

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

Date of Report: May 28, 2014
Commission file number 001-11602

APPLIED NANOTECH HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Texas
(State or other jurisdiction
of incorporation or organization)

76-0273345
(I.R.S. Employer
Identification No.)

3006 Longhorn Boulevard, Suite 107, Austin, Texas 78758
(Address of principal executive offices) (Zip Code)

(512) 339-5020

(Registrant's telephone number, including area code)
Former name or former address, if changed since last report: N/A

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 1.01 ENTRY INTO A MATERIAL DEFINITIVE AGREEMENT.

Amendment to Merger Agreement

On May 28, 2014, Applied Nanotech Holdings, Inc., a Texas corporation (the "Company"), together with its wholly owned direct subsidiaries PEN INC, a Delaware corporation and NanoMerger Sub Inc., a Delaware corporation entered into an Amendment to Agreement and Plan of Merger and Exchange (the "Amendment to Merger Agreement") with NanoHolding Inc. and Carl Zeiss, Inc. The Amendment to Merger Agreement deleted Exhibits B-1 and B-2 and substituted new Exhibits B-1 and B-2 which are included in the Amendment to Merger Agreement included in this report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exh.

No. Description

- 2.2 Amendment to Agreement and Plan of Merger and Exchange, dated as of May 28, 2014, by and among Applied Nanotech Holdings, Inc., PEN INC., NanoMerger Sub Inc., NanoHolding Inc., and Carl Zeiss, Inc.

ADDITIONAL INFORMATION AND WHERE TO FIND IT

In connection with the merger of APNT and Nanofilm discussed in this Form 8-K, we will be filing a proxy statement and relevant documents concerning the transaction with the Securities and Exchange Commission ("SEC"). OUR SECURITY HOLDERS ARE URGED TO READ THE PROXY STATEMENT AND ANY OTHER RELEVANT DOCUMENTS FILED WITH THE SEC WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION. Investors and security holders can obtain free copies of the proxy statement and other documents when they become available by contacting our Investor Relations Department, 3006 Longhorn Boulevard, Suite 107, Austin, Texas 78758 (Telephone: (512) 339-5020). In addition, documents we filed with the SEC are available free of charge at the SEC's web site at <http://www.sec.gov> and at our website www.appliednanotech.net under "Investor Information - SEC Filings."

Our company and our directors and executive officers and other persons may be deemed to be participants in the solicitation of proxies in respect of the proposed merger discussed in this Form 8-K. Information regarding our directors and executive officers is available in our Annual Report on Form 10-K for the year ended December 31, 2013, which was filed with the SEC on February 25, 2014, and the proxy statement and other relevant materials to be filed with the SEC in connection with these matters. Other information regarding the participants in the proxy solicitation and a description of their direct and indirect interests, by security holdings or otherwise, will be contained in the proxy statement and other relevant materials to be filed with the SEC when they become available.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Applied Nanotech Holdings, Inc.

Date: May 29, 2014

By: /s/ Zvi Yaniv

Dr. Zvi Yaniv, Chief Operating Officer

**AMENDMENT TO
AGREEMENT AND PLAN OF MERGER
AND EXCHANGE**

This AMENDMENT TO AGREEMENT AND PLAN OF MERGER AND EXCHANGE, dated as of May 28, 2014 is entered into by and among APPLIED NANOTECH HOLDINGS, INC., a corporation incorporated in the State of Texas, USA ("**APNT**"), PEN INC., a corporation incorporated in the State of Delaware and a wholly-owned subsidiary of APNT ("**PEN**"), NANOMERGER SUB INC., a corporation incorporated in the State of Delaware and a wholly-owned subsidiary of APNT ("**MergerSub**"), NANOHOLDING INC., a Delaware corporation ("**Nano**") AND CARL ZEISS INC., a New York corporation ("**Zeiss**").

WHEREAS, APNT, PEN, MergerSub, Nano and Zeiss are parties to an Agreement and Plan of Merger and Exchange dated as of March 10, 2014 (the "**Merger & Exchange Agreement**").

WHEREAS, the parties desire to amend the Merger & Exchange Agreement to change certain terms of the certificate of incorporation and bylaws of PEN following the closing.

NOW, THEREFORE, in consideration of the agreements contained in this Amendment and other good and valuable consideration, the parties agree that Exhibit B-1 and Exhibit B-2 to the Merger & Exchange Agreement are hereby deleted and Exhibit B-1 and Exhibit B-2 attached to this Amendment are substituted therefor. Except as stated in the preceding sentence, the Merger & Exchange Agreement remains in full force and effect.

[Signatures begin next page]

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to be duly executed by their respective authorized signatories as of the date first indicated above.

APPLIED NANOTECH HOLDINGS, INC.

By: /s/ Robert Ronstadt
Robert Ronstadt, Chairman

PEN INC.

By: /s/ Robert Ronstadt
Robert Ronstadt, Chairman

NANOMERGER SUB INC.

By: /s/ Robert Ronstadt
Robert Ronstadt, Chairman

NANO HOLDINGS INC.

By: /s/ Scott E. Rickert
Scott E. Rickert, President

CARL ZEISS, INC.

By: /s/ James A. Sharp

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF

PEN INC.

ARTICLE 1

The name of the Corporation is PEN Inc.

ARTICLE 2

The address of the registered office of the Corporation in the State of Delaware is 800 Delaware Ave, City of Wilmington, County of New Castle, Delaware 19801. The name of the Corporation's registered agent at such address is Delaware Corporations LLC.

ARTICLE 3

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

ARTICLE 4

Section 4.1. Authorized Capital Stock. The Corporation is authorized to issue four classes of capital stock, designated as Preferred Stock (as defined below), Class A Common Stock (as defined below), Class B Common Stock (as defined below), and Class Z Common Stock (as defined below). The total number of shares of capital stock that the Corporation is authorized to issue is [1,820,000,000], consisting of 20,000,000 shares of Preferred Stock, par value \$0.0001 per share ("**Preferred Stock**"), [1,300,000,000] shares of Class A Common Stock, par value \$0.0001 per share ("**Class A Common Stock**"), [400,000,000] shares of Class B Common Stock, par value \$0.0001 per share ("**Class B Common Stock**"), and [100,000,000] shares of Class Z Common Stock, par value \$0.0001 per share ("**Class Z Common Stock**").

Section 4.2. Preferred Stock. The Preferred Stock may be issued in one or more series. The Board of the Corporation (the "**Board**") is hereby authorized to issue the shares of Preferred Stock in such series and to fix from time to time before issuance thereof the number of shares to be included in any such series and the designation, powers, preferences and relative, participating, optional or other rights, and the qualifications, limitations or restrictions thereof, of such series. The authority of the Board with respect to each such series will include, without limiting the generality of the foregoing, the determination of any or all of the following:

1. the number of shares of any series and the designation to distinguish the shares of such series from the shares of all other series;
2. the voting powers, if any, of the shares of such series and whether such voting powers are full or limited;
2. the redemption provisions, if any, applicable to such series, including the redemption price or prices to be paid;
4. whether dividends, if any, will be cumulative or noncumulative, the dividend rate or rates of such series and the dates and preferences of dividends on such series;
5. the rights of such series upon the voluntary or involuntary dissolution of, or upon any distribution of the assets of, the Corporation;
6. the provisions, if any, pursuant to which the shares of such series are convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same or any other class or classes of stock, or any other security, of the Corporation or any other corporation or other entity, and the rates or other determinants of conversion or exchange applicable thereto;

7. the right, if any, to subscribe for or to purchase any securities of the Corporation or any other corporation or other entity;
8. the provisions, if any, of a sinking fund applicable to such series; and
9. any other relative, participating, optional or other powers, preferences or rights, and any qualifications, limitations or restrictions thereof, of such series;

all as may be determined from time to time by the Board and stated or expressed in the resolution or resolutions providing for the issuance of such Preferred Stock (collectively, a “**Preferred Stock Designation**”).

