporation.

(c) Neither any amendment nor repeal of this Article XI, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article XI, shall eliminate or reduce the effect of this Article XI, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article XI, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

Article XII

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

Article XIII

Advance notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the Corporation.

Article XIV

Stockholders shall not be entitled to cumulative voting rights for the election of directors.

[SIGNATURE PAGE TO FOLLOW]

The undersigned declares under penalty of perjury that the matters set forth in the foregoing certificate are true of his or her own knowledge.

IN WITNESS WHEREOF, the undersigned has executed this certificate in Fremont, California, this 26th day of January, 2000.

Walter Alessandrini
Walter Alessandrini, Chief Executive Officer

Judith M. O'Brien
Judith M. O'Brien, Secretary

**AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
AVANEX CORPORATION**

Avanex Corporation, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies that:

- A. The name of this Corporation is Avanex Corporation
- B. The date of filing of this Corporation's original Certificate of Incorporation with the Secretary of State of Delaware was December 1, 1999.
- C. Pursuant to Sections 242 and 245 of the Delaware General Corporation Law, this Restated Certificate of Incorporation restates, integrates and amends the provisions of the Corporation's Amended and Restated Certificate of Incorporation as follows:

FIRST: The name of this Corporation is Avanex Corporation

SECOND: The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The purpose of this Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: This Corporation is authorized to issue two classes of shares to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of Common Stock that this corporation is authorized to issue is 300,000,000, with a par value of \$0.001 per share, and the total number of shares of Preferred Stock that this corporation is authorized to issue is 10,000,000, with a par value of \$0.001 per share.

The Preferred Stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board). The Board of Directors is further authorized to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock and to fix the number of shares of any such series of Preferred Stock and the designation of any such series of Preferred Stock. The Board of Directors is authorized, within the limits and restrictions stated in any resolution or resolutions of the Board of Directors originally fixing the number of shares constituting any series, to increase or decrease (but not below the number of shares thereof then outstanding) the number of shares of any such series subsequent to the issue of shares of that series, to determine the designation of any series, and to fix the number of shares of any series.

FIFTH: The Corporation is to have perpetual existence.

SIXTH: Elections of directors need not be by written ballot unless a stockholder demands election by written ballot at the meeting and before voting begins or unless the Bylaws of the Corporation shall so provide.

SEVENTH: The management of the business and the conduct of the affairs of the Corporation shall be vested in its Board of Directors. The number of directors constituting the whole Board of Directors shall be designated in the Bylaws of the Corporation.

The Board of Directors shall be divided into three classes designated as Class I, Class II, and Class III, respectively. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders following the date hereof, the term of office of the Class I directors shall expire, and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the date hereof, the term of office of the Class II directors shall expire, and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the date hereof, the term of office of the Class III directors shall expire, and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this Article, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation, or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, or other causes shall be filled by either (i) the affirmative vote of the holders of a majority of the voting power of the then-outstanding shares of voting stock of the Corporation entitled to vote generally in the election of directors (the "Voting Stock") voting together as a single class; or (ii) by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors. Newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such newly created directorship shall be filled by the stockholders, be filled only by the affirmative vote of the directors then in office, even though less than a quorum of the Board of Directors. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified.

The affirmative vote of sixty-six and two-thirds percent (66-2/3%) of the voting power of the then outstanding shares of Voting Stock, voting together as a single class, shall be required for the adoption, amendment or repeal of the following sections of the Corporation's Bylaws by the stockholders of the Corporation: 2.2 (Annual Meeting) and 2.3 (Special Meeting).

No action shall be taken by the stockholders of the Corporation except at an annual or special meeting of the stockholders called in accordance with the Bylaws.

Any director, or the entire Board of Directors, may be removed from office at any time (i) with cause by the affirmative vote of the holders of at least a majority of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class; or (ii) without cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock.

EIGHTH: A. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, a director of the Corporation or any subsidiary of the Corporation shall not be personally liable to the Corporation or its stockholders and shall otherwise be indemnified by the Corporation for monetary damages for breach of fiduciary duty as a director of the Corporation, any predecessor of the Corporation or any subsidiary of the Corporation.

