

AMENDED AND RESTATED BYLAWS
OF
CRAY INC.

SECTION 1

SHAREHOLDERS AND SHAREHOLDERS' MEETINGS

1.1 Annual Meeting. The annual meeting of the shareholders of this corporation (the "Corporation") for the election of directors and for the transaction of such other business as may properly come before the meeting shall be held each year at the principal office of the Corporation, or at some other place either within or without the State of Washington as designated by the Board of Directors, on the day and at the time specified in Exhibit A, which is attached hereto and incorporated herein by this reference, or on such other day and time as may be set by the Board of Directors. If the specified day is a Sunday or a legal holiday, then the meeting will take place on the next business day at the same time or on such other day and time as may be set by the Board of Directors.

1.2 Special Meetings. Special meetings of the shareholders for any purpose or purposes may be called at any time by the Chairman of the Board, the President or a majority of the Board of Directors. Further, for so long as the Corporation is a "public company" under Title 23B RCW, a special meeting of the shareholders shall be held if the holders of not less than 30% of all the votes entitled to be cast on the issue proposed to be considered at such special meeting have dated, signed and delivered to the Secretary one or more written demands for such meeting, describing the purpose or purposes for which it is to be held; provided, however, that if the Corporation is not a "public company" under Title 23B RCW, the percentage of votes required to call a special meeting shall be 25%. The meetings shall be held at such time and place as the Board of Directors may prescribe, or, if not held upon the request of the Board of Directors, at such time and place as may be established by the Chairman of the Board or the President, as applicable, or by the Secretary in the absence of the Chairman and President.

1.3 Notice of Meetings. Notice of the place, date and time of the annual shareholders' meeting and notice of the place, date, time and purpose or purposes of special shareholders' meetings shall be delivered not less than 10 (or, if required by Washington law, 20) or more than 60 days before the date of the meeting, either personally, by facsimile, by mail, by electronic transmission in accordance with applicable law, or in any other manner approved by law, by or at the direction of the Chairman, the President or the Secretary, to each shareholder of record entitled to notice of such meeting. Mailed notices shall be deemed to be delivered when deposited in the

mail, first-class postage prepaid, correctly addressed to the shareholder's address shown in the Corporation's current record of shareholders. Notice given in any other manner shall be deemed effective when and as provided under applicable law.

1.4 Waiver of Notice. Except where expressly prohibited by law or the Restated Articles of Incorporation, notice of the place, date, time and purpose or purposes of any shareholders' meeting may be waived either before or after the meeting. Such waiver may be provided by the shareholder to the Corporation either (a) in an executed and dated written record or (b) if the Corporation has designated an address, location or system to which such waiver may be electronically transmitted and such waiver is electronically transmitted to such designated address, location, or system, in an executed and dated electronically transmitted record. Attendance at the meeting in person or by proxy waives objection to lack of notice or defective notice of the meeting unless the shareholder at the beginning of the meeting objects to holding the meeting or transacting business at the meeting. A shareholder waives objection to consideration of a particular matter at a meeting that is not within the purpose or purposes described in the meeting notice, unless the shareholder objects to considering the matter when it is presented.

1.5 Shareholders' Action Without a Meeting. The shareholders may take any action without a meeting that they could properly take at a meeting, if one or more consents setting forth the action so taken are executed by all of the shareholders entitled to vote with respect to the subject matter and are delivered to the Corporation for inclusion in the minutes or filing with the corporate records. Any consent, or subsequent withdrawal of such consent, delivered to the Corporation shall be (a) in an executed record or (b) if the Corporation has designated an address, location, or system to which the consent may be electronically transmitted and the consent is electronically transmitted to the designated address, location, or system, in an executed electronically transmitted record. If required by Washington law, all nonvoting shareholders must be given notice of the proposed action at least 10 days before the action is taken, unless such notice is waived in a manner consistent with these Bylaws. Any such notice shall be in such form as may be required by applicable law. Actions taken under this section are effective when all consents are in the possession of the Corporation, unless otherwise specified in the consent. A shareholder may withdraw consent only by delivering notice of withdrawal to the Corporation prior to the time that all consents are in the possession of the Corporation and such notice of withdrawal is in the form set forth above.

1.6 Telephone Meetings. Shareholders may participate in a meeting of shareholders by means of a conference telephone or any similar communications equipment that enables all persons participating in the meeting to hear each other during the meeting. Participation by such means shall constitute presence in person at a meeting.