Section 4.3. Common Stock. Subject to the rights of the holders of any series of Preferred Stock, the powers, preferences and rights, and the qualifications, limitations and restrictions, of the Class A Common Stock, Class B Common Stock, and Class Z Common Stock are as follows:

1. **Dividends**. Subject to the provisions of paragraph 7 of this Section 4.3, holders of Class A Common Stock, Class B Common Stock, and Class Z Common Stock shall be entitled to receive such dividends, payable in cash or otherwise, as may be declared thereon by the Board from time to time out of assets or funds of the Corporation legally available therefor to be distributed among and paid ratably, in accordance with the number of shares of Class A Common Stock, Class B Common Stock, and Class Z Common Stock held by each holder, to the holders of Class A Common Stock, Class B Common Stock, and Class Z Common Stock.
2. **Liquidation**. Subject to the rights of the holders of any series of Preferred Stock then outstanding, in the event of any dissolution, liquidation or winding up of the affairs of the Corporation, whether voluntary or involuntary, after payment or provision for payment of the debts and other liabilities of the Corporation, the remaining assets and funds of the Corporation shall be divided among and paid ratably, in accordance with the number of shares of Class A Common Stock, Class B Common Stock, and Class Z Common Stock held by each such holder, to the holders of Class A Common Stock, Class B Common Stock, and Class Z Common Stock.
3. **Voting**. Subject to the rights of the holders of any series of Preferred Stock then outstanding, on all matters presented to stockholders, every holder of Class A Common Stock shall be entitled to one vote in person or by proxy for each share of Class A Common Stock held by such holder and every holder of Class B Common Stock shall be entitled to one hundred votes in person or by proxy for each share of Class B Common Stock held by such holder. Holders of Class Z Common Stock shall have the rights set forth in this Amended and Restated Certificate of Incorporation but such Class Z Common Stock shall otherwise be non-voting.
4. **Permitted holders for Class B**. (a) The Corporation may issue shares of Class B Common Stock to the holders of Class B Common Stock in connection with the merger of the Corporation’s wholly owned subsidiary with NanoHoldings Inc. (the “**Merger**”), as contemplated by that certain Agreement and Plan of Merger and Exchange, among the Corporation, its wholly-owned subsidiary, NanoHoldings Inc., Applied Nanotech Holdings, Inc., and Carl Zeiss, Inc. (as it may be amended, the “**Merger and Exchange Agreement**”). After the issuance of Class B Common Stock pursuant to the Merger, the Corporation may issue Class B Common Stock only to holders of Class B Common Stock, their Permitted Transferees or as permitted by paragraph 9 of this Section 4.3. No person holding shares of Class B Common Stock (a “**Class B Holder**”) may transfer, and the Corporation shall not register the transfer of, such shares of Class B Common Stock, whether by sale, assignment, gift, bequest, appointment or otherwise, except to a Permitted Transferee of such Class B Holder, which term shall have the following meanings:

(i) In the case of the Class B Holder who is a natural person holding record and beneficial ownership of the shares of Class B Common Stock in question, “**Permitted Transferee**” means (A) a lineal descendant of the individuals who on the effective date of the Merger are partners in the limited partnership that is receiving Class B Common Stock in the Merger, (B) a spouse of a lineal descendant of a person described in clause (A), (C) the trustee of a trust (including without limitation a voting trust) for the benefit of one or more of such Class B Holders, any of the persons specified in subclause (A) or (B) of this clause (i), and any organization contributions to which are deductible for federal income, estate or gift tax purposes (hereinafter called a “Charitable Organization”), and for the benefit of no other person, provided that such trust may (x) grant a general or special power of appointment to such Class B Holder or such Class B Holder’s spouse, (y) permit trust assets to be used to pay taxes, legacies and other obligations of the trust or the estate of such Class B Holder or such Class B Holder’s spouse payable by reason of the death of such Class B Holder or such Class B Holder’s spouse, and (z) may hold assets other than shares of Class B Common Stock for the benefit of others who are not Permitted Transferees, (D) a Charitable Organization established by one or more of such Class B Holders, or any of the persons specified in this clause (i), (E) a corporation all of the outstanding capital stock of which is owned by, or a partnership all of the partners of which are, or a limited liability company, all of the members of which are, one or more of such Class B Holders, and any of the persons specified in this clause (i), provided that if any share of capital stock of such a corporation (or of any survivor of a merger, consolidation, conversion (a “**Survivor**”) of such a corporation), any partnership interest in such a partnership (or any Survivor of such a partnership) or any membership interest in such a limited liability company (or any Survivor of such a limited liability company) is acquired by any person who is not within such class of persons, all shares of Class B Common Stock then held by such corporation, partnership or limited liability company, as the case may be, shall be deemed without further act on anyone’s part to be converted into shares of Class A Common Stock, and stock certificates, if any, formerly representing such shares of Class B Common Stock shall thereupon and thereafter be deemed to represent the like number of shares of Class A Common Stock, and (F) any natural person with respect to whom such Class B Holder would be a Permitted Transferee if such person desired to transfer shares of Class B Common Stock to such Class B Holder.

(ii) In the case of a Class B Holder holding the shares of Class B Common Stock in question as trustee pursuant to a trust other than a trust described in clause (iii) below, “**Permitted Transferee**” means (A) the person or persons who established such trust and (B) a Permitted Transferee of any such person determined pursuant to clause (i) above.

(iii) In the case of a Class B Holder which is a partnership holding record and beneficial ownership of the shares of Class B Common Stock on the record date for the Merger (the “**Record Date**”) in question, “**Permitted Transferee**” means (A) any partner of such partnership, provided that such partner was a partner of such partnership on the Record Date or is a Permitted Transferee of at least one partner who was a partner of such partnership on the Record Date and (B) the Class B Holders who or that transferred the Class B Common Stock to such partnership and any Permitted Transferee of such Class B Holder who or that transferred the Class B Common Stock to said partnership, determined pursuant to clause (i) above. If any partnership interest of such a partnership (or of any Survivor of such a partnership), is acquired by any person who is not within such class of persons permitted by clauses (A) or (B) of this subsection (iii), all shares of Class B Common Stock then held by such partnership shall be deemed without further act on anyone’s part to be converted into shares of Class A Common Stock, and stock certificates, if any, formerly representing such shares of Class B Common Stock shall thereupon and thereafter be deemed to represent the like number of shares of Class A Common Stock.

(iv) In the case of a Class B Holder which is a corporation (other than a Charitable Organization described in subclause (D) of clause (i) above) holding record and beneficial ownership of the shares of Class B Common Stock in question, “**Permitted Transferee**” means (A) any stockholder of such corporation receiving shares of Class B Common Stock through a dividend or redemption or through a distribution made upon liquidation of such corporation, provided that such stockholder was a stockholder of such corporation on the Record Date or is a Permitted Transferee of at least one stockholder who was a stockholder of such corporation on the Record Date, (B) the Survivor of such corporation, provided that each equity owner of each other entity which is a party to such transaction is, at the time of such transaction, a stockholder of such corporation or a Permitted Transferee of at least one stockholder of such corporation, and (C) the Class B Holder who or that transferred the Class B Common Stock to such corporation and any Permitted Transferee of such Class B Holder who or that transferred the Class B Common Stock to such corporation, determined pursuant to clause (i) above. If any share of capital stock of such a corporation (or of any Survivor of such a corporation), is acquired by any person who is not within such class of persons permitted by clauses (A), (B) or (C) of this subsection (iv), all shares of Class B Common Stock then held by such corporation shall be deemed without further act on anyone’s part to be converted into shares of Class A Common Stock, and stock certificates, if any, formerly representing such shares of Class B Common Stock shall thereupon and thereafter be deemed to represent the like number of shares of Class A Common Stock.

(v) In the case of a Class B Holder which is a limited liability company holding record and beneficial ownership of the shares of Class B Common Stock in question, “**Permitted Transferee**” means (A) any member of such limited liability company, provided that such member was a member of such limited liability company on the Record Date or is a Permitted Transferee of at least one member who was a member of such limited liability company on the Record Date, (B) the Survivor of such corporation, provided that each equity owner of each other entity which is a party to such transaction is, at the time of such transaction, a member of such limited liability company or a Permitted Transferee of at least one member of limited liability company, and (C) the Class B Holders who or that transferred the Class B Common Stock to such limited liability company and any Permitted Transferee of such Class B Holder who or that transferred the Class B Common Stock to said limited liability company, determined pursuant to clause (i) above. If any membership interest in such a limited liability company (or of any Survivor of such a limited liability company), is acquired by any person who is not within such class of persons permitted by clauses (A), (B) or (C) of this subsection (v), all shares of Class B Common Stock then held by such limited liability company shall be deemed without further act on anyone’s part to be converted into shares of Class A Common Stock, and stock certificates, if any, formerly representing such shares of Class B Common Stock shall thereupon and thereafter be deemed to represent the like number of shares of Class A Common Stock.

