

AETRIUM INCORPORATED

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

To Be Held May 19, 2010

The 2010 Annual Meeting of the Shareholders of Aetrium Incorporated, a Minnesota corporation, will be held at Aetrium's corporate headquarters located at 2350 Helen Street, North St. Paul, Minnesota, beginning at 4:00 p.m., local time, on May 19, 2010, for the following purposes:

1. To elect seven (7) persons to serve as directors until the next Annual Meeting or until their respective successors are elected and qualified;
2. To ratify the selection of Grant Thornton LLP to audit our consolidated financial statements for the 2010 fiscal year; and
3. To transact such other business as may properly come before the Annual Meeting.

The record date for determining the shareholders who are entitled to notice of and to vote at the Annual Meeting, and any postponements or adjournments thereof, is the close of business on March 31, 2010.

You are cordially invited to attend the Annual Meeting. If you do not plan to attend the Annual Meeting in person, please be sure you are represented at the Annual Meeting by completing, signing, dating and promptly returning the enclosed proxy card in the envelope provided, which requires no postage if mailed within the United States.

By, Order of the Board of Directors



Douglas L. Hemer

Chief Administrative Officer and Secretary

April 8, 2010
North St. Paul, Minnesota

AETRIUM INCORPORATED
2350 Helen Street
North St. Paul, Minnesota 55109
(651) 770-2000

PROXY STATEMENT
FOR ANNUAL MEETING OF SHAREHOLDERS
To Be Held May 19, 2010

INTRODUCTION

The 2010 Annual Meeting of the Shareholders of Aetrium Incorporated, a Minnesota corporation, will be held at Aetrium's corporate headquarters located at 2350 Helen Street, North St. Paul, Minnesota 55109, beginning at 4:00 p.m., local time, on May 19, 2010.

A proxy card is enclosed for your use. **YOU ARE SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS TO SIGN AND RETURN THE PROXY CARD IN THE ACCOMPANYING ENVELOPE.** No postage is required if mailed within the United States. We will pay the costs related to soliciting proxies, including preparing, assembling and mailing the proxies and soliciting material, as well as the cost of forwarding such material to the beneficial owners of our common stock. Our directors, officers and regular employees may, without compensation other than their regular compensation, solicit proxies by telephone or personal conversation. We may reimburse brokerage firms and others for expenses in forwarding proxy materials to the beneficial owners of our common stock.

Any shareholder giving a proxy may revoke it at any time before its use at the Annual Meeting either by:

- giving written notice of revocation to our Secretary before the Annual Meeting or at the Annual Meeting before the proxy is used;
- submitting a duly executed proxy with a later date to our Secretary; or
- appearing at the Annual Meeting and voting his or her stock in person.

Proxies will be voted as specified by shareholders. Proxies that are signed by shareholders, but lack any such specification, will be voted in favor of ratification of the selection of Grant Thornton LLP to audit our consolidated financial statements for the 2010 fiscal year, and in favor of the nominees for directors listed in this Proxy Statement. Abstention from a proposal set forth in the Notice of Meeting is treated as a vote against such proposal. Broker non-votes on the election of directors (*i.e.*, a card returned by a broker because voting instructions have not been received and the broker has no discretionary authority to vote) are treated as shares with respect to which voting power has been withheld by the beneficial holders of those shares and, therefore, as shares not entitled to vote on such proposal.

THE BOARD RECOMMENDS THAT THE SHAREHOLDERS VOTE FOR THE ELECTION OF THE NOMINEES FOR DIRECTORS LISTED IN THIS PROXY STATEMENT AND FOR RATIFICATION OF THE SELECTION OF GRANT THORNTON LLP TO AUDIT OUR CONSOLIDATED FINANCIAL STATEMENTS FOR THE 2010 FISCAL YEAR.

We expect that this Proxy Statement and the proxy card will be first mailed to shareholders on or about April 8, 2010.

The terms “we,” “us,” “our,” or the “company” or similar terms refer to Aetrium Incorporated.

HOUSEHOLDING OF ANNUAL MEETING MATERIALS

Some banks, brokers and other nominee record holders may be participating in the practice of “householding” proxy statements and annual reports. This means that only one copy of our Proxy Statement or Annual Report to Shareholders may have been sent to multiple shareholders who share the same address. We will promptly deliver a separate copy of either document to any shareholder upon written or oral request to our Investor Relations Department, Aetrium Incorporated, 2350 Helen Street, North St. Paul, Minnesota 55109, telephone: (651) 770-2000. Any shareholder who wants to receive separate copies of our Proxy Statement or Annual Report to Shareholders in the future, or any shareholder who is receiving multiple copies and would like to receive only one copy per household, should contact the shareholder’s bank, broker, or other nominee record holder, or the shareholder may contact us at the above address and phone number.

