

**AMENDED AND RESTATED BYLAWS
OF
TYRATECH, INC.
(a Delaware corporation)
Adopted as of May 23, 2007 and amended of May 19, 2010**

**ARTICLE I
OFFICES AND FISCAL YEAR**

SECTION 1.01. Registered Office.--The registered office of the corporation shall be located at 1209 Orange Street, in the City of Wilmington, County of New Castle, State of Delaware until otherwise established in the manner provided by law.

SECTION 1.02. Other Offices.--The corporation may also have offices at such other places within or without the State of Delaware as the board of directors may from time to time determine or the business of the corporation requires.

SECTION 1.03. Fiscal Year.--The fiscal year of the corporation shall end on the 31st of December in each year.

**ARTICLE II
NOTICE - WAIVERS - MEETINGS**

SECTION 2.01. Notice, What Constitutes.

(a) Notice to Stockholders.--Whenever, under the provisions of the General Corporation Law of the State of Delaware (the "DGCL") or the certificate of incorporation or these bylaws, notice is required to be given to any stockholder, it shall mean (i) notice in writing delivered personally or mailed to the stockholder at his address as it appears on the books of the corporation, or (ii) if consented to by the stockholder, notice by a form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process (any such method, an "electronic transmission").

(b) Notice to Directors.--Whenever, under the provisions of the DGCL or the certificate of incorporation or these bylaws, notice is required to be given to any director, it shall mean (i) notice in writing delivered personally or mailed (whether by United States mail, courier or other form of express delivery service) to the director at his address as it appears on the books of the corporation or (ii) if consented to by the director, notice by electronic transmission.

(c) When Deemed Given.--If the notice is sent by mail, it shall be deemed to be given when deposited in the United States mail, postage prepaid, directed to the stockholder or director at such stockholder's or director's address as it appears on the books of the corporation. If notice is given by facsimile telecommunication, it shall be deemed to be given when directed to a number at which the stockholder or director has consented to receive notice. If notice is given by electronic mail, it shall be deemed given when directed to an electronic mail address at which the stockholder or director has consented to receive notice. If notice is given by a posting on an electronic network together with separate notice to the stockholder or director of such specific posting, it

shall be deemed to be given upon the later of such posting and the giving of such separate notice. If notice is given by another form of electronic transmission, it shall be deemed given when directed to the stockholder or director. Any consent to notice by electronic transmission shall be revocable by the stockholder or director by written notice to the corporation. An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that notice has been given by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

SECTION 2.02. Notice of Meetings of Board of Directors.-- Notice of a regular meeting of the board of directors need not be given. Notice of every special meeting of the board of directors shall be given to each director either (x) in writing delivered personally or mailed (whether by United States mail, courier or other form of express delivery service) to the director at his address as it appears on the books of the corporation or (y) by electronic transmission. Notice by personal delivery or electronic transmission shall be given at least twenty-four hours prior to such special meeting. Notice by courier or express delivery service shall be given at least forty-eight hours prior to such special meeting. Notice by United States mail shall be given at least five days prior to such special meeting. Every such notice shall state the time and place of the meeting. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the board need be specified in a notice of the meeting.

SECTION 2.03. Notice of Meetings of Stockholders.--Written notice of the place, if any, date and hour of every meeting of the stockholders, whether annual or special, as well as the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, shall be given to each stockholder of record entitled to vote at the meeting not less than ten nor more than sixty days before the date of the meeting, or if the capital stock of the corporation is listed on the AIM market of the London Stock Exchange ("AIM") as may otherwise be required under the rules of AIM issued by the London Stock Exchange plc (the "AIM Rules"). Every notice of a special meeting shall state the purpose or purposes thereof.

SECTION 2.04. Waivers of Notice.

(a) Written Waiver.--Whenever notice is required to be given under any provisions of the DGCL or the certificate of incorporation or these bylaws, a written waiver, signed by the person or persons entitled to the notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors, or members of a committee of directors need be specified in any written waiver of notice of such meeting or any waiver by electronic transmission.

(b) Waiver by Attendance.--Attendance of a person at a meeting, either in person or by proxy, shall constitute a waiver of notice of such meeting, except where a person attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting was not lawfully called or convened.

SECTION 2.05. Exception to Requirements of Notice.

(a) General Rule.--Whenever notice is required to be given, under any provision of the DGCL or the certificate of incorporation or these bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given.