(vi) In the case of a Charitable Organization, “**Permitted Transferee**” means the person who transferred the shares of Class B Common Stock in question thereto and any Permitted Transferee of such person pursuant to clause (i) above.

(vii) In the case of a Class B Holder which is the estate of a deceased or incompetent Class B Holder, or which is the estate of a bankrupt or insolvent Class B Holder, and provided such deceased, incompetent, bankrupt or insolvent Class B Holder, as the case may be, held record and beneficial ownership of the shares of Class B Common Stock in question, “**Permitted Transferee**” means a Permitted Transferee of such deceased, incompetent, bankrupt or insolvent Class B Holder as determined pursuant to clauses (i), (v) or (vi) above, as the case may be.

(viii) In all events, the Corporation is a Permitted Transferee of Class B Common Stock from any Class B Holder.

(b) Notwithstanding anything to the contrary set forth herein, any Class B Holder may pledge such Holder’s shares of Class B Common Stock to a pledgee pursuant to a bona fide pledge of such shares as collateral security for indebtedness due to the pledgee, provided that such shares shall not be transferred to or registered in the name of the pledgee and shall remain subject to the provisions of this paragraph 4. In the event of foreclosure or other similar action by the pledgee, such pledged shares of Class B Common Stock may only be transferred to a Permitted Transferee of the pledgor or converted into shares of Class A Common Stock, as the pledgor may elect.

(c) For purposes of this paragraph 4:

(i) The relationship of any person that is derived by or through legal adoption prior to age 18 shall be considered a natural one.

(ii) The term “**spouse**” shall include a widow or widower.

(iii) Each joint owner of shares of Class B Common Stock shall be considered a “**Class B Holder**” of such shares.

(iv) A minor for whom shares of Class B Common Stock are held pursuant to a Uniform Gifts to Minors Act or similar law shall be considered a Class B Holder of such shares.

(v) Unless otherwise specified, the term “**person**” means both natural and legal entities.

(vii) The term “**natural person**” in Section 4.3, paragraph 4(a)(i) shall include the estate of such natural person in the event such natural person dies or becomes incompetent, bankrupt or insolvent.

(d) Any purported transfer of shares of Class B Common Stock not permitted hereunder shall be void and of no effect and the purported transferee shall have no rights as stockholder of the Corporation and no other right against or with respect to the Corporation. The Corporation may, as a condition to the transfer or the registration of transfer of shares of Class B Common Stock to a purported Permitted Transferee, require the furnishing of such affidavits or other proof as it deems necessary to establish that such transferee is a Permitted Transferee. The Corporation shall note in a written statement with respect to, or on the certificates for, shares of Class B Common Stock (or in the case of uncertificated shares of Class B Common Stock, on the written notice sent pursuant to Section 151(f) of the DGCL) the restrictions on transfer and registration of transfer imposed by this paragraph 4.

5. Permitted holders, anti-dilutive & other rights for Class Z. (a) The Corporation may issue shares of Class Z Common Stock to Carl Zeiss Inc. (the “Zeiss Stockholder”) in exchange for Class Z Units in Nanofilm, Ltd., an Ohio limited liability company (the “**Exchange**”) under the Merger and Exchange Agreement. After the issuance of Class Z Common Stock pursuant to the Exchange, the Corporation may issue Class Z Common Stock only to holders of Class Z Common Stock, their Permitted Transferees or as permitted by paragraph 9 of this Section 4.3. No person holding shares of Class Z Common Stock (a “**Class Z Holder**”) may transfer, and the Corporation shall not register the transfer of, such shares of Class Z Common Stock, whether by sale, assignment, gift, bequest, appointment or otherwise, except to an entity that is, directly or indirectly, wholly owned by the ultimate parent of the Zeiss Stockholder, and if any equity interest in such a wholly-owned entity (or in a Survivor of such entity) is acquired by any person who is not so controlled, all shares of Class Z Common Stock then outstanding shall without further act on anyone’s part to be converted into shares of Class A Common Stock, and stock certificates, if any, formerly representing such shares of Class Z Common Stock shall thereupon and thereafter be deemed to represent the like number of shares of Class A Common Stock.

(b) Any purported transfer of shares of Class Z Common Stock not permitted hereunder shall be void and of no effect and the purported transferee shall have no rights as stockholder of the Corporation and no other right against or with respect to the Corporation. The Corporation may, as a condition to the transfer or the registration of transfer of shares of Class Z Common Stock to a purported permitted transferee under this paragraph 5, require the furnishing of such affidavits or other proof as it deems necessary to establish that such transferee is a permitted transferee. The Corporation shall note in a written statement with respect to, or on the certificates for, shares of Class Z Common Stock (or in the case of uncertificated shares of Class Z Common Stock, on the written notice sent pursuant to Section 151(f) of the DGCL) the restrictions on transfer and registration of transfer imposed by this paragraph 5.

(c) If the Corporation issues additional shares or equity rights that are the economic equivalent of the Class A Common Stock, the Class B Common Stock or the Class Z Common Stock or have the right to subscribe for, purchase or acquire, convert into, be exchangeable or exercisable for or otherwise participate in distributions (whether interim or liquidating) with the Class A Common Stock, the Class B Common Stock or the Class Z Common Stock (such shares, together with the Class A Common Stock, Class B Common Stock and Class Z Common Stock, “**Common Equivalents**”), Class Z Holders and their Permitted Transferees are entitled to purchase the Common Equivalents being issued (unless the Common Equivalents include Class B Common Stock or rights that may become Class B Common Stock in which event the Class Z Holders will be entitled to the equivalent economics without regard to voting rights with respect to Class Z Common Stock) to prevent dilution of the Class Z Common Stock (together with any other Common Equivalents held by the Class Z Holders) as a percentage of the total Common Equivalents. Additional Common Equivalents or Class Z Units, as applicable, may be purchased only if and to the extent necessary to ensure that the economic interest of the Class Z Common Stock (together with any other Common Equivalents held by the Class Z Holders) as a percentage of the total of the Common Equivalents of the Corporation will not be diluted. To exercise its rights, a Class Z Holder must notify the Company, not more than 20 days after receiving the notice, whether or not it elects to make a purchase. Unless the Corporation and the Class Z Holder(s) electing to purchase agree otherwise, a purchase under this paragraph will close not more than 10 days after the election or, if later, the day that the other Common Equivalents are issued. The purchase price for the additional shares of Common Equivalents or Class Z Common Stock, as applicable, will be equal to the price for which the Corporation issues the Common Equivalents to others. The antidilutive rights of this paragraph (c) do not apply to (i) the issuance of Class A Common Stock and Class B Common Stock up to 10% of the Common Equivalents in connection with employee compensation programs approved by the Board, or (ii) the issuance of Common Equivalents that do not reduce the outstanding shares of Class Z Common Stock below 8% of the Common Equivalents. The Corporation covenants that it will at all times prior to taking any action that would trigger the rights set forth in this paragraph 5(c) or paragraph 7 of this Section 4.3 ensure that it has reserved and available such number of shares of Class Z Common Stock as shall be necessary for the holders of Class Z Common Stock to exercise their rights hereunder or enjoying their rights under paragraph 7 of this Section 4.3. The Corporation shall not permit any of its direct or indirect subsidiaries to take any action that would circumvent or frustrate the rights of the holders of Class Z Common Stock under this paragraph 5(c) by issuing equity of any subsidiary without offering the Class Z Holders the right to purchase their pro-rata share thereof on the terms described herein.

(d) The holders of Class Z Common Stock are entitled to receive a copy of any notice sent to the holders of Class A Common Stock or Class B Common Stock, as and when the notice is sent to such holders.

(e) If the Class Z Holders have converted into shares of Class A Common Stock more than one-half of the shares of Class Z Common Stock issued in the Exchange (as that number may have been adjusted under paragraph 7 of this Section 4.3) then all shares of Class Z Common Stock then outstanding shall without further act on anyone’s part to be converted into shares of Class A Common Stock, and stock certificates, if any, formerly representing such shares of Class Z Common Stock shall thereupon and thereafter be deemed to represent the like number of shares of Class A Common Stock, *mutatis mutandis*.