1.7 List of Shareholders. At least 10 days before any shareholders' meeting, the Secretary of the Corporation or the agent having charge of the stock transfer books of the Corporation shall have prepared an alphabetical list of the names of the

shareholders on the record date who are entitled to notice of a shareholders' meeting, arranged by voting group, and within each voting group, by class or series of shares, and showing the address of and number of shares held by each shareholder.

1.8 Quorum and Voting. The presence in person or by proxy of the holders of a majority of the votes entitled to be cast on a matter at a meeting shall constitute a quorum of shareholders for that matter. If a quorum exists, action on a matter shall be approved by a voting group if the votes cast within a voting group favoring the action exceed the votes cast within the voting group opposing the action, unless a greater number of affirmative votes is required by the Restated Articles of Incorporation or by Washington law. If the Restated Articles of Incorporation or Washington law provide for voting by two or more voting groups on a matter, action on a matter is taken only when voted upon by each of those voting groups counted separately. Action may be taken by one voting group on a matter even though no action is taken by another voting group.

1.9 Adjourned Meetings. If a shareholders' meeting is adjourned to a different place, date or time, whether for failure to achieve a quorum or otherwise, notice need not be given of the new place, date or time if the new place, date or time is announced at the meeting before adjournment. When a determination of shareholders entitled to vote at any meeting of shareholders has been made as provided in these Bylaws, that determination shall apply to any adjournment thereof, unless Washington law requires fixing a new record date. If Washington law requires that a new record date be set for the adjourned meeting, notice of the adjourned meeting must be given to shareholders as of the new record date. Any business may be transacted at an adjourned meeting that could have been transacted at the meeting as originally called.

1.10 Proxies. A shareholder may appoint a proxy to vote or otherwise act for the shareholder by (a) executing a writing authorizing another person or persons to act for the shareholder as proxy or (b) transmitting or authorizing the transmission of an electronic transmission which contains or is accompanied by information from which it can be reasonably verified that the transmission was authorized by the shareholder or by the shareholder's attorney-in-fact. The Corporation shall require the holders of proxies by transmission to provide to the Corporation copies of the transmission and the Corporation shall retain copies of the transmission for at least 60 days after the election. No appointment shall be valid after 11 months from the date of its execution unless the appointment form expressly so provides. An appointment of a proxy is revocable unless the appointment is coupled with an interest. No revocation shall be effective until notice thereof has actually been received by the Secretary of the Corporation or any other person authorized to tabulate votes and such notice of revocation is given by (a) executing a writing revoking the proxy or (b) transmitting or authorizing the transmission of an electronic transmission which contains or is accompanied by information from which it can be reasonably verified that the transmission was authorized by the shareholder or by the shareholder's attorney-in-fact.

1.11 Business for Shareholders' Meetings.

1.11.1 Business at Annual Meetings.

(a) In addition to the election of directors, other proper business may be transacted at an annual meeting of shareholders, provided that such business is properly brought before such meeting. To be properly brought before an annual meeting business must be (i) brought by or at the direction of the Board or (ii) brought before the meeting by a shareholder by inclusion in the Corporation's proxy statement pursuant to the provisions of Rule 14a-8 under Section 14 of the Securities Exchange Act of 1934, as amended, or any successor provision, when and if such Rule is applicable thereto, or if such business is not so included in the Corporation's proxy statement, only pursuant to written notice thereof in accordance with subsection 1.12 hereof, and received by the Secretary not fewer than 60 nor more than 90 days prior to the date of such annual meeting (or, if less than 60 days' notice or prior public disclosure of the date of the annual meeting is given or made to the shareholders, not later than the close of business on the tenth business day following the day on which such notice of the date of the annual meeting was mailed or such public disclosure was made, whichever first occurs).

(b) Any such shareholder notice shall set forth (i) the name and address of the shareholder proposing such business; (ii) a representation that the shareholder is entitled to vote at such meeting; (iii) a statement of the number of shares of the Corporation which are beneficially owned by the shareholder and the date upon which such shares were acquired; (iv) a representation that the shareholder intends to appear in person or by proxy at the meeting to propose such business; and (v) as to each matter the shareholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, the language of the proposal (if appropriate), and any material interest of the shareholder in such business.

(c) No business shall be conducted at any annual meeting of shareholders except in accordance with this subsection 1.11.1. If the facts warrant, the Board, or the chairman of an annual meeting of shareholders, may determine and declare that (i) a proposal does not constitute proper business to be transacted at the meeting or (ii) the business was not properly brought before the meeting in accordance with the provisions of this subsection 1.11.1 and if, in either case, it is so determined, any such business shall not be transacted.