B. The Corporation shall indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director or officer of the Corporation, any predecessor of the Corporation or any subsidiary of the Corporation or serves or served at any other enterprise as a director or officer at the request of the Corporation, any predecessor to the Corporation or any subsidiary of the Corporation.

C. Neither any amendment nor repeal of this Article EIGHTH, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article EIGHTH, shall eliminate or reduce the effect of this Article EIGHTH, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article EIGHTH, would accrue or arise, prior to such amendment, repeal, or adoption of an inconsistent provision.

NINTH: Notwithstanding any other provisions of this Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Voting Stock required by law, this Certificate of Incorporation or any rights of designation of Preferred Stock conferred by the Board of Directors pursuant to Article FOURTH, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the Voting Stock, voting together as a single class, shall be required to alter, amend or repeal Article SEVENTH or this Article NINTH.

TENTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in Article NINTH of this Certificate, and all rights conferred upon the stockholders herein are granted subject to this right.

ELEVENTH: In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation. Exclusive authority to amend the Bylaws to change the authorized number of Directors shall reside in the Board of Directors.

TWELFTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

THIRTEENTH: Advance written notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the Corporation.

FOURTEENTH: Stockholders shall not be entitled to cumulative voting rights for the election of directors.

This Amended and Restated Certificate of Incorporation has been duly adopted by the stockholders of the Corporation in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware, as amended.

IN WITNESS WHEREOF, Avanex Corporation has caused this Amended and Restated Certificate of Incorporation to be signed by Walter Alessandrini, its President, and attested by Judith M. O'Brien, its Secretary, this 9th day of February, 2000.

AVANEX CORPORATION



Walter Alessandrini, President

Attested:



Judith M. O'Brien, Secretary

**CERTIFICATE OF OWNERSHIP
MERGING HOLOGRAPHIX, INC.
INTO AVANEX CORPORATION**

Avanex Corporation, a corporation incorporated on December 1, 1999, pursuant to the provisions of the Delaware General Corporation Law (the "Corporation"), does hereby certify that this Corporation owns all of the capital stock of Holographix Inc., a corporation incorporated under the laws of Delaware (the "Subsidiary") and that this Corporation, by resolutions of its board of directors duly adopted on January 18, 2001 and filed with the minutes of the Board of Directors, determined to and did merge into itself said Subsidiary which resolutions are in the following words:

WHEREAS, the Company purchased substantially all of the assets and some of the liabilities of Holographix Inc., a Delaware corporation ("Holographix"), on July 24, 2000 through its subsidiary Aspen Acquisition Corporation in order to protect the Company from any hidden liabilities related to the acquisition;

WHEREAS, Aspen Acquisition Corporation changed its name to Holographix Inc., a Delaware corporation ("Aspen"), following the acquisition;

WHEREAS, the Board and the officers of the Company presently believe that there are no material hidden liabilities related to the Holographix assets acquired by Aspen;

WHEREAS, the Board and the officers of the Company believe that the business of Aspen may be better run and administered as a division of the Company instead of as a separate company;

WHEREAS, the Company lawfully owns all of the outstanding stock of Aspen; and

WHEREAS, the Company desires, on behalf of itself and in its capacity as the sole stockholder of Aspen, to merge Aspen into itself pursuant to the provisions of Section 253 of the Delaware General Company Law;

NOW, THEREFORE, BE IT RESOLVED: That this Company merge into itself, and does hereby merge into itself, Aspen and assumes all of Aspen's liabilities and obligations.

RESOLVED FURTHER: That the proper officers of this Company be and they hereby are authorized and directed to make and execute, a certificate of ownership and merger setting forth a copy of these resolutions, to merge Aspen and assume its liabilities and obligations, and the date of adoption thereof, and to file the same in the office of the Secretary of State of Delaware.

RESOLVED FURTHER: That the officers of this Company be and they hereby are authorized and directed to do all acts and things whatsoever, whether within or without the state of Delaware, which may be in any way necessary or proper to effect said merger.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be signed by Brian Kinard, its Vice President, General Counsel.