6. Conversion of Class B or Class Z into Class A. (a) Each share of Class B Common Stock and each share of Class Z Common Stock may at any time, at the option of the holder, be converted into one fully paid and nonassessable share of Class A Common Stock. Such right shall be exercised by the delivery by the holder to the Corporation at any time during normal business hours at the principal executive offices of the Corporation, or if an agent for the registration of transfer of shares of Class B Common Stock or Class Z Common Stock is then duly appointed and acting (said agent being hereinafter called the “**Transfer Agent**”) then at the office of the Transfer Agent, of a written notice of the election by the holder thereof to convert such share of Class B Common Stock or Class Z Common Stock and (if so required by the Corporation or the Transfer Agent) instruments of transfer, in form satisfactory to the Corporation and to the Transfer Agent, duly executed by such holder or his duly authorized attorney, and transfer tax stamps or funds therefor, if required pursuant to subparagraph (e) below, accompanied by the certificate, if any, representing such share of Class B Common Stock or Class Z Common Stock or, in lieu thereof, an affidavit that the certificate has been lost, stolen or destroyed in a form reasonably requested by the Corporation which may include an indemnity by which the holder indemnifies the Corporation against any claim that may be made against it relating to the missing certificate.

(b) As promptly as practicable after the (i) delivery of the notice of election to convert shares of Class B Common Stock or Class Z Common Stock and the related documentation as contemplated by and in the manner provided in subparagraph (a) above, (ii) if applicable, surrender for conversion of a certificate representing such shares in the manner provided in subparagraph (a) above, and (iii) payment in cash of any amount required by the provisions of subparagraphs (a) and (e), the Corporation shall deliver or cause to be delivered to the office of the Transfer Agent upon the written order of the holder of such shares uncertificated shares, or upon request, a certificate or certificates, representing the number of full shares of Class A Common Stock issuable upon such conversion, issued in such name or names as such holder may direct. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of the last to occur of (i), (ii) and (iii) above, and all rights of the holder of such shares as such holder shall cease at such time (other than rights to any declared but unpaid dividends) and the person or persons in whose name or names the shares of Class A Common Stock are to be issued shall be treated for all purposes as having become the record holder or holders of such shares of Class A Common Stock at such time; **except**, that any holder who makes such delivery, surrender and payment on any date when the stock transfer books of the Corporation shall be closed shall constitute the person or persons in whose name or names shares of Class A Common Stock are to be issued as the record holder or holders thereof for all purposes immediately prior to the open of business on the next succeeding day on which such stock transfer books are open.

(c) No adjustments in respect of dividends shall be made upon the conversion of any share of Class B Common Stock or Class Z Common Stock, **except** that if a share shall be converted subsequent to the record date for determining the identity of the holder thereof entitled to payment of a dividend or other distribution on shares of Class B Common Stock or Class Z Common Stock but prior to such payment, the registered holder of such share at the close of business on such record date shall be entitled to receive the dividend or other distribution payable on such share on such date notwithstanding the conversion thereof or the Corporation’s default in payment of the dividend due on such date.

(d) The Corporation covenants that it will at all times reserve and keep available, solely for the purpose of issue upon conversion of the outstanding shares of Class B Common Stock and Class Z Common Stock, such number of shares of Class A Common Stock as shall be issuable upon the conversion of all such outstanding shares, provided, that nothing contained herein shall be construed to preclude the Corporation from satisfying its obligations in respect of the conversion of the outstanding shares of Class B Common Stock or Class Z Common Stock by delivery of purchased shares of Class A Common Stock which are held in the treasury of the Corporation. The Corporation covenants that if any shares of Class A Common Stock, required to be reserved for purposes of conversion hereunder, require registration with or approval of any governmental authority under any federal or state law before such shares of Class A Common Stock may be issued upon conversion, the Corporation will use its best efforts to cause such shares to be duly registered or approved, as the case may be. The Corporation covenants that all shares of Class A Common Stock will, upon issue, be fully paid and nonassessable and not subject to any preemptive rights.

(e) The issuance of shares of Class A Common Stock upon conversion of shares of Class B Common Stock or upon conversion of shares of Class Z Common Stock shall be made without charge for any stamp or other similar tax in respect of such issuance which, to the extent applicable, shall be paid by the Corporation. However, if any such shares are to be issued in a name other than that of the holder of the shares of Class B Common Stock or Class Z Common Stock converted, the person or persons requesting the issuance thereof shall pay to the Corporation the amount of any tax which may be payable in respect of any transfer involved in such issuance or shall establish to the reasonable satisfaction of the Corporation that such tax has been paid or is not required to be paid.

7. Share distributions or splits. Each share of Class A Common Stock, Class B Common Stock, and Class Z Common Stock shall be equal in respect of rights to dividends and other distributions in cash, stock or property of the Corporation, provided that in the case of dividends or other distributions payable in stock of the Corporation, including distributions pursuant to stock split-ups or divisions of stock of the Corporation, or any other distributions of stock of any subsidiary of the Corporation only shares of Class A Common Stock shall be distributed with respect to Class A Common Stock, only shares of Class B Common Stock shall be distributed with respect to Class B Common Stock, and only shares of Class Z Common Stock shall be distributed with respect to Class Z Common Stock. Without limiting the foregoing, if there is a stock split, reverse stock split or similar reorganization affecting the Class A Common Stock, the Class B Common Stock or the Class Z Common Stock, the number of shares of Class A Common Stock, Class B Common Stock and Class Z Common Stock shall each be increased or decreased proportionately.

8. Merger, Conversion or Sale. In case of any consolidation, merger, conversion, or sale of all or substantially all of the assets of the Corporation as a result of which stockholders of the Corporation shall be entitled to receive cash, stock, other securities or other property with respect to or in exchange for their stock of the Corporation, each holder of Class A Common Stock, Class B Common Stock, and Class Z Common Stock shall be entitled to receive, with respect to each share, (A) an equal amount of consideration, (B) the same form of consideration, and (C) voting and other rights consistent with those held under this Amended and Restated Certificate of Incorporation prior to the consolidation, merger, conversion or sale.

9. Retirement after conversion, special vote for new Class B or Class Z shares. Except (i) as otherwise provided in paragraph 5 of this Section 4.3, (ii) pursuant to compensation programs for employees of the Corporation (or its direct or indirect subsidiaries) resulting in the issuance of Class B Common Stock to Permitted Holders of such shares for a value not less than the value of a share of Class A Common Stock on the date of grant or issuance, (iii) shares of Class B Common Stock issued to Permitted Holders of such shares as a result of the conversion of notes issued in the Bridge Financing (as that term is used in the Merger and Exchange Agreement) but only if the purchase price and other terms of such notes are the same as the terms for other purchasers in the Bridge Financing, and (iv) as approved by the affirmative vote of the holders of a majority of the voting power of the outstanding voting stock voting together as a single class, the Corporation shall not issue additional shares of Class B Common Stock or of Class Z Common Stock after the date of the Merger and Exchange and all shares of Class B Common Stock or Class Z Common Stock surrendered for conversion or otherwise acquired by the Corporation shall be retired.

10. Vote to Increase Authorized Shares. The number of authorized shares of any class or classes of stock of the Corporation may be increased or decreased (but not below the total number of shares thereof then outstanding plus those reserved as required by this Amended and Restated Certificate of Incorporation) by the affirmative vote of the holders of a majority of the outstanding voting stock of the Corporation entitled to vote thereon irrespective of the provisions of Section 242(b)(2) of the DGCL (or any successor provision thereto).

12. Record Owner. The Corporation shall be entitled to treat the person in whose name any share of its stock is registered as the owner thereof for all purposes, and shall not be bound to recognize any equitable or other claims to, or interest in, such share on the part of any other person, whether or not the Corporation shall have notice thereof, except as expressly provided by applicable law.

ARTICLE 5

Section 5.1. Number, Election and Terms of Directors. (a) Subject to the rights, if any, of the holders of any series of Preferred Stock to elect additional Directors under circumstances specified in a Preferred Stock Designation and the rights, if any, of the holders of Class Z Common Stock described in paragraph (b) of this section 5.1, (i) the number of the Directors of the Corporation will not be less than one, except that the number will be not less than three so long as the holders of Class Z Common Stock have the right to designate a director under paragraph (b) of this Section 5.1, and (ii) subject to clause (i), the authorized number of Directors may be determined from time to time only by a vote of a majority of the total number of Directors then in office. Election of directors need not be by written ballot.

(b) So long as Class Z Common Shares have not all been converted into Class A Common Shares under paragraph 5 or 6 of section 4.3 the holders of Class Z Common Shares may designate an individual to serve as a director of the Corporation and any vacancy in that position shall be filled only by the Class Z Holders. If the Class Z Holders no longer have the right to designate a director, any director designated by the Class Z Holders will (without any further action) be removed from office.