1.11.2 Business at Special Meetings. At any special meeting of the shareholders, only business within the purpose or purposes described in the meeting notice required by Section 1.3 may be conducted.

1.12 Notice to Corporation. Any written notice required to be delivered by a shareholder to the Corporation pursuant to section 1.2 or section 1.11 hereof must be given, either by personal delivery or by registered or certified mail, postage prepaid, to the Secretary at the Corporation's principal office.

SECTION 2

BOARD OF DIRECTORS

2.1 Number and Qualification. The business affairs and property of the Corporation shall be managed under the direction of a Board of Directors, the number of members of which is hereby set at eight (8). A member of the Board of Directors does not need to be a shareholder of the Corporation or a Washington resident.

2.2 Election--Term of Office.

2.2.1 The directors shall be elected by the shareholders at each annual shareholders' meeting or at a special shareholders' meeting called for such purpose.

2.2.2 The term of office of a director shall commence effective immediately upon election, unless otherwise specified in a resolution approved by the shareholders in connection with the election of such director, and shall expire at the next annual shareholders' meeting following their election. Notwithstanding any of the foregoing provisions of this Section 2.2.2, directors shall serve until their successors are elected and qualified or until their earlier death, resignation or removal from office, or until there is a decrease in the number of directors; provided, however, that no decrease in the number of directors shall have the effect of shortening the term of any incumbent director.

2.3 Nominations.

2.3.1 Only persons who are nominated in accordance with the following procedures shall be eligible for election as directors by the shareholders. Nominations for the election of directors may be made (a) by or at the direction of the Board or (b) by any shareholder of record entitled to vote for the election of directors at such meeting; provided, however, that a shareholder may nominate persons for election as directors only if written notice (in accordance with section 1.12 hereof) of such shareholder's intention to make such nominations is received by the Secretary not later than (i) with respect to an election to be held at an annual meeting of the shareholders, not fewer than 60 nor more than 90 days prior to the date of such annual meeting (or, if less than 60 days' notice or prior public disclosure of the date of the annual meeting is given or made to the shareholders, not later than the close of business on the tenth business day following the day on which such notice of the date of the annual meeting was mailed or such public disclosure was made, whichever first occurs) and (ii) with respect to an election to be held at a special meeting of the shareholders for the election of directors, the close of business on the tenth business day following the date on which notice of such meeting is first mailed to shareholders.

2.3.2 Any such shareholder's notice shall set forth (a) the name and address of the shareholder who intends to make a nomination; (b) a representation that the shareholder is entitled to vote at such meeting; (c) a statement of the number of shares of the Corporation which are beneficially owned by the shareholder and the dates upon which such shares were acquired; (d) a representation that the shareholder intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice; (e) as to each person the shareholder proposes to nominate for election or reelection as a director, the name and address of such person and such other information regarding such nominee as would be required in a proxy statement filed pursuant to the proxy rules of the Securities and Exchange Commission had such nominee been nominated by the Board, and a description of any arrangements or understandings, between the shareholder and such nominee and any other persons (including their names), pursuant to which the nomination is to be made; and (f) the consent of each such nominee to serve as a director if elected.

2.3.3 If the facts warrant, the Board, or the chairman of a shareholders' meeting at which directors are to be elected, shall determine and declare that a nomination was not made in accordance with the foregoing procedure and, if it is so determined, the defective nomination shall be disregarded. The right of shareholders to make nominations pursuant to the foregoing procedure is subject to the rights of the holders of any class or series of stock having a preference over the Common Stock as to dividends or upon liquidation. The procedures set forth in this section 2.3 for nomination for the election of directors by shareholders are in addition to, and not in limitation of, any procedures now in effect or hereafter adopted by or at the direction of the Board or any committee thereof.

2.4 Removal.

2.4.1 Any director or the entire Board of Directors may be removed only for cause and only by the holders of not less than two-thirds of the shares entitled to elect the director or directors whose removal is sought. Such action may only be taken at a special meeting of the shareholders called expressly for that purpose, provided that notice of the proposed removal, which shall include a statement of the charges alleged against the director, shall have been duly given to the shareholders together with or as a part of the notice of the meeting.

2.4.2 The vacancy created by the removal of a director under this section 2.4 shall be filled only by a vote of the holders of two-thirds of the shares then entitled to elect the director removed. Such vote may be taken at the same meeting at which the removal of such director was accomplished, or at such later meeting, annual or special, as the shareholders may decide.