Dated: January 18, 2001

AVANEX CORPORATION

By: Brian Kinard

Brian Kinard

Vice President, General Counsel

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**CERTIFICATE OF DESIGNATION OF RIGHTS, PREFERENCES
 AND PRIVILEGES OF
 SERIES A PARTICIPATING PREFERRED STOCK
 OF AVANEX CORPORATION**

The undersigned, Paul Engle and Thomas LaWer, do hereby certify:

1. That they are the duly elected and acting President and Secretary, respectively, of Avanex Corporation, a Delaware corporation (the "Company").
2. That pursuant to the authority conferred upon the Board of Directors by the Amended and Restated Certificate of Incorporation of the said Company, the said Board of Directors on July 26, 2001 adopted the following resolution creating a series of 300,000 shares of Preferred Stock designated as Series A Participating Preferred Stock:

"RESOLVED, that pursuant to the authority vested in the Board of Directors of the corporation by the Amended and Restated Certificate of Incorporation, the Board of Directors does hereby provide for the issue of a series of Preferred Stock of the Company and does hereby fix and herein state and express the designations, powers, preferences and relative and other special rights and the qualifications, limitations and restrictions of such series of Preferred Stock as follows:

Section 1. Designation and Amount. The shares of such series shall be designated as "Series A Participating Preferred Stock." The Series A Participating Preferred Stock shall have a par value of \$0.001 per share, and the number of shares constituting such series shall be 300,000.

Section 2. Proportional Adjustment. In the event that the Company shall at any time after the issuance of any share or shares of Series A Participating Preferred Stock (i) declare any dividend on Common Stock of the Company ("Common Stock") payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the Company shall simultaneously effect a proportional adjustment to the number of outstanding shares of Series A Participating Preferred Stock.

Section 3. Dividends and Distributions.

(a) Subject to the prior and superior right of the holders of any shares of any series of Preferred Stock ranking prior and superior to the shares of Series A Participating Preferred Stock with respect to dividends, the holders of shares of Series A Participating Preferred Stock shall be entitled to receive when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the last day of February, May, August and November in each year (each such date being referred to herein as a "Quarterly Dividend Payment Date"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock, in an amount per share (rounded to the nearest cent) equal to 1,000 times the aggregate per share amount of all cash dividends, and 1,000 times the aggregate per share amount (payable in kind) of all non-cash

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dividends or other distributions other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise), declared on the Common Stock since the immediately preceding Quarterly Dividend Payment Date, or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Participating Preferred Stock.

(b) The Company shall declare a dividend or distribution on the Series A Participating Preferred Stock as provided in paragraph (a) above immediately after it declares a dividend or distribution on the Common Stock (other than a dividend payable in shares of Common Stock).

(c) Dividends shall begin to accrue on outstanding shares of Series A Participating Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares of Series A Participating Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Participating Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be no more than 30 days prior to the date fixed for the payment thereof.

Section 4. Voting Rights. The holders of shares of Series A Participating Preferred Stock shall have the following voting rights:

(a) Each share of Series A Participating Preferred Stock shall entitle the holder thereof to 1,000 votes on all matters submitted to a vote of the stockholders of the Company.

(b) Except as otherwise provided herein or by law, the holders of shares of Series A Participating Preferred Stock and the holders of shares of Common Stock shall vote together as one class on all matters submitted to a vote of stockholders of the Company.

(c) Except as required by law, the holders of Series A Participating Preferred Stock shall have no special voting rights and their consent shall not be required (except to the extent that they are entitled to vote with holders of Common Stock as set forth herein) for taking any corporate action.

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Section 5. Certain Restrictions.