OUTSTANDING SHARES

Only record holders of our common stock at the close of business on March 31, 2010 will be entitled to vote at the Annual Meeting. On March 31, 2010, we had 10,630,512 outstanding shares of common stock, each such share entitling the holder thereof to one vote on each matter to be voted on at the Annual Meeting. The holders of a majority of the shares (5,315,257 shares) entitled to vote and represented in person or by proxy at the Annual Meeting will constitute a quorum for the transaction of business at the Annual Meeting. In general, shares of common stock represented by a properly signed and returned proxy card will be counted as shares present and entitled to vote at the Annual Meeting for the purposes of determining a quorum, without regard to whether the card reflects an abstention (or is left blank) or reflects a broker non-vote on a matter. Holders of shares of common stock are not entitled to cumulate voting rights.

ELECTION OF DIRECTORS

Proposal 1

Nomination

Our Bylaws provide that the number of directors to constitute our board of directors will be at least one or such other number as may be determined by our board or our shareholders. At our 2009 Annual Meeting, five directors were elected. In March 2010, our board elected Charles B. Westling and John J. Pollock as additional directors to serve on the board for the remainder of the annual term. Our board has unanimously recommended and determined to nominate the five directors elected last year plus Messrs. Westling and Pollock to be elected at the 2010 Annual Meeting. The process used to nominate these directors is discussed below under the caption “Board Member Nomination Process.” Directors elected at the 2010 Annual Meeting will hold office until the next regular meeting of shareholders or until their successors are duly elected and qualified.

All of the nominees for directors are currently members of our board and have consented to serve as directors, if elected. Each nominee will be elected by a plurality of the votes cast. The seven director nominees receiving the highest vote totals will be elected. Shares represented by proxies that contain instructions to “withhold” voting authority on one or more nominees will not affect the election of nominees receiving a plurality of the votes cast. Our board recommends a vote **FOR** the election of each of the nominees listed in this Proxy Statement. Our board intends to vote the proxies solicited on its behalf (other than proxies in which the vote is withheld) for the election of each of the nominees as

directors. If prior to the Annual Meeting our board should learn that any of the nominees will be unable to serve by reason of death, incapacity or other unexpected occurrence, the proxies will be cast for another nominee to be designated by our board to fill such vacancy, unless a shareholder indicates to the contrary on his or her proxy card. Alternatively, the proxies may, at our board's discretion, be voted for such fewer nominees as results from such death, incapacity or other unexpected occurrence. Our board has no reason to believe that any of the nominees will be unable to serve.

Board Member Nomination Process

We have not established a nominating committee. Our board has determined that because of the relatively small size of the board and the value of all directors participating in the process of nominations for board membership, it is in the company's best interests for the entire board to exercise the responsibilities of nominations for board membership. In lieu of a charter, the board has adopted principles, objectives and requirements in connection with the nomination process that set forth guidelines and procedures for the selection and evaluation of candidates for nomination as board members. We have posted these principles, objectives and requirements on our website at www.aetrium.com and refer to them as our nominating procedures. Our board reviews these principles, objectives and requirements periodically to determine if a more formal policy should be adopted.

In evaluating individual candidates for nomination for board membership, the board will seek out individuals who have, at a minimum, the following attributes:

- High moral and ethical character;
- Readiness to share constructive ideas, make independent decisions, work proactively and constructively with other board members, and devote the time and energy necessary for comprehensive and timely completion of all board member responsibilities; and
- Adequate education, training and business experience, including knowledge of our business and the semiconductor and semiconductor equipment industries, to understand and make well informed and well reasoned judgments on all matters within the scope of the board's responsibilities.

While the Company does not have a separate policy related to board diversity, the board seeks nominees with a broad diversity of experience, expertise and backgrounds. We believe that the backgrounds and qualifications of the directors, considered as a group, should provide a significant composite mix of experience, knowledge and abilities that will allow the board to fulfill its responsibilities and meet its objectives. Nominees are not discriminated against on the basis of race, religion, national origin, sexual orientation, disability or any other basis prescribed by law.

In making nominations for board membership, the board will consider recommendations from a variety of sources, including from shareholders. All recommended candidates will be evaluated under the same criteria. All candidates selected as a nominee for director must be approved by a majority of the independent directors of our board.