Section 5.2. Nomination of Director Candidates. Advance notice of stockholder nominations for the election of Directors must be given in the manner provided in the Bylaws of the Corporation.

Section 5.3. Removal. Subject to the rights, if any, of the holders of any series of Preferred Stock to elect additional Directors under circumstances specified in a Preferred Stock Designation, any Director (other than a Director designated by the holders of Class Z Common Shares who may be removed by, and only by, those holders (with or without cause) or as described in Section 5.1(b)) may be removed from office by the stockholders with or without cause.

ARTICLE 6

The affirmative vote of the holders of at least a majority of the quorum, voting together as a single class, is required to amend or repeal this Amended and Restated Certificate of Incorporation. In addition, the affirmative vote of the holders of at least 50% of the outstanding shares of Class Z Common Stock is required for any amendment, repeal or change to: (i) Section 5.1(b) or to the parenthetical phrase of Section 5.3; (ii) the distribution provisions of paragraphs 1 and 2 of Section 4.3; (iii) paragraphs 5, 6, 7 and 8 of Section 4.3; (iv) Article 10; (v) to create other differences under this Amended and Restated Certificate to the rights, powers, duties or restrictions applicable to the Class Z Common Stock and either the Class A Common Stock or the Class B Common Stock; or (vi) this sentence.

The Board may make, amend and repeal the Bylaws of the Corporation. Any Bylaw made by the Board under the powers conferred hereby may be amended or repealed by the Board (except as specified in any such Bylaw so made or amended) or by the stockholders in the manner provided in the Bylaws of the Corporation.

ARTICLE 7

To the fullest extent permitted by the DGCL or any other applicable laws as presently or hereafter in effect, no member of the Board shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director with respect to any acts or omissions in the performance of his or her duties as a member of the Board. No amendment to or repeal of this Article 7 shall apply to or have any effect on the liability or alleged liability of any member of the Board for or with respect to any acts or omissions of such member occurring prior to such amendment or repeal.

ARTICLE 8

Section 8.1. Right to Indemnification. The Corporation shall indemnify to the fullest extent permitted by the DGCL, as it now exists or may be amended, any current or former director or officer of the Corporation who is made, or threatened to be made, a party to or is otherwise involved in an action, suit or proceeding, whether civil, criminal, administrative, investigative or other (including an action, suit or proceeding by or in the right of the Corporation) (collectively, a "**proceeding**"), by reason of the fact that such person is or was a director or officer of the Corporation or an administrator or fiduciary with respect to any employee benefit plan of the Corporation, or serves or served at the request of the Corporation as a director, officer, employee or agent, or as an administrator or fiduciary of an employee benefit plan, of another corporation, partnership, joint venture, trust or other enterprise (a "**beneficiary**") against all expense, liability and loss (including attorneys' fees, judgments, fines, Employee Retirement Income Security Act of 1974 (or comparable non-U.S. law) excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such beneficiary in connection therewith; **except** that the Corporation shall indemnify any such beneficiary in connection with a proceeding (or part thereof) initiated by such beneficiary only if such proceeding (or part thereof) was authorized by the Board or is initiated to enforce a beneficiary's rights under this Section 8.1 or Section 8.2. No amendment to this Article 8 that limits the Corporation's obligation to indemnify any person shall have any effect on such obligation for any act or omission that occurs prior to the later of the effective date of the amendment or the date notice of the amendment is given to the person.

Section 8.2. Right to Advancement of Expenses. The rights granted under Section 1 of this Article 8 shall include the right to be paid by the Corporation the expenses (including, without limitation, attorneys' fees and expenses) incurred in defending any such proceeding in advance of its final disposition (an "**advancement of expenses**"); **except** that, if the DGCL so requires, an advancement of expenses incurred by an beneficiary in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such beneficiary, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such beneficiary, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such beneficiary is not entitled to be indemnified for such expenses under this Section 2 or otherwise. The rights to indemnification and to the advancement of expenses conferred in Sections 8.1 and 8.2 shall be contract rights and such rights shall continue as to a beneficiary who has ceased to be a director or officer and shall inure to the benefit of the beneficiary's heirs, executors and administrators. No amendment to this Article 8 that limits the Corporation's obligation regarding advancement of expenses shall have any effect on that right for a claim arising out of an act or omission that occurs prior to the date of the amendment.

Section 8.3. Indemnification of Employees and Agents of the Corporation. The Corporation may, to the extent authorized from time to time by the Board, grant rights to indemnification and to the advancement of expenses to any employee or agent of the Corporation or an administrator or fiduciary with respect to any employee benefit plan to the fullest extent of the provisions of this Article 8 with respect to the indemnification and advancement of expenses of directors and officers of the Corporation.

Section 8.4. Non-Exclusivity of Rights. Any indemnification or advancement of expenses made pursuant to this Article 8 shall not be exclusive of any other right that any person may have or hereafter acquire under any statute, this Amended and Restated Certificate of Incorporation, the Bylaws or any agreement, vote of stockholders or disinterested directors or otherwise.

Section 8.5. Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the DGCL.

ARTICLE 9

Unless the Corporation consents in writing to the selection of an alternative forum, the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) an action asserting a claim arising pursuant to any provision of the DGCL, or (iv) any action asserting a claim governed by the internal affairs doctrine shall be a state or federal court located within the state of Delaware, in all cases subject to the court's having personal jurisdiction over the indispensable parties named as defendants.

ARTICLE 10

To the fullest extent permitted by Section 122(17) of the DGCL (or any successor provision) and except as may be otherwise expressly agreed in writing by the Corporation and the Zeiss Stockholder, the Corporation, on behalf of itself and its subsidiaries, renounces any interest or expectancy of the Corporation and its subsidiaries in, or in being offered an opportunity to participate in, business opportunities, that are from time to time presented to the Zeiss Stockholder or to any of its controlled affiliates or to any of their designees on the Corporation's Board of Directors, even if the opportunity is one that the Corporation or its subsidiaries might reasonably be deemed to have pursued or had the ability or desire to pursue if granted the opportunity to do so, and no such person shall be liable to the Corporation or any of its subsidiaries for breach of any fiduciary or other duty, as a director or otherwise, by reason of the fact that such person pursues or acquires the business opportunity, directs the business opportunity to another person or fails to present the business opportunity, or information regarding the business opportunity, to the Corporation or its subsidiaries unless, in the case of any such person who is a director of the Corporation, the business opportunity is (i) first presented to that individual by the Corporation in good faith in connection with its operations or strategic activities, or (ii) expressly offered to such director in writing solely in his or her capacity as a director of the Corporation; provided, that, in no event shall the foregoing subclauses (i) or (ii) be deemed to expand, and they shall only apply to the extent of, the duties such person would otherwise have under Delaware law. Any person purchasing or otherwise acquiring any interest in any shares of stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article 10. Neither the alteration, amendment or repeal of this Article 10, nor the adoption of any provision of this Amended and Restated Certificate of Incorporation inconsistent with this Article 10, nor, to the fullest extent permitted by Delaware law, any modification of law, shall eliminate or reduce the effect of this Article 10 in respect of any business opportunity first identified or any other matter occurring, or any cause of action, suit or claim that, but for this Article 10, would accrue or arise, prior to the alteration, amendment, repeal, adoption or modification. If any provision or provisions of this Article 10 shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever: (a) the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article 10 (including, without limitation, each portion of any paragraph of this Article 10 containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (b) to the fullest extent possible, the provisions of this Article 10 (including, without limitation, each such portion of any paragraph of this Article 10 containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to permit the Corporation to protect its directors from personal liability in respect of their good faith service to or for the benefit of the Corporation to the fullest extent permitted by law. This Article 10 shall not limit any protections or defenses available to, or indemnification or advancement rights of, any director of the Corporation under this Amended and Restated Certificate of Incorporation, the Corporation's Bylaws, any other agreement between the Corporation and such director or applicable law.

**BYLAWS OF
PEN INC.**

1. OFFICES & AGENT

Section 1.01. Registered Office and Agent. The Corporation shall have and continuously maintain a registered office and registered agent in accordance with the Delaware General Corporation Law (“DGCL”).

Section 1.02 Other Offices. The Corporation may have offices at such place or places within or without the State of Delaware as the Board of Directors may from time to time appoint or the business of the Corporation may require or make desirable.