- (a) The Company shall not declare any dividend on, make any distribution on, or redeem or purchase or otherwise acquire for consideration any shares of Common Stock after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock unless concurrently therewith it shall declare a dividend on the Series A Participating Preferred Stock as required by Section 3 hereof.
- (b) Whenever quarterly dividends or other dividends or distributions payable on the Series A Participating Preferred Stock as provided in Section 3 are in arrears, thereafter and until all accrued and unpaid dividends and distributions, whether or not declared, on shares of Series A Participating Preferred Stock outstanding shall have been paid in full, the Company shall not
- (i) declare or pay dividends on, make any other distributions on, or redeem or purchase or otherwise acquire for consideration any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Participating Preferred Stock;
- (ii) declare or pay dividends on, or make any other distributions on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, except dividends paid ratably on the Series A Participating Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;
- (iii) redeem or purchase or otherwise acquire for consideration shares of any stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, provided that the Company may at any time redeem, purchase or otherwise acquire shares of any such parity stock in exchange for shares of any stock of the Company ranking junior (either as to dividends or upon dissolution, liquidation or winding up) to the Series A Participating Preferred Stock;
- (iv) purchase or otherwise acquire for consideration any shares of Series A Participating Preferred Stock, or any shares of stock ranking on a parity with the Series A Participating Preferred Stock, except in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.
- (c) The Company shall not permit any subsidiary of the Company to purchase or otherwise acquire for consideration any shares of stock of the Company unless the Company could, under paragraph (a) of this Section 5, purchase or otherwise acquire such shares at such time and in such manner.

Section 6. Reacquired Shares. Any shares of Series A Participating Preferred Stock purchased or otherwise acquired by the Company in any manner whatsoever shall be retired and

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canceled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of Preferred Stock and may be reissued as part of a new series of Preferred Stock to be created by resolution or resolutions of the Board of Directors, subject to the conditions and restrictions on issuance set forth herein and in the Amended and Restated Certificate of Incorporation, as then amended.

Section 7. Liquidation, Dissolution or Winding Up. Upon any liquidation, dissolution or winding up of the Company, the holders of shares of Series A Participating Preferred Stock shall be entitled to receive an aggregate amount per share equal to 1,000 times the aggregate amount to be distributed per share to holders of shares of Common Stock plus an amount equal to any accrued and unpaid dividends on such shares of Series A Participating Preferred Stock.

Section 8. Consolidation, Merger, etc. In case the Company shall enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case the shares of Series A Participating Preferred Stock shall at the same time be similarly exchanged or changed in an amount per share equal to 1,000 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged.

Section 9. No Redemption. The shares of Series A Participating Preferred Stock shall not be redeemable.

Section 10. Ranking. The Series A Participating Preferred Stock shall rank junior to all other series of the Company's Preferred Stock as to the payment of dividends and the distribution of assets, unless the terms of any such series shall provide otherwise.

Section 11. Amendment. The Amended and Restated Certificate of Incorporation of the Company shall not be further amended in any manner which would materially alter or change the powers, preference or special rights of the Series A Participating Preferred Stock so as to affect them adversely without the affirmative vote of the holders of a majority of the outstanding shares of Series A Participating Preferred Stock, voting separately as a series.

Section 12. Fractional Shares. Series A Participating Preferred Stock may be issued in fractions of a share which shall entitle the holder, in proportion to such holder's fractional shares, to exercise voting rights, receive dividends, participate in distributions and to have the benefit of all other rights of holders of Series A Participating Preferred Stock.

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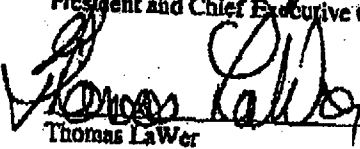
P. 8

RESOLVED FURTHER, that the President or any Vice President and the Secretary or any Assistant Secretary of this corporation be, and they hereby are, authorized and directed to prepare and file a Certificate of Designation of Rights, Preferences and Privileges in accordance with the foregoing resolution and the provisions of Delaware law and to take such actions as they may deem necessary or appropriate to carry out the intent of the foregoing resolution."

We further declare under penalty of perjury that the matters set forth in the foregoing Certificate of Designation are true and correct of our own knowledge.

Executed at Fremont, California on August 23, 2001.


Paul Eagle
President and Chief Executive Officer


Thomas LaWer
Secretary

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Aug. 23. 2001 1:48PM WILSON SONS INC

CERTIFICATE OF AMENDMENT
TO THE AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF AVANEX CORPORATION

A Delaware Corporation

Avanex Corporation, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies that:

A: The name of this Corporation is Avanex Corporation.

B: The date of filing of this Corporation's original Certificate of Incorporation with the Secretary of State of Delaware was December 1, 1999.