Information About Mr. Westling

Charles B. Westling, age 51, has served as one of our directors since his election in March 2010, as noted above. He is currently a business advisor to emerging growth and middle market companies. Mr. Westling is also a director of Bremer Bank N.A., a private financial services company, and is a member of the board of trustees of the Dunwoody College of Technology, a private non-profit institution that provides career-focused applied education for people of diverse backgrounds. Between 2002 and 2009,

Mr. Westling held a variety of executive positions at Datalink Corporation, a publicly held provider of data storage solutions and IT services for mid-to-large enterprise customers. Mr. Westling was president, CEO and a director of Datalink from 2005 to 2009. Prior to Datalink, Mr. Westling was executive vice president of Agiliti, Inc., a private managed services and hosting company. From 1997 to 1999, Mr. Westling served as senior managing director and director of corporate finance for John G. Kinnard and Company, Incorporated, a publicly held regional brokerage and investment banking firm. From 1990 to 1997, Mr. Westling was a member of the corporate finance department at Dain Bosworth Incorporated, a publicly held regional brokerage and investment banking firm, most recently serving as a managing director and head of technology investment banking.

Mr. Westling's strategic and operational expertise gained through his executive positions with operating companies, his long history of working with technology oriented companies and his extensive experience in mergers and acquisitions, strategic partnerships and capital raising activities, together with his effective ability to leverage off of these strengths in his participation as a board member, make Mr. Westling a welcome and valuable addition to our board.

The other members of the board have each engaged with Mr. Westling in his various capacities over the last several years, and agree that Mr. Westling is well suited under all of the board's nominating criteria to be a director of the company.

Mr. Westling served as an investment banker engaged on the company's secondary public offering in 1995. Mr. Westling has no other prior affiliation with the company and is independent as defined under the Nasdaq listing standards and by the SEC.

Mr. Westling received his BA in economics from Carleton College and earned an MBA from the J.L. Kellogg Graduate School of Management at Northwestern University. Since then, as an investment banker as well as in his executive management positions in operating companies, Mr. Westling has gained an extensive understanding of generally accepted accounting principles and financial statements and the full abilities, knowledge and experience to qualify as an audit committee financial expert, as defined by the SEC.

Information About Mr. Pollock

John J. Pollock, age 50, has served as one of our directors since his election in March 2010, as noted above. Mr. Pollock has served as our president since October 2009. From December 2001 to October 2009, Mr. Pollock served as vice president and general manager of our North St. Paul operations. From August 1998 to December 2001, Mr. Pollock served as our vice president of product development and marketing. From April 1998 to August 1998, Mr. Pollock served as interim general manager of our North St. Paul operations. From November 1997 to May 1998, Mr. Pollock served as interim general manager of a test handler product line we had recently acquired. From September 1996 to August 1997, Mr. Pollock served as a business unit manager.

Prior to joining the company, Mr. Pollock worked at BF Goodrich Aerospace from 1987 to 1995 where he served in a variety of management and product development positions, including managing director of a facility in the United Kingdom. From 1983 to 1987 Mr. Pollock was a manufacturing and test engineer at Magnetic Peripherals, a subsidiary of Control Data Corporation. He received his BS in electrical engineering from Ohio University in 1982 and an MBA from Ohio University in 1983.

Mr. Pollock has proven to be an astute, knowledgeable and effective executive manager during his years of service with the company, and his range of experiences and expertise make him particularly well suited to assume the responsibilities of president of the company. These same talents and

perspectives and the extensive knowledge and understanding he has gained of the semiconductor and semiconductor equipment industries make him a valuable addition to our board across the full range of board considerations.

Information About Other Nominees

The following table sets forth certain information as of March 3, 2010, which has been furnished to us by the remaining persons who have been nominated by our board to serve as directors for the ensuing year.

Nominees for Election	Age	Principal Occupation	Director Since
Joseph C. Levesque	65	Chairman of the Board and Chief Executive Officer of Aetrium Incorporated	1986
Darnell L. Boehm	61	Principal of Darnell L. Boehm & Associates	1986
Terrence W. Glarner	66	President of West Concord Ventures, Inc.	1990
Daniel A. Carr	49	Chief Executive Officer of The Collaborative	2009
Douglas L. Hemer	63	Chief Administrative Officer and Secretary of Aetrium Incorporated	1986

Joseph C. Levesque has served as our chief executive officer and chairman of our board since 1986. From 1986 until October 2009, Mr. Levesque also served as our president. From 1973 to 1986, Mr. Levesque served in various capacities and most recently as executive vice president of Micro Component Technology, Inc., a manufacturer of integrated circuit testers and test handlers. Mr. Levesque's long history with the semiconductor equipment industry and his long history as our chief executive officer make his participation on our board very valuable in all aspects of our operations and board considerations.