2. SHAREHOLDERS’ MEETINGS

Section 2.01. Place of Meetings. All meetings of the shareholders shall be held at a place or in a manner as may be fixed from time to time by the Board of Directors.

Section 2.02. Annual Meetings. An annual meeting of the shareholders shall be held at such date and time as may be fixed by resolution of the Board of Directors for the purpose of electing Directors and transacting such other business as may properly be brought before the meeting.

Section 2.03. Special Meetings. Special meetings of the shareholders, for any purpose or purposes, unless otherwise prescribed by the DGCL or the Certificate of Incorporation, may be called by the Chairman of the Board (the “Chairman”) or the Corporation’s Chief Executive Officer; and shall be called by the Chairman or the Secretary: (i) when so directed by the Board of Directors, or (ii) at the written request of shareholders owning shares representing at least twenty-five percent of voting power of the Corporation in the election of Directors. A request for a special meeting shall state the purpose or purposes of the proposed meeting.

Section 2.04. Notice of Meetings. Except as otherwise required or permitted by the DGCL or the Certificate of Incorporation, written notice of each meeting of the shareholders, whether annual or special, shall be served either personally, by mail or electronic transmission, upon each shareholder of record entitled to vote at such meeting, not less than 10 nor more than 60 days before such meeting. If mailed or sent by electronic transmission, such notice shall be directed to a shareholder at the shareholder’s post office address or electronic address last shown on the records of the Corporation. Notice of any special meeting of shareholders shall state the purpose or purposes for which the meeting is called. Notice of any meeting of shareholders shall not be required to be given to any shareholder who, in person or by his attorney thereunto authorized, either before or after such meeting, shall waive such notice by means of a signed writing. Attendance of a shareholder at a meeting, either in person or by proxy, shall of itself constitute waiver of notice and waiver of any and all objections to the place of the meeting, the time of the meeting, and the manner in which it has been called or convened, except when a shareholder attends a meeting solely for the purpose of stating, at the beginning of the meeting, any such objection or objections to the transaction of business. Notice of any adjourned meeting need not be given otherwise than by announcement at the meeting at which the adjournment is taken.

Section 2.05. Quorum. Shareholders owning shares entitling them to exercise at least one third of the voting power in the election of directors shall constitute a quorum at any meeting of the shareholders for the transaction of business, except as otherwise provided by the DGCL, by the Certificate of Incorporation, or by these Bylaws. If, however, the required number shall not be present or represented at any meeting of the shareholders, the shareholders present and entitled to vote shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. At any adjourned meeting at which a quorum is present any business may be transacted that might have been transacted at the meeting as originally called.

Section 2.06. Voting. If a quorum exists, action on a matter by the shareholders (other than the election of Directors) is approved if the votes cast by the holders of the shares represented at the meeting and entitled to vote on the subject matter favoring the action exceed the votes cast opposing the action (with ‘abstentions’ and ‘broker non-votes’ not counted as a vote cast with respect to that matter), unless a greater number of affirmative votes is required by the Certificate of Incorporation or is mandatory under the DGCL. Unless otherwise provided in the Certificate of Incorporation, Directors are elected by a plurality of the votes cast by the shares entitled to vote in the election at a meeting at which a quorum is present (with ‘abstentions’ and ‘broker non-votes’ not counted as a vote cast with respect to that director).

Section 2.07. Conduct of Meetings. The Chairman of the Board of Directors, or in his absence the Chief Executive Officer, or in their absence a person appointed by the Board of Directors, shall preside at meetings of the shareholders. The Secretary of the Corporation, or in the Secretary’s absence, any person appointed by the individual presiding at the meeting shall act as Secretary for meetings of the shareholders. Meetings shall be governed by procedures prescribed by the person presiding at the meeting or by the Board so long as they are not inconsistent with these Bylaws.

Section 2.08. Written Consents. Any action required or permitted to be taken at a meeting of the shareholders of the Corporation may be taken without a meeting if written consent, setting forth the action so taken, shall be signed by persons who would be entitled to vote at a meeting with the voting power necessary to authorize or take such action at a meeting at which all shares entitled to vote were present and voted.

Section 2.09. Shareholder Nominees for Directors. Any shareholder holding shares entitled to vote in the election of directors with an aggregate value of at least \$2,000 may nominate one or more directors if the shareholder gives written notice to the corporate secretary and the notice is received not less than 60 days nor more than 90 days prior to the date of the shareholder meeting; except that, if the Corporation gives less than 75 days' notice of the meeting date or if public disclosure of the date of the meeting is made less than 75 days before the meeting, the notice must be received not later than the close of business on the 10th day following the day on which notice of the date of the meeting was mailed or public disclosure was made, whichever first occurs. The notice must set forth: (i) the name and address of the shareholder making the nomination; (ii) the name, age, principal occupation or employment, business address and residence address of each person to be nominated; (iii) the class and number of shares of stock held of record, owned beneficially and represented by proxy by such shareholder or any person directly or indirectly controlling, controlled by, under common control with or acting in concert with such shareholder (a "Shareholder Associated Person"), and by each person to be nominated as of the record date for the meeting and as of the date of such notice; (iv) a description of all contracts, arrangements, understandings or relationships between (a) the shareholder making the nomination and any Shareholder Associated Person that relate to the nomination, (b) the shareholder making the nomination and the proposed nominee and (c) the shareholder making the nomination, the proposed nominee or any Shareholder Associated Person and any other person or persons that relate to the nomination; (v) such other information regarding each nominee that would be required to be disclosed in a proxy statement; and (vi) the consent of each nominee to serve as a director of the corporation if elected and that nominee's representation that the nominee is qualified under section 3.06 of the Bylaws of the Corporation.

Section 2.10. Shareholder Proposals. Any shareholder holding shares entitled to vote in the election of directors with an aggregate value of at least \$2,000 may present a proposal at a meeting of the shareholder of the Corporation if the shareholder gives written notice to the corporate secretary and the notice is received not less than 60 days nor more than 90 days prior to the date of the shareholder meeting; except that if the Corporation gives less than 75 days' notice of the meeting date or if public disclosure of the date of the meeting is made less than 75 days before the meeting, the notice must be received not later than the close of business on the 10th day following the day on which notice of the date of the meeting was mailed or public disclosure was made, whichever first occurs. Each notice must set forth as to each matter the shareholder proposes to bring before the meeting: (i) a description of each proposed item of business and the reasons for conducting that business at the annual meeting; (ii) any material interest in that business of that shareholder or any Shareholder Associated Person, including any anticipated benefit to the shareholder or any Shareholder Associated Person; (iii) the name and record address of the shareholder proposing to bring that item of business before the meeting; (iv) the class and number of shares of stock held of record, owned beneficially and represented by proxy by that shareholder or any Shareholder Associated Person as of the record date for the meeting and as of the date of the notice; (v) whether and the extent to which any derivative instrument, hedging or other transaction or transactions has been entered into by or on behalf of, or any other agreement or understanding has been made to increase or decrease economic interest in the corporation's stock or manage the risk or benefit of share price changes for, or to increase or decrease the voting power of, that shareholder or any Shareholder Associated Persons with respect to the corporation's stock; (vi) a description of all contracts, arrangements, understandings or relationships between that shareholder and any Shareholder Associated Persons or between that shareholder or any Shareholder Associated Persons and any other person or persons that relate to the proposal of that business by that shareholder; and (vii) all other information which would be required to be included in a proxy statement.

3. BOARD OF DIRECTORS

Section 3.01. Authority. The property and business of the Corporation shall be managed by its Board of Directors. In addition to the powers and authority expressly conferred by these Bylaws, the Board of Directors may exercise all powers of the Corporation and do all such lawful acts and things as are not by the DGCL, by the Certificate of Incorporation, or by these Bylaws directed or required to be exercised or done by the shareholders.

Section 3.02. Number and Term. The Board of Directors shall consist of a set number of members to be fixed by a resolution of the Board of Directors from time to time. Except as provided in the Certificate of Incorporation, each Director (whether elected at an annual meeting of shareholders or otherwise) shall hold office until the annual meeting of shareholders held next after this election, and until a successor shall be elected and qualified, or until his earlier death, resignation, incapacity to serve, or removal. Directors need not be shareholders.