(b) Stockholders Without Forwarding Addresses.--Whenever notice is required to be given, under any provision of the DGCL or the certificate of incorporation or these bylaws, to any stockholder to whom (i) notice of two consecutive annual meetings, and all notices of meetings or of the taking of action by written consent without a meeting to such person during the period between such two consecutive annual meetings, or (ii) all, and at least two, payments (if sent by first class mail) of dividends or interest on securities during a 12 month period, have been mailed addressed to such person at his address as shown on the records of the corporation and have been returned undeliverable, the giving of such notice to such person shall not be required. Any action or meeting which shall be taken or held without notice to such person shall have the same force and effect as if such notice had been duly given. If any such person shall deliver to the corporation a written notice setting forth the person's then current address, the requirement that notice be given to such person shall be reinstated. The exception in clause (i) of this subsection (b) shall not be applicable to any notice returned as undeliverable if the notice given was by electronic transmission.

(c) Undeliverable Electronic Transmissions. Any consent to delivery of notice by electronic transmission shall be deemed revoked if (i) the corporation is unable to deliver by electronic transmission two consecutive notices by the corporation in accordance with such consent and (ii) such inability becomes known to the secretary or an assistant secretary of the corporation or to the transfer agent or other person responsible for the giving of notice; provided, however, that the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action. In the event any consent to electronic delivery is deemed revoked under this Section 2.05(c), delivery of notice shall be made by other means unless subject to an exception under subsections (a) or (b) above.

SECTION 2.06. Conference Meetings.--One or more directors may participate in a meeting of the board, or of a committee of the board, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Participation in a meeting pursuant to this section shall constitute presence in person at such meeting.

ARTICLE III

MEETINGS OF STOCKHOLDERS

SECTION 3.01. Place of Meeting; Participation By Remote Communication.—All meetings of the stockholders of the corporation shall be held at such place within or without the State of Delaware as shall be designated by the board of directors in the

notice of such meeting. The board of directors may, in its sole discretion, determine (i) that the meeting shall not be held at any place, but shall instead be held solely by means of remote communication equipment or (ii) that in addition to being held at the place specified in the notice of the meeting, the stockholders may participate in the meeting and be deemed present in person and vote by means of remote communication. Subject to any guidelines or procedures adopted by the board of directors, stockholders and proxyholders not physically present at a meeting of stockholders but who attend by means of remote communication approved by the board of directors may participate in the meeting and be deemed present in person and vote at the meeting; provided, however, that (i) the corporation must implement reasonable measures to verify that each person deemed present and permitted to vote at the meeting by means of remote communication is a stockholder or proxyholder, (ii) the corporation must implement reasonable measures to provide such stockholders and proxyholders a reasonable opportunity to participate in the meeting and to vote on matters submitted to the stockholders, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with such proceedings, and (iii) if any stockholder or proxyholder votes or takes other action at the meeting by means of remote communication, a record of such vote or other action shall be maintained by the corporation.

SECTION 3.02. Annual Meeting.--The board of directors may fix and designate the date and time of the annual meeting of the stockholders, and at said meeting the stockholders then entitled to vote shall elect directors and shall transact such other business as may properly be brought before the meeting, and if applicable, in accordance with the AIM Rules.

SECTION 3.03. Special Meetings.--Special meetings of the stockholders of the corporation may be called at any time by the chairman of the board, a majority of the board of directors, the president, or at the request, in writing, of stockholders entitled to cast at least a majority of the votes that all stockholders are entitled to cast at the particular meeting. At any time, upon the written request of any person or persons who have duly called a special meeting, which written request shall state the purpose or purposes of the meeting, it shall be the duty of the secretary to fix the date of the meeting which shall be held at such date and time as the secretary may fix, not less than ten nor more than sixty days after the receipt of the request, and to give due notice thereof. If the secretary shall neglect or refuse to fix the time and date of such meeting and give notice thereof, the person or persons calling the meeting may do so.

SECTION 3.04. Quorum, Manner of Acting and Adjournment.