2.5 Vacancies. Subject to the provisions of section 2.4 hereof and unless the Restated Articles of Incorporation provide otherwise, vacancies in the Board of Directors, whether caused by resignation, death, retirement, disqualification, increase in the number of directors, or otherwise, may be filled for the remainder of the term by the

Board of Directors, by the shareholders, or, if the directors in office constitute less than a quorum of the Board of Directors, by an affirmative vote of a majority of the remaining directors. The term of a director elected to fill a vacancy expires upon the election and qualification of his or her successor. A vacancy that will occur at a specific later date may be filled before the vacancy occurs, but the new director may not take office until the vacancy occurs.

2.6 Quorum and Voting. At any meeting of the Board of Directors, the presence in person (including presence by electronic means such as a telephone conference call) of a majority of the number of directors presently in office shall constitute a quorum for the transaction of business. Notwithstanding the foregoing, in no case shall a quorum be less than one-third of the authorized number of directors. If a quorum is present at the time of a vote, the affirmative vote of a majority of the directors present at the time of the vote shall be the act of the Board of Directors and of the Corporation except as may be otherwise specifically provided by the Restated Articles of Incorporation, by these Bylaws, or by law. A director who is present at a meeting of the Board of Directors when action is taken is deemed to have assented to the action taken unless: (a) the director objects at the beginning of the meeting, or promptly upon his or her arrival, to holding it or to transacting business at the meeting; (b) the director's dissent or abstention from the action taken is entered in the minutes of the meeting; or (c) the director delivers written notice of his or her dissent or abstention to the presiding officer of the meeting before its adjournment or to the Corporation within a reasonable time after adjournment of the meeting. The right of dissent or abstention is not available to a director who votes in favor of the action taken.

2.7 Regular Meetings. Regular meetings of the Board of Directors shall be held at such place, date and time as shall from time to time be fixed by resolution of the Board.

2.8 Special Meetings. Special meetings of the Board of Directors may be held at any place and at any time and may be called by the Chairman of the Board, the President, Vice President, Secretary or Treasurer, or any two or more directors.

2.9 Notice of Meetings.

2.9.1 Unless the Restated Articles of Incorporation provide otherwise, any regular meeting of the Board of Directors may be held without notice of the date, time, place, or purpose of the meeting. Any special meeting of the Board of Directors must be preceded by at least two days' notice of the date, time, and place of the meeting, but not of its purpose, unless the Restated Articles of Incorporation or these Bylaws require otherwise. Each director shall have a mailing address, telephone number and facsimile number on record with the Corporation for purposes of receiving notice.

2.9.2 Notice may be given personally, by facsimile, by mail, by electronic transmission in accordance with applicable law, or in any other manner allowed by law. Oral notice shall be sufficient only if a written record of such notice is

included in the Corporation's minute book. Notice shall be deemed effective at the earliest of: (a) receipt; (b) delivery to the proper address or telephone number of the director as shown in the Corporation's records; or (c) three days after its deposit in the United States mail, as evidenced by the postmark, if correctly addressed and mailed with first-class postage prepaid.

2.9.3 Notice of any meeting of the Board of Directors may be waived by any director at any time, by a signed writing delivered to the Corporation or, if the Corporation has designated an address, location, or system to which waiver may be electronically transmitted and the waiver is electronically transmitted to the designated address, location, or system, by an executed electronically transmitted record, and such waiver shall be included in the minutes, either before or after the meeting. Attendance or participation by a director at a meeting shall constitute a waiver of any required notice of the meeting unless the director promptly objects to holding the meeting or to the transaction of any business on the grounds that the meeting was not lawfully convened and the director does not thereafter vote for or assent to action taken at the meeting.

2.10 Directors' Action Without A Meeting. The Board of Directors or a committee thereof may take any action without a meeting that it could properly take at a meeting if one or more consents setting forth the action are executed by all of the directors, or all of the members of the committee, as the case may be, either before or after the action is taken, and if the consents are delivered to the Corporation for inclusion in the minutes or filing with the corporate records. Consents shall be set forth either (a) in an executed record or (b) if the Corporation has designated an address, location, or system to which the consent may be electronically transmitted and the consent is electronically transmitted to the designated address, location, or system, in an executed electronically transmitted record. Such action shall be effective when the last director executes the consent, unless the consent specifies a later effective date.

2.11 Committees of the Board of Directors. The Board of Directors, by resolutions adopted by a majority of the members of the Board of Directors in office, may create from among its members one or more committees and shall appoint the members thereof. Each such committee must have two or more members, who shall be directors and who shall serve at the pleasure of the Board of Directors. Each committee of the Board of Directors may exercise the authority of the Board of Directors to the extent provided in its enabling resolution and any pertinent subsequent resolutions adopted in like manner, provided that the authority of each such committee shall be subject to applicable law. Each committee of the Board of Directors shall keep regular minutes of its proceedings and shall report to the Board of Directors when requested to do so.