Section 3.03. Vacancies. A vacancy on the Board of Directors shall exist upon the death, resignation, removal, or incapacity to serve of any Director; upon the increase in the number of authorized Directors; and upon the failure of the shareholders to elect the full number of Directors authorized. During a vacancy or vacancies, the remaining Directors shall continue to act. Except as required by the Certificate of Incorporation, vacancies may be filled by the Directors, at any meeting held during the existence of such vacancy. Any Director appointed by the Board of Directors to fill a vacancy, shall serve as a Director until the next annual meeting of the shareholders.

Section 3.04. Place of Meetings. The Board of Directors may hold its meetings at any place or places within or without the State of Delaware or by remote communication.

Section 3.05. Compensation of Directors. Directors may be allowed such compensation for attendance at regular or special meetings of the Board of Directors and of any special or standing committees of the Board of Directors as may from time to time be determined by the Board of Directors.

Section 3.06. Qualifications. No person shall qualify for service as a Director if he or she is a party to any compensatory, payment or other financial agreement, arrangement or understanding with any person or entity other than the Corporation, or has received any such compensation or other payment from any person or entity other than the Corporation, in each case in connection with candidacy or service as a director of the Corporation. Agreements providing only for indemnification and/or reimbursement of out-of-pocket expenses in connection with candidacy as a director (but not, for the avoidance of doubt, in connection with service as a director) and any pre-existing employment agreement a candidate has with his or her employer (not entered into in contemplation of the employer's investment in the Corporation or such employee's candidacy as a director), shall not be disqualifying under this bylaw.

Section 3.07. Resignation. Any Director may resign by giving written notice to the Board of Directors. The resignation shall be effective on receipt, unless the notice specifies a later time for the effective date. If the resignation is effective at a future time, a successor may be elected before that time to take office when the resignation becomes effective.

Section 3.08. Removal. Except as stated in the Certificate of Incorporation, the Shareholders may declare the position of a Director vacant, and may remove such Director for cause if the Director has been declared of unsound mind by a final order of court; the Director has been convicted of a felony; the Director has failed to attend at least 75% of the meetings of the Board during a twelve month period or the Director has been presented with one or more written charges, has been given at least ten days' notice of a hearing at which he may have legal counsel present, and has been given opportunity for such a hearing at a meeting of the Shareholders. Except as stated in the Certificate of Incorporation, the Shareholders may also declare the position of a Director vacant, and may remove such Director without cause, by a majority vote cast at a meeting at which a quorum is present.

Section 3.09. Notice of Meetings. Regular meetings of the Board of Directors may be held at such time and place within or without the State of Delaware as shall from time to time be determined by the Board of Directors by resolution, and that resolution, without more, will constitute notice

Section 3.10. Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board or the Chief Executive Officer on not less than one day's notice by mail, electronic transmission or personal delivery to each Director and shall be called by the Chairman of the Board, the Chief Executive Officer, or the Secretary in like manner and on like notice on the written request of any four or more Directors.

Section 3.11. Notice - Purpose of Meeting. No notice of any special meeting of the Board of Directors need state the purposes for the meeting, and notice is sufficient if it states the time and place or manner of participating in the meeting and the person or persons calling such meeting.

Section 3.12. Quorum. At all meetings of the Board of Directors, the presence of a majority of the Directors then serving shall be necessary and sufficient to constitute a quorum for the transaction of business. The act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically required by the DGCL, by the Certificate of Incorporation or by these Bylaws. In the absence of a quorum, a majority of the Directors present at any meeting may adjourn the meeting from time to time until a quorum is present. Notice of any adjourned meeting need only be given by announcement at the meeting at which the adjournment is taken.

Section 3.13. Telephonic Participation. Directors may participate in meetings of the Board of Directors through use of conference telephone or other remote communications equipment, so long as all Directors participating in the meeting can hear and speak to each other. Such participation is equivalent to personal presence at the meeting.

Section 3.14. Action by Written Consent. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting if a written consent is signed by all members of the Board or of such committee, as the case may be, and the written consent is filed with the minutes of the proceedings of the Board or committee.

4. COMMITTEES OF THE BOARD

Section 4.01. Executive Committee. The Board of Directors may, by resolution adopted by a majority of the entire Board, designate an Executive Committee of three or more Directors. Each member of the Executive Committee shall hold office until the first meeting of the Board of Directors after the annual meeting of the shareholders next following his election and until his successor member of the Executive Committee is elected, or until his death, resignation, removal, or until he shall cease to be a Director.

Section 4.02. Executive Committee-Powers. During the intervals between the meetings of the Board of Directors, the Executive Committee may exercise all the powers of the Board of Directors in the management of the business affairs of the Corporation, including all powers specifically granted to the Board of Directors by these Bylaws or by the Certificate of Incorporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; provided, however, that the Executive Committee shall not have the power to amend or repeal any resolution of the Board of Directors that by its terms does not provide for amendment or repeal by the Executive Committee, and the Executive Committee shall not have the authority of the Board of Directors in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval or (ii) adopting, amending or repealing any of these Bylaws.

Section 4.03. Executive Committee-Meetings. The Executive Committee shall meet from time to time on call of the Chairman of the Board, the Chief Executive Officer, or of any two or more members of the Executive Committee. Meetings of the Executive Committee may be held at such place or places, within or without the State of Delaware, as the Executive Committee shall determine or as may be specified or fixed in the respective notices of such meetings. The executive Committee may fix its own rules of procedure, including provision for notice of its meetings, shall keep a record of its proceedings, and shall report these proceedings to the Board of Directors at the meeting thereof held next after such meeting of the Executive Committee. All such proceedings shall be subject to revision or alteration by the Board of Directors except to the extent that action shall have been taken pursuant to or in reliance upon such proceedings prior to any such revision or alteration. The Executive Committee shall act by majority vote of its members.

Section 4.04. Executive Committee-Alternate Members. The Board of Directors, by resolution adopted in accordance with Section 4.01, may designate one or more Directors as alternate members of the Executive Committee, who may act in the place and stead of any absent member or members at any meeting of such committee.

Section 4.05. Other Committees. The Board of Directors, by resolution adopted by a majority of the entire Board, may designate one or more additional committees, each committee to consist of one or more of the Directors of the Corporation, which shall have such name or names and shall have and may exercise such powers of the Board of Directors in the management of the business and affairs of the Corporation, except the powers denied to the Executive Committee, as may be determined from time to time by the Board of Directors.

Section 4.06. Removal of Committee Members. The Board of Directors shall have power at any time to remove any or all of the members of any committee, with or without cause, and to fill vacancies in and to dissolve any committee.

5. OFFICERS

Section 5.01. Election of Officers. The Board of Directors, at its first meeting after each annual meeting of shareholders, shall elect a Chief Executive Officer and may elect such other Officers as it shall deem necessary who shall hold their offices for such terms as shall be determined by the Board of Directors, and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors or the Chairman of the Board.

Section 5.02. Compensation. The salaries of the Officers of the Corporation shall be fixed by the Board of Directors, except that the Board of Directors may delegate to any Officer or Officers the power to fix the compensation of any Officer.

Section 5.03. Term. Removal. Resignation. Each Officer of the Corporation shall hold office until his successor is chosen or until his earlier resignation, death, removal, or termination of his office. Any Officer may be removed with or without cause by a majority vote of the Board of Directors whenever in its judgment the best interests of the Corporation will be served thereby. Any Officer may resign by giving written notice to the Board of Directors. The resignation shall be effective upon receipt, or at such time as may be specified in such notice.

Section 5.04. Chairman of the Board. The Chairman of the Board shall be the Chief Executive Officer of the Corporation and shall have general and active management of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. He shall be ex officio a member of all standing committees, unless otherwise provided in the resolution appointing the same. The Chairman of the Board shall determine the meeting agenda, call meetings of the shareholders, the Board of Directors, and the Executive Committee to order and shall act as chairman of such meetings.

Section 5.05. Chief Executive Officer. When no Chairman of the Board has been elected, or if a Chairman has been elected and not declared to be the Chief Executive Officer, or in the event of the death or disability of the Chairman of the Board or at his request, the Chief Executive Officer (if such an officer is appointed) shall have all of the powers and perform the duties of the Chairman of the Board. The Chief Executive Officer shall also have such powers and perform such duties as are specifically imposed upon him by law and as may be assigned to him by the Board of Directors or the Chairman of the Board. In the absence of a Chairman of the Board serving as Chief Executive Officer, the Chief Executive Officer shall determine the meeting agenda, call meetings of the shareholders, the Board of Directors, and the Executive Committee to order and shall act as chairman of such meetings. If no other Officers are elected, the Chief Executive Officer shall also have all of the powers and perform the duties of Secretary and Treasurer.