(a) Quorum.--The holders of not less than one-third of the shares entitled to vote, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders except as otherwise provided by the DGCL, the AIM Rules, by the certificate of incorporation or by these bylaws. If a quorum is not present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time until a quorum is present or represented, without notice other than announcement

at the meeting of the time and place, if any, to which the meeting has been adjourned and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting. At any such adjourned meeting at which a quorum is present or represented, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

(b) Manner of Acting.--Directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. In all matters other than the election of directors, the affirmative vote of the majority in voting power of shares present in person or represented by proxy at the meeting and entitled to vote thereon shall be the act of the stockholders, unless the question is one upon which, by express provision of the applicable statute or the certificate of incorporation, a different vote is required in which case such express provision shall govern and control the decision of the question. The stockholders present in person or represented by proxy at a duly organized meeting can continue to do business until adjournment, notwithstanding withdrawal of enough stockholders to leave less than a quorum.

SECTION 3.05. Organization.--At every meeting of the stockholders, the chairman of the board, if there be one, or in the case of a vacancy in the office or absence of the chairman of the board, one of the following persons present in the order stated: the vice chairman of the board, if one has been appointed, the president, the vice presidents in their order of rank or seniority, a chairman designated by the board of directors or a chairman chosen by the stockholders entitled to cast a majority of the votes which all stockholders present in person or by proxy are entitled to cast, shall act as chairman of the meeting, and the secretary, or, in the absence of the secretary, an assistant secretary, or in the absence of the secretary and the assistant secretaries, a person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 3.06. Voting.

(a) General Rule.--Unless otherwise provided in or limited by the certificate of incorporation, each stockholder shall be entitled to one vote, in person or by proxy, for each share of capital stock having voting power held by such stockholder.

(b) Voting and Other Action by Proxy.--

(1) A stockholder may authorize another person or persons to act for the stockholder as proxy. In the case of a proxy granted by execution of a writing, such execution may be accomplished by the stockholder or the authorized officer, director, employee or agent of the stockholder signing such writing or causing the stockholder's signature to be affixed to such writing by any reasonable means including, but not limited to, by facsimile signature. A stockholder may authorize another person or persons to act for the stockholder as proxy by transmitting or authorizing the transmission of a telegram, cablegram, or other means of electronic transmission to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or

like agent duly authorized by the person who will be the holder of the proxy to receive such transmission if such telegram, cablegram or other means of electronic transmission sets forth or is submitted with information from which it can be determined that the telegram, cablegram or other electronic transmission was authorized by the stockholder.

(2) No proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period.

(3) A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only so long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the corporation generally.

SECTION 3.07. Consent of Stockholders in Lieu of Meeting.--Any action required to be taken at any annual or special meeting of stockholders of the corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty days of the earliest dated consent delivered in the manner required in this section to the corporation, written consents signed by a sufficient number of holders to take action are delivered to the corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. A telegram, cablegram or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxyholder, or by a person or person authorized to act for a stockholder or proxyholder, shall be deemed to be written, signed and dated for purposes of this section, provided that any such telegram, cablegram or other electronic transmission sets forth or is delivered with information from which the corporation can determine (A) that the telegram, cablegram or other electronic transmission was transmitted by the stockholder or proxyholder or by a person or persons authorized to act for the stockholder or proxyholder and (B) the date on which such stockholder or proxyholder or authorized person or persons transmitted such telegram, cablegram or electronic transmission. The date on which such telegram, cablegram or electronic transmission is transmitted shall be deemed to be the date on which such consent was signed. No consent given by telegram, cablegram or other electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper form shall be delivered to the corporation by delivery to its registered office in the State of Delaware, its

principal place of business or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded.

Notwithstanding the foregoing limitations on delivery, consents given by telegram, cablegram or other electronic transmission may be otherwise delivered to the principal place of business of the corporation or to an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded if, to the extent and in the manner provided by resolution of the board of directors of the corporation. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the corporation.

SECTION 3.08. Voting Lists.--The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting. The list shall be arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Electronic mail addresses or other electronic contact information need not be included on such list. The list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least ten days prior to the meeting: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting.

SECTION 3.09. Inspectors of Election.

(a) **Appointment.**--Elections of directors need not be by written ballot, and the vote upon any other matter need not be by written ballot. In advance of any meeting of stockholders the board of directors may, and if required by law shall, appoint one or more inspectors, who need not be stockholders, to act at the meeting. If inspectors are not so appointed, the chairman of the meeting may, and if required by law shall, and upon the demand of any stockholder or his proxy at the meeting and before voting

begins shall, appoint one or more inspectors. The number of inspectors shall be either one or three, as determined in the case of inspectors appointed upon demand of a stockholder or his proxy, by stockholders present entitled to cast a majority of the votes which all stockholders present are entitled to cast thereon. No person who is a candidate for office shall act as an inspector. In case any person appointed as an inspector fails to appear or fails or refuses to act, the vacancy may be filled by appointment made by the board of directors in advance of the convening of the meeting, or at the meeting by the chairman of the meeting.