2.12 Telephone Meetings. Members of the Board of Directors or of any committee appointed by the Board of Directors may participate in a meeting of the Board of Directors or committee by means of a conference telephone or similar communications equipment that enables all persons participating in the meeting to hear each other during the meeting. Participation by such means shall constitute presence in person at a meeting.

2.13 Chairman. The Board may elect from among its members a Chairman of the Board who shall have such duties as the Board of Directors may from time to time prescribe but shall not be an officer of the Corporation.

2.14 Compensation of Directors. The Board of Directors may fix the compensation of directors as such and may authorize the reimbursement of their expenses.

SECTION 3

OFFICERS

3.1 Officers Enumerated--Election. The officers of the Corporation shall consist of such officers and assistant officers as may be designated by resolution of the Board of Directors. The officers may include a President, a Chief Scientist, one or more Vice Presidents, a Secretary, a Treasurer, and any assistant officers. The officers shall hold office at the pleasure of the Board of Directors. Unless otherwise restricted by the Board of Directors, the President may appoint any assistant officer, the Secretary may appoint one or more Assistant Secretaries, and the Treasurer may appoint one or more Assistant Treasurers; provided that any such appointments shall be recorded in writing in the corporate records.

3.2 Qualifications. None of the officers of the Corporation need be a director. Any two or more corporate offices may be held by the same person.

3.3 Duties of the Officers. Unless otherwise prescribed by the Board of Directors, the duties of the officers shall be as follows:

3.3.1 President. The President shall be the chief executive officer of the Corporation, unless some other officer is so designated by the Board of Directors, and shall exercise the usual executive powers pertaining to the office of President. In the absence of the Chairman of the Board, the President shall preside at meetings of the Board of Directors and of the shareholders. The President shall perform such other duties as the Board of Directors may from time to time designate.

3.3.2 Chief Scientist. The Chief Scientist, if one is appointed by the Board, shall be responsible for the scientific and technical activities of the Corporation, and shall have such other duties as the Board of Directors or President may from time to time designate.

3.3.3 Vice President. Each Vice President shall perform such duties as the Board of Directors may from time to time designate. In addition, in the absence or disability of the President, the Vice President (or if there is more than one Vice President, then in the order designated by the Board of Directors) shall perform the

duties of the President, and when so acting, shall have all the powers of and be subject to all restrictions upon the President.

3.3.4 Secretary. The Secretary shall be responsible for and shall keep, personally or with the assistance of others, records of the proceedings of the directors and shareholders; authenticate records of the Corporation; attest all certificates of stock in the name of the Corporation; keep the corporate seal, if any, and affix the same to certificates of stock and other proper documents; keep a record of the issuance of stock and the transfers of the same; and perform such other duties as the Board of Directors may from time to time designate.

3.3.5 Treasurer. The Treasurer shall have the care and custody of, and be responsible for, all funds and securities of the Corporation and shall cause to be kept regular books of account. The Treasurer shall cause to be deposited all funds and other valuable effects in the name of the Corporation in such depositories as may be designated by the Board of Directors. In general, the Treasurer shall perform all of the duties incident to the office of Treasurer, and such other duties as from time to time may be assigned by the Board of Directors.

3.3.6 Assistant Officers. Assistant officers may consist of one or more Assistant Vice Presidents, one or more Assistant Secretaries, and one or more Assistant Treasurers. Each assistant officer shall perform those duties assigned to him or her from time to time by the Board of Directors, the President, or the officer who appointed him or her.

3.4 Vacancies. Vacancies in any office arising from any cause may be filled by the Board of Directors at any regular or special meeting.

3.5 Removal. Any officer or agent may be removed by action of the Board of Directors with or without cause, but any removal shall be without prejudice to the contract rights, if any, of the person removed. Election or appointment of an officer or agent shall not of itself create any contract rights.