Section 5.06. Secretary. The Secretary shall attend all meetings of the Board of Directors, all meetings of the shareholders, and record all votes and the minutes of all proceedings in books to be kept for that purpose, and shall perform like duties for the standing committees when required. He shall give, or cause to be given, any notice required to be given of any meetings of the shareholders and of the Board of Directors. The Assistant Secretary or Assistant Secretaries shall, in the absence or disability of the Secretary, or at the Secretary's request, perform the duties and exercise the powers and authority granted to the Secretary.

Section 5.07. Treasurer. The Treasurer shall have charge and be responsible for all funds, securities, receipts, and disbursements of the Corporation; he shall render to the Chairman of the Board, the Chief Executive Officer, and to the Board of Directors, whenever requested, an account of the financial condition of the Corporation, and in general, he shall perform all the duties incident to the office of a treasurer of a Corporation, and such other duties as may be assigned to him by the Chairman of the Board, or the Chief Executive Officer.

Section 5.08. Duties. Except as otherwise provided in this Article 5, the corporate officers of the Corporation elected to office by the Board of Directors shall have such powers and perform such duties incident to each of their respective offices and such other duties as may from time to time be conferred upon or assigned to them by the Board of Directors.

6. CAPITAL STOCK

Section 6.01. Share Certificates. Unless the Certificate of Incorporation otherwise provides, or unless the Board of Directors provides by resolution or resolutions that some or all of the shares of any class or classes, or series thereof, of the Corporation's capital stock shall be certificated, the Corporation shall not issue certificates to evidence shares of stock in the Corporation. If under the preceding sentence shares of any class or classes of the Corporation's capital stock are to be certificated, the interest of each shareholder shall be evidenced by a certificate or certificates representing shares of stock of the Corporation in such form as the Board of Directors may from time to time adopt. The certificates shall be consecutively numbered, and the issuance of shares shall be duly recorded in the books of the Corporation as they are issued. Each certificate shall indicate the holder's name, the number of shares, the class of shares and series, if any, represented thereby, a statement that the Corporation is organized under the laws of the State of Delaware, and the par value of each share or a statement that the shares are without par value. Each certificate shall be signed by (i) the Chairman of the Board, the Chief Executive Officer, or the President (if any) and (ii) the Treasurer, Assistant Treasurer, Secretary or Assistant Secretary, if such officer or officers have been elected or appointed by the Corporation, and shall be sealed with the seal of the Corporation; *except* that if such certificate is signed by a transfer agent, or by a transfer clerk acting on behalf of the Corporation, and a registrar, the signature of any Officer of the Corporation, whether because of death, resignation, or otherwise, prior to the delivery of such share certificate by the Corporation, such certificate may nevertheless be delivered as though the person who signed whose facsimile signatures shall have been used thereon had not ceased to be such Officer or Officers.

Section 6.02. Fractional Shares. The Corporation may, but shall not be required to, issue fractional shares of its capital stock if necessary or appropriate to effect authorized transactions. If the Corporation does not issue fractional shares, it shall (i) arrange for the disposition of fractional interests on behalf of those that otherwise would be entitled thereto, (ii) pay in cash the fair value of fractions of a share as of the time when those who otherwise would be entitled to receive such fractions are determined, or (iii) issue scrip or warrants in registered form (either represented by a certificate or uncertificated) or in bearer form (represented by a certificate), which scrip or warrants shall entitle the holder to receive a full share upon surrender of such scrip or warrants aggregating a full share. Fractional shares shall, but scrip or warrants for fractional shares shall not (unless otherwise expressly provided therein), entitle the holder to exercise voting rights, to receive dividends thereon, to participate in the distribution of any assets in the event of liquidation, and otherwise to exercise rights as a holder of capital stock of the class or series to which such fractional shares belong.

Section 6.03. Shareholder Records. The names and addresses of the holders of record of the shares of each class and series of the Corporation's capital stock, together with the number of shares of each class and series held by each record holder, shall be entered on the books of the Corporation. Except as otherwise required by the DGCL or other applicable law, the Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares of capital stock of the Corporation as the person entitled to exercise the rights of a stockholder, including, without limitation, the right to receive any dividends or any other distributions and to vote in person or by proxy at any meeting of the stockholders of the Corporation. The Corporation shall not be bound to recognize any equitable or other claim to or interest in any such shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise expressly required by the DGCL or other applicable law.

Section 6.04. Determination of Shareholders.

(a) For the purpose of determining shareholders entitled to notice of or to vote at any meetings of shareholders or any adjournment thereof, or entitled to receive payment of any dividend, or in order to make a determination of shareholders for any other proper purpose, the Board of Directors may provide that stock transfer books shall be closed for a stated period not to exceed sixty days. If the stock transfer books shall be closed for the purpose of determining shareholders entitled to notice or to vote at a meeting of shareholders, such books shall be closed for at least ten days immediately preceding such meeting.

(b) In lieu of closing stock transfer books, the Board of Directors may fix in advance a date as the record date for any such determination of shareholders, such date to be not more than sixty days and, in case of a meeting of shareholders, not less than ten days, prior to the date on which the particular action requiring such determination of shareholders is to be taken.

Section 6.06. Transfer Agent. The Board of Directors may appoint one or more transfer agents and one or more registrars and may require each stock certificate to bear the signature or signatures of a transfer agent or a registrar or both.

Section 6.07. Replacement Certificates. Any person claiming a certificate of stock to be lost, stolen, or destroyed shall make an affidavit or affirmation of the fact in such manner as the Board of Directors may require and shall, if the Directors so require, give the Corporation a bond of indemnity. Such bond shall be in form and amount satisfactory to the Board of Directors, and shall be with one or more sureties, whereupon an appropriate new certificate may be issued in lieu of the one alleged to have been lost, stolen or destroyed.

7. MISCELLANEOUS

Section 7.01. Inspection of Books. The Board of Directors shall have power to determine which accounts and books of the Corporation, if any, shall be open to the inspection of the shareholders, except with respect to such accounts, books, and records as may by law be specifically open to inspection by the shareholders, and shall have power to fix reasonable rules and regulations not in conflict with the applicable law, if any, for the inspection of records, accounts, and books which by law or by determination of the Board of Directors shall be open to inspection, and the shareholders' rights to this respect are and shall be restricted and limited accordingly.

Section 7.02. Fiscal Year. The fiscal year of the Corporation shall be fixed from time to time by resolution of the Board of Directors.

Section 7.03. Seal. If required, the signature of the Corporation followed by the word "SEAL" or "CORPORATE SEAL" enclosed in parenthesis or scroll, shall be deemed to be the seal of the Corporation.

Section 7.04. Appointment of Agents. The Chairman of the Board, the Chief Executive Officer, or the Secretary shall be authorized and empowered in the name of and as the act and deed of the Corporation to name and appoint general and special agents, representatives, and attorneys to represent the Corporation in the United States or in any foreign country or countries; to name and appoint attorneys and proxies to vote any shares of stock in any other Corporation at any time owned or held of record by the Corporation; to prescribe, limit, and define the powers and duties of such agents, representatives, attorneys, and proxies; and to make substitution, revocation, or cancellation in whole or in part of any power or authority conferred on any such agent, representative, attorney, or proxy. All powers of attorney or other instruments under which such agents, representatives, attorneys, or proxies shall be so named and appointed shall be signed and executed by the Chairman of the Board, the Chief Executive Officer, or the Secretary, and the corporate seal shall be affixed thereto. Any substitution, revocation, or cancellation shall be signed in like manner, provided always that any agent, representative, attorney, or proxy, when so authorized by the instrument appointing him, may substitute or delegate his powers in whole or in part and revoke and cancel such substitutions or delegations. No special authorization by the Board of Directors shall be necessary in connection with the foregoing, but this Bylaw shall be deemed to constitute full and complete authority to the Officers above designated to do all the acts and things as they deem necessary or incidental thereto or in connection therewith.

8. AMENDMENTS

Section 8.01. Amendment. The Bylaws of the Corporation may be altered or amended and new Bylaws may be adopted by the shareholders at any annual or special meeting of the shareholders or by the Board of Directors at any regular or special meeting of the Board of Directors; *except* that, if such action is to be taken at a meeting of the shareholders, notice of the general nature of the proposed change in the Bylaws shall have been given in the notice of the meeting.