(b) Duties.--If inspectors are appointed, they shall determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum and the authenticity, validity and effect of proxies and ballots, shall receive votes or ballots, shall hear and determine all challenges and questions in any way arising in connection with the right to vote, shall count and tabulate all votes, shall determine the result, and shall do such acts as may be proper to conduct the election or vote with fairness to all stockholders. If there be three inspectors of election, the decision, act or certificate of a majority shall be effective in all respects as the decision, act or certificate of all.

(c) Report.--On request of the chairman of the meeting or of any stockholder or his proxy, or if required by law, the inspectors shall make a report in writing of any challenge or question or matter determined by them, and execute a certificate of any fact found by them.

ARTICLE IV BOARD OF DIRECTORS

SECTION 4.01. Powers.--All powers vested by law in the corporation shall be exercised by or under the authority of, and the business and affairs of the corporation shall be managed under the direction of, the board of directors.

SECTION 4.02. Number and Term of Office.—The initial director or directors of the corporation shall be the person or persons specified in the Consent of Incorporator of the corporation. Thereafter, the board of directors shall consist of such number of directors as may be determined from time to time by resolution of the board of directors. Each director shall hold office until the expiration of the term for which he or she was selected and until a successor shall have been elected and qualified or until his or her earlier death, resignation or removal. Directors need not be residents of the State of Delaware or stockholders of the corporation.

SECTION 4.03. Vacancies.--Subject to the provisions of the certificate of incorporation, vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having a right to vote as a single class may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until their successors are elected and qualified or until their earlier death, resignation or removal. If there are no directors in office, then an election of directors may be held in the manner provided by statute. Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the

certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected. If, at the time of filling any vacancy or any newly created directorship, the directors then in office shall constitute less than a majority of the whole board (as constituted immediately prior to any such increase), the Delaware Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office.

SECTION 4.04. Resignations.--Any director may resign at any time upon notice given in writing or by electronic transmission to the corporation. The resignation shall be effective upon receipt thereof by the corporation or at such subsequent time as shall be specified in the notice of resignation and, unless otherwise specified in the notice, the acceptance of the resignation shall not be necessary to make it effective.

SECTION 4.05. Removal.--Any director or the entire board of directors may, unless otherwise provided by law, be removed with or without cause by the holders of shares entitled to cast a majority of the votes which all stockholders are entitled to cast at an election of directors.

SECTION 4.06. Organization.--At every meeting of the board of directors, the chairman of the board, if there be one, or, in the case of a vacancy in the office or absence of the chairman of the board, one of the following officers present in the order stated: the vice chairman of the board, if there be one, the president, the vice presidents in their order of rank and seniority, or a chairman of the meeting chosen by a majority of the directors present, shall preside, and the secretary, or, in the absence of the secretary, an assistant secretary, or in the absence of the secretary and the assistant secretaries, any person appointed by the chairman of the meeting, shall act as secretary of the meeting.

SECTION 4.07. Place of Meeting.--Meetings of the board of directors shall be held at such place within or without the State of Delaware as the board of directors may from time to time determine, or as may be designated in the notice of the meeting.

SECTION 4.08. Regular Meetings.--Regular meetings of the board of directors shall be held without notice at such time and place as shall be designated from time to time by resolution of the board of directors.

SECTION 4.09. Special Meetings.--Special meetings of the board of directors shall be held whenever called by the president or by two or more of the directors.

SECTION 4.10. Quorum, Manner of Acting and Adjournment.

(a) General Rule.--At all meetings of the board a majority of the total number of directors shall constitute a quorum for the transaction of business. The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the

board of directors, except as may be otherwise specifically provided by the DGCL or by the certificate of incorporation. If a quorum is not present at any meeting of the board of directors, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

(b) Unanimous Written Consent.--Unless otherwise restricted by the certificate of incorporation, any action required or permitted to be taken at any meeting of the board of directors may be taken without a meeting, if all members of the board consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

SECTION 4.11. Executive and Other Committees.