C: Pursuant to Section 242 of the Delaware General Corporation Law, this Certificate of Amendment hereby amends the provisions of the Corporation's Amended and Restated Certificate of Incorporation by deleting the first paragraph of Article Fourth and substituting therefor a new first paragraph to read in its entirety as follows:

FOURTH: This Corporation is authorized to issue two classes of shares to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of Common Stock that this Corporation is authorized to issue is 450,000,000, with a par value of \$0.001 per share, and the total number of shares of Preferred Stock that this Corporation is authorized to issue is 10,000,000, with a par value of \$0.001 per share.

D: This Certificate of Amendment to the Amended and Restated Certificate of Incorporation has been duly adopted by the stockholders of the Corporation in accordance with the provisions of Section 242 of the Delaware General Corporation Law.

IN WITNESS WHEREOF, Avanex Corporation has caused this Certificate of Amendment to the Amended and Restated Certificate of Incorporation to be signed by Jo S. Major, Jr., its President and Chief Executive Officer, this 20 day of November, 2006.

AVANEX CORPORATION


Jo S. Major, Jr.

President and Chief Executive Officer

State of Delaware
Secretary of State
Division of Corporations
Delivered 02:38 PM 11/20/2006
FILED 02:18 PM 11/20/2006
SRV 061064903 - 3134019 FILE

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State of Delaware
Secretary of State
Division of Corporations
Delivered 09:05 AM 08/12/2008
FILED 08:52 AM 08/12/2008
SRV 080864465 - 3134019 FILE

**CERTIFICATE OF AMENDMENT
TO THE AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF AVANEX CORPORATION**

A Delaware Corporation

Avanex Corporation, a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies that:

A: The name of this Corporation is Avanex Corporation.

B: The date of filing of this Corporation's original Certificate of Incorporation with the Secretary of State of Delaware was December 1, 1999.

C: Pursuant to Section 242 of the Delaware General Corporation Law, this Certificate of Amendment hereby amends the provisions of the Corporation's Amended and Restated Certificate of Incorporation by deleting the first paragraph of Article Fourth and substituting therefor a new first paragraph to read in its entirety as follows:

FOURTH: This Corporation is authorized to issue two classes of shares to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of Common Stock that this Corporation is authorized to issue is 30,000,000 with a par value of \$0.001 per share, and the total number of shares of Preferred Stock that this Corporation is authorized to issue is 2,000,000, with a par value of \$0.001 per share. Effective as of 5:00 p.m., Eastern time, on the date this Certificate of Amendment to the Amended and Restated Certificate of Incorporation is filed with the Secretary of State of the State of Delaware, each fifteen (15) shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding shall, automatically and without any action on the part of the respective holders thereof, be combined and converted into one (1) share of Common Stock, par value \$0.001 per share, of the Corporation. No fractional shares shall be issued and, in lieu thereof, any holder of less than one (1) share of Common Stock shall be entitled to receive cash for such holder's fractional share based upon the closing sales price of the Corporation's Common Stock as reported on the Nasdaq Global Market, as of the date this Certificate of Amendment is filed with the Secretary of State of the State of Delaware.

D: This Certificate of Amendment to the Amended and Restated Certificate of Incorporation has been duly adopted by the stockholders of the Corporation in accordance with the provisions of Section 242 of the Delaware General Corporation Law.

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IN WITNESS WHEREOF, Avanex Corporation has caused this Certificate of Amendment to the Amended and Restated Certificate of Incorporation to be signed by Giovanni Barbarossa, its Interim Chief Executive Officer, this 12th day of August, 2008.