3.6 Compensation. The compensation of all officers of the Corporation shall be fixed by the Board of Directors.

SECTION 4

SHARES

4.1 Certificated and Uncertificated Shares. The Board of Directors may authorize the issue of some or all of the shares of any or all classes or series of stock of the Corporation without certificates. Any such authorization does not affect shares already represented by certificates until they are surrendered to the Corporation. As to any shares of stock that are represented by certificates, such certificates shall be issued in numerical order, and each certificate shall be signed by two officers of the Corporation,

including the President, the Chief Scientist, any Vice President, the Secretary and the Treasurer. Share certificates may be sealed with the corporate seal, if any. Facsimiles of the signatures and seal may be used as permitted by law. Every share certificate shall state:

- (a) the name of the Corporation;
- (b) that the Corporation is organized under the laws of the State of Washington;
- (c) the name of the person to whom the share certificate is issued;
- (d) the number, class and series (if any) of shares that the certificate represents; and
- (e) if the Corporation is authorized to issue shares of more than one class or series, that upon written request and without charge, the Corporation will furnish any shareholder with a full statement of the designations, preferences, limitations and relative rights of the shares of each class or series, and the authority of the Board of Directors to determine variations for future series.

4.2 Consideration for Shares. Shares of the Corporation may be issued for such consideration as shall be determined by the Board of Directors to be adequate. The consideration for the issuance of shares may be paid in whole or in part in cash, or in any tangible or intangible property or benefit to the Corporation, including but not limited to promissory notes, services performed, contracts for services to be performed, or other securities of the Corporation. Establishment by the Board of Directors of the amount of consideration received or to be received for shares of the Corporation shall be deemed to be a determination that the consideration so established is adequate.

4.3 Transfers. Shares not represented by certificates may be transferred on the stock transfer records of the Corporation upon proper instruction from the registered holder or other appropriate person with respect to such shares in accordance with applicable law, including without limitation Article 8 of the Washington Uniform Commercial Code. Shares that are represented by certificates may be transferred on the stock records of the Corporation by delivery of the certificate, accompanied either by an assignment in writing on the back of the certificate, or by a written power of attorney to sell, assign and transfer the same, signed by the record holder of the certificate. Except as otherwise specifically provided in these Bylaws, no shares of stock that are represented by certificates shall be transferred on the books of the Corporation until the outstanding certificate therefore has been surrendered to the Corporation.

4.4 Loss or Destruction of Certificates. In the event of the loss or destruction of any certificate, a new certificate may be issued in lieu thereof upon satisfactory proof of such loss or destruction, and upon the giving of security against loss to the Corporation by bond, indemnity or otherwise, to the extent deemed necessary by the Board of Directors, the Secretary, or the Treasurer.

4.5 Fixing Record Date. The Board of Directors may fix in advance a date as the record date for determining shareholders entitled: (a) to notice of or to vote at any shareholders' meeting or any adjournment thereof; (b) to receive payment of any share dividend; or (c) to receive payment of any distribution. The Board of Directors may in addition fix record dates with respect to any allotment of rights or conversion or exchange of any securities by their terms, or for any other proper purpose, as determined by the Board of Directors and by law. The record date shall be not more than 70 days and, in case of a meeting of shareholders, not less than 10 days (or such longer period as may be required by Washington law) prior to the date on which the particular action requiring determination of shareholders is to be taken. If no record date is fixed for determining the shareholders entitled to notice of or to vote at a meeting of shareholders, the record date shall be the date before the day on which notice of the meeting is delivered. If no record date is fixed for the determination of shareholders entitled to a distribution (other than one involving a purchase, redemption, or other acquisition of the Corporation's own shares), the record date shall be the date on which the Board adopted the resolution declaring the distribution. If no record date is fixed for determining shareholders entitled to a share dividend, the record date shall be the date on which the Board of Directors authorized the dividend.

SECTION 5

BOOKS, RECORDS AND REPORTS

5.1 Records of Corporate Meetings, Accounting Records and Share Registers.

5.1.1 The Corporation shall keep, as permanent records, minutes of all meetings of the Board of Directors and shareholders, and all actions taken without a meeting, and all actions taken by a committee exercising the authority of the Board of Directors. The Corporation or its agent shall maintain, in a form that permits preparation of a list, a list of the names and addresses of its shareholders, in alphabetical order by class of shares, showing the number, class, and series, if any, of shares held by each.

5.1.2 The Corporation shall also maintain appropriate accounting records, and at its principal place of business shall keep copies of: (a) its Articles of Incorporation or restated Articles of Incorporation and all amendments in effect; (b) its Bylaws or restated Bylaws and all amendments in effect; (c) minutes of all shareholders' meetings and records of all actions taken without meetings for the past three years; (d) the year-end balance sheets and income statements for the past three fiscal years, prepared as required by Washington law; (e) all communications to shareholders

generally in the past three years; (f) a list of the names and business addresses of its current officers and directors; and (g) its most recent annual report to the Secretary of State.