(a) Establishment.--The board of directors may, by resolution, establish an Executive Committee and one or more other committees, each committee to consist of one or more directors. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee and the alternate or alternates, if any, designated for such member, the member or members of the committee present at any meeting and not disqualified from voting, whether or not they constitute a quorum, may unanimously appoint another director to act at the meeting in the place of any such absent or disqualified member.

(b) Powers.--The Executive Committee, if established, and any such other committee to the extent provided in the resolution establishing such committee shall have and may exercise all the power and authority of the board of directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any bylaw of the corporation. The Executive Committee shall, without limitation, have the power and authority to declare dividends, to authorize the issuance of stock and to adopt a certificate of ownership and merger pursuant to Section 253 of the DGCL (provided that no vote of stockholders of the corporation is required for the effectuation of such merger). Other committees shall have such names as may be determined from time to time by resolution adopted by the board of directors. Each committee so formed shall keep regular minutes of its meetings and report the same to the board of directors when required.

(c) Committee Procedures.--The term "board of directors" or "board," when used in any provision of these bylaws relating to the organization or procedures of or the manner of taking action by the board of directors, shall be construed to include and refer to the Executive Committee and any other committees of the board.

SECTION 4.12. Compensation of Directors.--Unless otherwise restricted by the certificate of incorporation, the board of directors shall have the authority to fix the compensation of directors.

ARTICLE V OFFICERS

SECTION 5.01. Number, Qualifications and Designation.--The officers of the corporation shall be chosen by the board of directors and shall include a president, one or more vice presidents, a secretary, a treasurer, and such other officers as may be elected in accordance with the provisions of Section 5.03 of this Article V. Any number of offices may be held by the same person. Officers may, but need not, be directors or stockholders of the corporation. The board of directors may elect from among the members of the board a chairman of the board and a vice chairman of the board who shall be officers of the corporation. The chairman of the board or the president, as designated from time to time by the board of directors, shall be the chief executive officer of the corporation.

SECTION 5.02. Election and Term of Office.--The officers of the corporation, except those elected by delegated authority pursuant to section 5.03 of this Article, shall be elected annually by the board of directors, and each such officer shall hold office for a term of one year and until a successor is elected and qualified, or until his or her earlier resignation or removal. Any officer may resign at any time upon written notice to the corporation.

SECTION 5.03. Subordinate Officers, Committees and Agents.--The board of directors may from time to time elect such other officers and appoint such committees, employees or other agents as it deems necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as are provided in these bylaws, or as the board of directors may from time to time determine. The board of directors may delegate to any officer or committee the power to elect subordinate officers and to retain or appoint employees or other agents, or committees thereof, and to prescribe the authority and duties of such subordinate officers, committees, employees or other agents.

SECTION 5.04. The Chairman and Vice Chairman of the Board.--The chairman of the board, if there be one, or in the absence of the chairman, the vice chairman of the board, if there be one, shall preside at all meetings of the stockholders and of the board of directors, and shall perform such other duties as may from time to time be assigned to them by the board of directors

SECTION 5.05. The President.--The president shall have general supervision over the business and operations of the corporation, subject, however, to the control of the board of directors. The president shall, in general, perform all duties incident to the office of president, and such other duties as from time to time may be assigned by the board of directors and, if the chairman of the board is the chief executive officer, the chairman of the board.

SECTION 5.06. The Vice Presidents.--The vice presidents shall perform the duties of the president in the absence of the president and such other duties as may from time to time be assigned to them by the board of directors or by the president.

SECTION 5.07. The Secretary.--The secretary, or an assistant secretary, shall attend all meetings of the stockholders and of the board of directors and shall record the proceedings of the stockholders and of the directors and of committees of the board in a book or books to be kept for that purpose; shall see that notices are given and records and reports properly kept and filed by the corporation as required by law; shall be the custodian of the seal of the corporation and see that it is affixed to all documents to be executed on behalf of the corporation under its seal; and, in general, shall perform all duties incident to the office of secretary, and such other duties as may from time to time be assigned by the board of directors or the president.

SECTION 5.08. The Treasurer.--The treasurer, or an assistant treasurer, shall have or provide for the custody of the funds or other property of the corporation; shall collect and receive or provide for the collection and receipt of moneys earned by or in any manner due to or received by the corporation; shall deposit all funds in his or her custody as treasurer in such banks or other places of deposit as the board of directors may from time to time designate; whenever so required by the board of directors, shall render an account showing his or her transactions as treasurer and the financial condition of the corporation; and, in general, shall discharge such other duties as may from time to time be assigned by the board of directors or the president.