AVANEX CORPORATION

/s/ Giovanni Barbarossa

Giovanni Barbarossa

Interim Chief Executive Officer

**CERTIFICATE OF MERGER
FOR THE MERGER OF ULTRAVIOLET ACQUISITION SUB, INC.
WITH AND INTO
AVANEX CORPORATION**

Pursuant to Title 8, Section 251(c) of the
General Corporation Law of the State of Delaware

Avanex Corporation, a Delaware corporation (the "*Company*"), does hereby certify to the following facts relating to the merger (the "*Merger*") of Ultraviolet Acquisition Sub, Inc., a Delaware corporation ("*Sub*"), with and into the Company, with the Company continuing as the surviving corporation of the Merger (the "*Surviving Corporation*");

- FIRST: The Company and Sub are the constituent corporations in the Merger, and each is a corporation incorporated pursuant to the laws of the State of Delaware.
- SECOND: An Agreement and Plan of Merger and Reorganization (the "*Merger Agreement*") has been approved, adopted, certified, executed and acknowledged by the Company and by Sub in accordance with the provisions of Section 251 of the Delaware General Corporation Law.
- THIRD: The surviving corporation of the Merger shall be Avanex Corporation. The name of the surviving corporation shall be Avanex Corporation.
- FOURTH: Upon the effectiveness of the Merger, the Amended and Restated Certificate of Incorporation of the Company, the Surviving Corporation, shall be amended and restated to read in its entirety as set forth in Attachment A attached hereto.
- FIFTH: The executed Merger Agreement is on file at the principal place of business of the Company, the Surviving Corporation, at 40919 Encyclopedia Circle, Fremont, CA 94538.
- SIXTH: A copy of the executed Merger Agreement will be furnished by the Company, the Surviving Corporation, on request and without cost, to any stockholder of any constituent corporation of the Merger.
- SEVENTH: The Merger shall become effective immediately upon the filing of this Certificate of Merger with the Secretary of State of the State of Delaware.

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:12 PM 04/27/2009
FILED 04:13 PM 04/27/2009
SRV 090401711 - 3134019 FILE

IN WITNESS WHEREOF, Avanex Corporation has caused this Certificate of Merger
to be executed by its duly authorized officer as of April 27, 2009.

AVANEX CORPORATION

By: /s/ Giovanni Barbarossa

Name: Giovanni Barbarossa

Title: Chief Executive Officer

ATTACHMENT A

**AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
AVANEX CORPORATION**

ARTICLE I

The name of this corporation is Avanex Corporation

ARTICLE II

The address of the registered office of the corporation in the State of Delaware is 2711 Centerville Road, Suite 400, City of Wilmington, County of New Castle. The name of the registered agent of the corporation in the State of Delaware at such address is Corporation Service Company.

ARTICLE III

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law ("DGCL").

ARTICLE IV

This corporation is authorized to issue only one class of stock, to be designated Common Stock. The total number of shares of Common Stock which the corporation is presently authorized to issue is One Hundred (100) shares, each having a par value of one cent (\$0.01).

ARTICLE V

A. The management of the business and the conduct of the affairs of the corporation shall be vested in its Board of Directors. The number of directors which shall constitute the whole Board of Directors shall be fixed by the Board of Directors in the manner provided in the Bylaws.

B. Election of Directors

1. Directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. Each director shall hold office either until the expiration of the term for which elected or appointed and until a successor has been elected and qualified, or until such director's death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

2. No person entitled to vote at an election for directors may cumulate votes to which such person is entitled, unless, at the time of such election, the corporation is subject to Section 2115(b) of the California General Corporation Law ("CGCL"). During such time or times that the corporation is subject to Section 2115(b) of the CGCL, every stockholder entitled to vote at an election for directors may cumulate such stockholder's votes and give one candidate

a number of votes equal to the number of directors to be elected multiplied by the number of votes to which such stockholder's shares are otherwise entitled, or distribute the stockholder's votes on the same principle among as many candidates as such stockholder thinks fit. No stockholder, however, shall be entitled to so cumulate such stockholder's votes unless (a) the names of such candidate or candidates have been placed in nomination prior to the voting and (b) the stockholder has given notice at the meeting, prior to the voting, of such stockholder's intention to cumulate such stockholder's votes. If any stockholder has given proper notice to cumulate votes, all stockholders may cumulate their votes for any candidates who have been properly placed in nomination. Under cumulative voting, the candidates receiving the highest number of votes, up to the number of directors to be elected, are elected.