5.2 Copies of Corporate Records. Any person dealing with the Corporation may rely upon a copy of any of the records of the proceedings, resolutions, or votes of the Board of Directors or shareholders, when certified by the President, the Chief Scientist, any Vice President, the Secretary or the Assistant Secretary.

5.3 Examination of Records.

5.3.1 A shareholder shall have the right to inspect and copy, during regular business hours at the principal office of the Corporation, in person or by his or her attorney or agent, the corporate records referred to in subsection 5.1.2 hereof if the shareholder gives the Corporation written notice of the demand at least five business days before the date on which the shareholder wishes to make such inspection.

5.3.2 In addition, if a shareholder's demand is made in good faith and for a proper purpose, a shareholder may inspect and copy, during regular business hours at a reasonable location specified by the Corporation, excerpts from minutes of any meeting of the Board of Directors, records of any action of a committee of the Board of Directors, minutes of any meeting of the shareholders, and records of actions taken by the shareholders or the Board of Directors without a meeting, to the extent not subject to inspection under subsection 5.3.1, accounting records of the Corporation, or the record of shareholders; provided that the shareholder shall have made a demand describing with reasonable particularity the shareholder's purpose and the records the shareholder desires to inspect, and provided further that the records are directly connected to the shareholder's purpose.

5.3.3 This section shall not affect any right of shareholders to inspect records of the Corporation that may be otherwise granted to the shareholders by law.

5.4 Financial Statements. Not later than four months after the end of each fiscal year, or in any event prior to its annual meeting of shareholders, the Corporation shall prepare a balance sheet and income statement in accordance with Washington law. The Corporation shall furnish a copy of each to any shareholder upon written request.

SECTION 6

FISCAL YEAR

The fiscal year of the Corporation shall be as set forth in Exhibit A.

SECTION 7

CORPORATE SEAL

The corporate seal of the Corporation, if any, shall be in the form shown on Exhibit A.

SECTION 8

MISCELLANEOUS PROCEDURAL PROVISIONS

The Board of Directors may adopt rules of procedure to govern any meetings of shareholders or directors to the extent not inconsistent with law, the Corporation's Restated Articles of Incorporation, or these Bylaws, as they are in effect from time to time. In the absence of any rules of procedure adopted by the Board of Directors, the chairman of the meeting shall make all decisions regarding the procedures for any meeting.

SECTION 9

AMENDMENT OF BYLAWS

The Board of Directors is expressly authorized to adopt, amend and repeal the Bylaws of the Corporation subject to approval by a majority of the Continuing Directors (as defined below); provided, however, the Board of Directors may not repeal or amend any bylaw that the shareholders have expressly provided may not be amended or repealed by the Board of Directors. The shareholders of the Corporation also have the power to adopt, amend or repeal the Bylaws of the Corporation by the affirmative vote of the holders of not less than two-thirds of the outstanding shares and, to the extent, if any, provided by resolution adopted by the Board of Directors authorizing the issuance of a class or series of Preferred Stock, by the affirmative vote of the holders of not less than two-thirds of the outstanding shares of Common Stock and/or of such class or series of Preferred Stock, voting as separate voting groups. "Continuing Directors" means any member of the Board of Directors (i) who was a member of the Board of Directors on August 31, 1995, or (ii) who is elected to the Board of Directors after August 31, 1995 after being nominated by a majority of the Continuing Directors voting separately and as a subclass of directors on such nomination.

SECTION 10

INDEMNIFICATION OF DIRECTORS AND OTHERS

10.1 Grant of Indemnification. Subject to section 10.2, each person who was or is made a party or is threatened to be made a party to or is involved (including, without limitation, as a witness) in any threatened, pending, or completed action, suit or proceeding, whether formal or informal, civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she is or was a director of the Corporation or who, while a director of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of this or another corporation or of a partnership, joint venture, trust, other enterprise, or employee benefit plan, whether the basis of such proceeding is alleged action in an official capacity as a director or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent permitted by applicable law, as then in effect, against all expense, liability and loss (including attorneys' fees, costs, judgments, fines, ERISA excise taxes or penalties and amounts to be paid in settlement) reasonably incurred or suffered by such person in connection therewith, and such indemnification shall continue as to a person who has ceased to be a director and shall inure to the benefit of his or her heirs, executors and administrators.

10.2 Limitations on Indemnification. Notwithstanding section 10.1, no indemnification shall be provided hereunder to any such person to the extent that such indemnification would be prohibited by the Washington Business Corporation Act or other applicable law as then in effect, nor, except as provided in section 10.4 with respect to proceedings seeking to enforce rights to indemnification, shall the Corporation indemnify any such person seeking indemnification in connection with a proceeding (or part thereof) initiated by such person except where such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation.