SECTION 5.09. Officers' Bonds.--No officer of the corporation need provide a bond to guarantee the faithful discharge of the officer's duties unless the board of directors shall by resolution so require a bond in which event such officer shall give the corporation a bond (which shall be renewed if and as required) in such sum and with such surety or sureties as shall be satisfactory to the board of directors for the faithful performance of the duties of office.

SECTION 5.10. Salaries.--The salaries of the officers and agents of the corporation elected by the board of directors shall be fixed from time to time by the board of directors.

ARTICLE VI CERTIFICATES OF STOCK AND TRANSFER

SECTION 6.01. Form and Issuance.

(a) Issuance.--The shares of the corporation shall be represented by certificates unless the board of directors shall by resolution provide that some or all of any class or series of stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until the certificate is surrendered to the corporation. Notwithstanding the adoption of any resolution providing for uncertificated shares, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the corporation by, the chairman or vice chairman of the board of directors, or the

president or vice president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary, representing the number of shares registered in certificate form.

(b) Form and Records.--Stock certificates of the corporation shall be in such form as approved by the board of directors. The stock record books and the blank stock certificate books shall be kept by the secretary or by any agency designated by the board of directors for that purpose. The stock certificates of the corporation shall be numbered and registered in the stock ledger and transfer books of the corporation as they are issued. Any restrictions on the transfer of shares shall be conspicuously noted on the face of any stock certificates issued by the Corporation.

(c) Signatures.--Any of or all the signatures upon the stock certificates of the corporation may be a facsimile. In case any officer, transfer agent or registrar who has signed, or whose facsimile signature has been placed upon, any share certificate shall have ceased to be such officer, transfer agent or registrar, before the certificate is issued, it may be issued with the same effect as if the signatory were such officer, transfer agent or registrar at the date of its issue.

SECTION 6.02. Transfer.--(a) Transfers of shares shall be made on the share register or transfer books of the corporation upon payment of all necessary transfer taxes surrender of the certificate therefore, endorsed by the person named in the certificate or by an attorney lawfully constituted in writing. No transfer shall be made which would be inconsistent with the provisions of Article 8, Title 6 of the Delaware Uniform Commercial Code-Investment Securities.

(b) The corporation will refuse to register any transfer of such shares (i) during the one year Distribution Compliance Period (as defined in Section 902 of the U.S. Securities Act of 1933, as amended (the "Securities Act")) with respect to the common stock which has been issued or sold pursuant to Regulation S under the Securities Act unless such transfer is made in accordance with the provisions of Regulation S, pursuant to registration under the Securities Act or pursuant to an available exemption from registration under the Securities Act; or (ii) as otherwise set forth in the certificate of incorporation.

SECTION 6.03. Lost, Stolen, Destroyed or Mutilated Certificates.--The board of directors may direct a new certificate of stock or uncertificated shares to be issued in place of any certificate theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. When authorizing such issue of a new certificate or certificates, the board of directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate or certificates, or the legal representative of the owner, to give the corporation a bond sufficient to indemnify against any claim that may be made against the corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate or uncertificated shares.

SECTION 6.04. Record Holder of Shares.--The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and

assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of the State of Delaware.

SECTION 6.05. Determination of Stockholders of Record.

(a) Meetings of Stockholders.--In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors, and which record date shall not be more than sixty nor less than ten days before the date of such meeting. If no record date is fixed by the board of directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting unless the board of directors fixes a new record date for the adjourned meeting.

(b) Consent of Stockholders.--In order that the corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors, and which date shall not be more than ten days after the date upon which the resolution fixing the record date is adopted by the board of directors. If no record date has been fixed by the board of directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the board of directors is required by the DGCL, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the board of directors and prior action by the board of directors is required by the DGCL, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the board of directors adopts the resolution taking such prior action.