C. Removal

1. During such time or times that the corporation is subject to Section 2115(b) of the CGCL, the Board of Directors or any individual director may be removed from office at any time without cause by the affirmative vote of the holders of at least a majority of the outstanding shares entitled to vote on such removal; provided, however, that unless the entire Board is removed, no individual director may be removed when the votes cast against such director's removal, or not consenting in writing to such removal, would be sufficient to elect that director if voted cumulatively at an election which the same total number of votes were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of such director's most recent election were then being elected.

2. At any time or times that the corporation is not subject to Section 2115(b) of the CGCL and subject to any limitations imposed by law, Section C.1 above shall not apply and the Board of Directors or any director may be removed from office at any time (a) with cause by the affirmative vote of the holders of a majority of the voting power of all then-outstanding shares of capital stock of the corporation entitled to vote at an election of directors or (b) without cause by the affirmative vote of the holders of a majority of the voting power of all then-outstanding shares of capital stock of the corporation, entitled to vote generally at an election of directors.

D. The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the corporation; provided, however, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by this Certificate of Incorporation, the affirmative vote of the holders of at least a majority of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to adopt, amend or repeal any provision of the Bylaws of the corporation.

ARTICLE VI

E. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of

the corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

F. This corporation is authorized to provide indemnification of agents (as defined in Section 317 of the CGCL) for breach of duty to the corporation and its stockholders through bylaw provisions or through agreements with the agents, or through stockholder resolutions, or otherwise, in excess of the indemnification otherwise permitted by Section 317 of the CGCL, subject, at any time or times that the corporation is subject to Section 2115(b) of the CGCL, to the limits on such excess indemnification set forth in Section 204 of the CGCL.

G. Any repeal or modification of this Article VI shall be prospective and shall not affect the rights under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

ARTICLE VII

The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon the stockholders herein are granted subject to this reservation.

State of Delaware
Secretary of State
Division of Corporations
Delivered 07:40 PM 07/07/2009
FILED 07:33 PM 07/07/2009
SRV 090680314 - 3134019 FILE

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
AVANEX CORPORATION

PUSUANT TO SECTION 242 OF THE
GENERAL COPORATION LAW OF THE STATE OF DELAWARE

Avanex Corporation., (hereinafter called the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify as follows:

The Board of Directors of the Corporation duly adopted a resolution pursuant to Section 242 of the General Corporation Law of the State of Delaware, setting forth an amendment to the Certificate of Incorporation of the Corporation and declaring said amendment to be advisable.

The sole stockholder of the Corporation duly approved said proposed amendment in accordance with Section 242 of the General Corporation Law of the State of Delaware by written consent in accordance with Section 228 of the General Corporation Law of the State of Delaware. The resolution setting forth the amendment is as follows:

RESOLVED: That Article FIRST of the Certificate of Incorporation of the Corporation be and hereby is deleted in its entirety and the following new Article FIRST be inserted in lieu thereof:

"FIRST" The name of the corporation is Oclaro (North America), Inc. "

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment of Certificate of Incorporation to be signed by its Chief Financial Officer this 1 day of July, 2009.

AVANEX CORPORATION


Jerry Turin
Chief Financial Officer

State of Delaware
Secretary of State
Division of Corporations
Delivered 06:24 PM 11/16/2009
FILED 06:21 PM 11/16/2009
SRV 091022663 - 3134019 FILE

STATE OF DELAWARE
CERTIFICATE OF CHANGE
OF REGISTERED AGENT AND/OR
REGISTERED OFFICE

The Board of Directors of Oclaro (North America), Inc.,
a Delaware Corporation, on this 16th day of
November, A.D. 2009, do hereby resolve and order that the
location of the Registered Office of this Corporation within this State be, and the
same hereby is Corporation Trust Center
1209 Orange Street, in the City of Wilmington,
County of New Castle Zip Code 19801.

The name of the Registered Agent therein and in charge thereof upon whom
process against this Corporation may be served, is _____
THE CORPORATION TRUST COMPANY

The Corporation does hereby certify that the foregoing is a true copy of a
resolution adopted by the Board of Directors at a meeting held as herein stated.

IN WITNESS WHEREOF, said Corporation has caused this certificate to be
signed by an authorized officer, the 16th day of November,
A.D., 2009.

By: _____

Authorized Officer

Name: _____

Print or Type

Title: _____

Secretary