10.3 Advancement of Expenses. The right to indemnification conferred in this section shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition, except where the Board of Directors shall have adopted a resolution expressly disapproving such advancement of expenses.

10.4 Right to Enforce Indemnification. If a claim under section 10.1 is not paid in full by the Corporation within 60 days after a written claim has been received by the Corporation, or if a claim for expenses incurred in defending a proceeding in advance of its final disposition authorized under section 10.3 is not paid within 60 days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and, to the extent successful in whole or in part, the claimant shall be entitled to be paid also the expense of prosecuting such claim. The claimant shall be presumed to be entitled to indemnification hereunder upon submission of a written claim (and, in an action brought to enforce a claim for expenses incurred in defending any proceeding in

advance of its final disposition, where the required undertaking has been tendered to the Corporation), and thereafter the Corporation shall have the burden of proof to overcome the presumption that the claimant is so entitled. It shall be a defense to any such action (other than an action with respect to expenses authorized under section 10.3) that the claimant has not met the standards of conduct which make it permissible hereunder or under the Washington Business Corporation Act for the Corporation to indemnify the claimant for the amount claimed, but the burden of proving such defense shall be on the Corporation.

10.5 Alternate Procedures. Pursuant to RCW 23B.08.560(2) or any successor provision of the Washington Business Corporation Act, the procedures for indemnification and advancement of expenses set forth in this section are in lieu of the procedures required by RCW 23B.08.550 or any successor provision of the Washington Business Corporation Act.

10.6 Nonexclusivity. The right to indemnification and the advancement of expenses conferred in this section shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, provision of the Restated Articles of Incorporation or the Bylaws of the Corporation, general or specific action of the Board, contract or otherwise.

10.7 Indemnification of Officers, Employees and Agents. The Corporation, by action of its Board of Directors from time to time, may provide indemnification and pay expenses in advance of the final disposition of a proceeding to officers, employees and agents of the Corporation on the same terms and with the same scope and effect as the provisions of this section with respect to the indemnification and advancement of expenses of directors of the Corporation or pursuant to rights granted pursuant to, or provided by, the Washington Business Corporation Act or on such other terms as the Board may deem proper.

10.8 Insurance and Other Security. The Corporation may maintain insurance, at its expense, to protect itself and any individual who is or was a director, officer, employee or agent of the Corporation or another Corporation, partnership, joint venture, trust or other enterprise against any liability asserted against or incurred by the individual in that capacity or arising from his or her status as an officer, director, agent, or employee, whether or not the Corporation would have the power to indemnify such person against the same liability under the Washington Business Corporation Act. The Corporation may enter into contracts with any director or officer of the Corporation in furtherance of the provisions of this section and may create a trust fund, grant a security interest or use other means (including, without limitation, a letter of credit) to ensure the payment of such amounts as may be necessary to effect indemnification as provided in this section.

10.9 Amendment or Modification. This section may be altered or amended at any time as provided in these Bylaws, but no such amendment shall have the effect of

diminishing the rights of any person who is or was an officer or director as to any acts or omissions taken or omitted to be taken prior to the effective date of such amendment.

10.10 Effect of Section. The rights conferred by this section shall be deemed to be contract rights between the Corporation and each person who is or was a director or officer. The Corporation expressly intends each such person to rely on the rights conferred hereby in performing his or her respective duties on behalf of the Corporation.

SECTION 11

REPRESENTATION OF SHARES OF OTHER CORPORATIONS

Unless otherwise restricted by the Board of Directors, the President, the Chief Scientist and any Vice President of the Corporation are each authorized to vote, represent and exercise on behalf of the Corporation all rights incident to any and all shares of other corporations standing in the name of the Corporation. This authority may be exercised by such officers either in person or by a duly executed proxy or power of attorney.

EXHIBIT A

Section 1.1. Date and time of annual shareholders' meeting:
Third Wednesday in May at such time as the Board of Directors shall direct.

Section 6. Fiscal year: December 31

Section 7. Corporate Seal: None

Date Restated Bylaws Adopted: July 31, 1995, as amended on June 25, 1999, December 14, 1999, January 14, 2000, April 3, 2000, October 1, 2001, March 1, 2002, February 5, 2003, May 12, 2004, October 20, 2004, December 7, 2004 effective May 11, 2005, August 8, 2005, February 15, 2006, June 7, 2006, and February 8, 2007.