(c) Dividends.--In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty days prior to such action. If no record date is fixed, the record date for

determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

ARTICLE VII INDEMNIFICATION

SECTION 7.01. Right to Indemnification.--The corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "Indemnitee") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he, or a person for whom he is the legal representative, is or was a director or officer of the corporation or, while a director or officer of the corporation, is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Indemnitee. Notwithstanding the preceding sentence, except as otherwise provided in Section 7.03, the corporation shall be required to indemnify an Indemnitee in connection with a proceeding (or part thereof) commenced by such Indemnitee only if the commencement of such proceeding (or part thereof) by the Indemnitee was authorized by the board of directors of the corporation.

SECTION 7.02. Prepayment of Expenses.--The corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnitee in defending any proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the Indemnitee to repay all amounts advanced if it should be ultimately determined that the Indemnitee is not entitled to be indemnified under this Article VII or otherwise.

SECTION 7.03. Claims.--If a claim for indemnification or payment of expenses under this Article VII is not paid in full within sixty days after a written claim therefore by the Indemnitee has been received by the corporation, the Indemnitee may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of (including reasonable attorneys' fees) prosecuting such claim. In any such action the corporation shall have the burden of proving that the Indemnitee is not entitled to the requested indemnification or payment of expenses under applicable law.

SECTION 7.04. Nonexclusivity of Rights.--The rights conferred on any Indemnitee by this Article VII shall not be exclusive of any other rights which such Indemnitee may have or hereafter acquire under any statute, provision of the certificate of incorporation, these bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

SECTION 7.05. Other Sources.--The corporation's obligation, if any, to indemnify or to advance expenses to any Indemnitee who was or is serving at its request as a director,

officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Indemnitee may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or nonprofit entity.

SECTION 7.06. Amendment or Repeal.-- Any repeal or modification of the foregoing provisions of this Article VII shall not adversely affect any right or protection hereunder of any Indemnitee in respect of any act or omission occurring prior to the time of such repeal or modification.

SECTION 7.07. Other Indemnification and Prepayment of Expenses.--This Article VII shall not limit the right of the corporation, to the extent and in the manner permitted by law, to indemnify and to advance expenses to persons other than Indemnitees when and as authorized by appropriate corporate action.

ARTICLE VIII GENERAL PROVISIONS

SECTION 8.01. Dividends.--Subject to the restrictions contained in the DGCL and any restrictions contained in the certificate of incorporation, the board of directors may declare and pay dividends upon the shares of capital stock of the corporation.

SECTION 8.02. Contracts.--Except as otherwise provided in these bylaws, the board of directors may authorize any officer or officers including the chairman and vice chairman of the board of directors, or any agent or agents, to enter into any contract or to execute or deliver any instrument on behalf of the corporation and such authority may be general or confined to specific instances.

SECTION 8.03. Corporate Seal.--The corporation shall have a corporate seal, which shall have inscribed thereon the name of the corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

SECTION 8.04. Deposits.--All funds of the corporation shall be deposited from time to time to the credit of the corporation in such banks, trust companies, or other depositories as the board of directors may approve or designate, and all such funds shall be withdrawn only upon checks signed by such one or more officers or employees as the board of directors shall from time to time determine.

SECTION 8.05. Corporate Records.

(a) Examination by Stockholders.--Every stockholder shall, upon written demand under oath stating the purpose thereof, have a right to examine, in person or by agent or attorney, during the usual hours for business, for any proper purpose, the stock ledger, list of stockholders, books or records of account, and records of the proceedings of the stockholders and directors of the corporation, and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent shall be the person

who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing which authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal place of business. Where the stockholder seeks to inspect the books and records of the corporation, other than its stock ledger or list of stockholders, the stockholder shall first establish (1) that the stockholder has complied with the provisions of this section respecting the form and manner of making demand for inspection of such documents; and (2) that the inspection sought is for a proper purpose. Where the stockholder seeks to inspect the stock ledger or list of stockholders of the corporation and has complied with the provisions of this section respecting the form and manner of making demand for inspection of such documents, the burden of proof shall be upon the corporation to establish that the inspection sought is for an improper purpose.

(b) Examination by Directors.--Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders and its other books and records for a purpose reasonably related to the person's position as a director.

SECTION 8.06. Amendment of Bylaws.--These bylaws may be altered, amended or repealed or new bylaws may be adopted either (1) by vote of the stockholders holding not less than a majority of the outstanding capital stock of the corporation at a duly organized annual or special meeting of stockholders, or (2) by vote of a majority of the board of directors at any regular or special meeting of directors if such power is conferred upon the board of directors by the certificate of incorporation.