Darnell L. Boehm served as our Chief Financial Officer and Secretary from 1986 until May 2000, and has served as one of our directors since 1986. From December 1994 until July 1995, Mr. Boehm had also assumed executive management responsibilities for our former Poway, California operations. Mr. Boehm is currently the principal of Darnell L. Boehm & Associates, a management consulting firm. Mr. Boehm is also a director of Rochester Medical Corporation, a publicly held company, and Versa Companies, a privately held company. Mr. Boehm serves on the compensation committee and is chairman of the audit committee of Rochester Medical Corporation. The entire board of Versa Companies acts as its audit and compensation committees. Mr. Boehm's deep financial expertise, which includes several years experience as a certified public accountant and several chief financial officer or chief executive officer positions in addition to his services to the company, provides particular value to our board in addition to his insights from his years of executive management services to the company.

Terrence W. Glarner has served as one of our directors since March 1990. Mr. Glarner was initially elected as a director to our board because of his affiliation with North Star Ventures, Inc. and Norwest Venture Capital, which were significant shareholders of Aetrium at the time. Since February 1993, Mr. Glarner has been president of West Concord Ventures, Inc., a venture capital company, and has been a consultant to North Star Ventures, Inc. and Norwest Venture Capital. Mr. Glarner is also a director of FSI International, Inc. and NVE Corporation, both of which are publicly held companies, and Bremer Financial Corp., a privately held company. Mr. Glarner also serves on the audit and compensation committees of FSI International, Inc., NVE Corporation and Bremer Financial Corp. Mr. Glarner's long career as a venture capitalist has provided him with comprehensive perspectives on strategic and

operational issues in manufacturing and technology oriented companies that continue to be very valuable to our board.

Daniel A. Carr has served as one of our directors since his election in February 2009. He is chief executive officer of The Collaborative, a Minnesota membership organization that creates publications and events targeted to entrepreneurs, investors and business executives. In addition to his efforts in helping growing companies over the past 23 years with The Collaborative, he also has first-hand entrepreneurial experience as a co-founder of four businesses. Mr. Carr also writes occasionally on entrepreneurship, innovation and the Minnesota economy. Mr. Carr's experiences as an entrepreneur, his background as a certified public accountant and his extensive experience working with a variety of entrepreneurial companies provide him with unique perspectives that add important value to the full range of our board considerations.

Douglas L. Hemer has served as one of our directors since 1986, and has served as our secretary since May 2000 and as our chief administrative officer since March 2001. He served as our group vice president from August 1998 to March 2001, as the president of our former Poway, California operations from February 1997 to August 1998 and as our chief administrative officer from May 1996 until February 1997. Mr. Hemer was a partner in the law firm of Oppenheimer Wolff & Donnelly LLP for more than 15 years before joining Aetrium. Mr. Hemer is also a director of Versa Companies, a privately held company. Mr. Hemer's long history of legal services to a wide range of corporate transactions with manufacturing and technology oriented companies provides particular value to our board in addition to his insights from his years of executive management services to the company.

Additional Information About the Board and Its Committees

General Information. Our board of directors manages our business and affairs. Except for Messrs. Levesque, Hemer and Pollock, all of our directors are independent directors, as defined by current Nasdaq listing standards and the rules and regulations of the SEC. Our independent directors hold meetings, referred to as "executive sessions," at which only the independent directors are present on a regular basis and at least two times each year. During the fiscal year ended December 31, 2009, our independent directors held four executive sessions in addition to their participation in Audit Committee and Compensation Committee meetings.

Our board met or took action in writing seven times during the fiscal year ended December 31, 2009. Our board established and maintains an Audit Committee and a Compensation Committee. Each of our directors is expected to make a reasonable effort to attend all meetings of the board, applicable committee meetings and our Annual Meeting of Shareholders. All of our directors then serving attended 75% or more of the aggregate meetings of our board and all such committees on which they served during the fiscal year ended December 31, 2009. All of our directors then serving attended our 2009 Annual Meeting.

Audit Committee. Our Audit Committee was established in accordance with section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended, for the purpose of overseeing accounting and financial reporting processes and audits of our financial statements. The functions of the Audit Committee include reviewing our financial statements, overseeing the financial reporting and disclosures prepared by management, making recommendations regarding our financial controls, and conferring with our outside independent registered public accounting firm. In addition, the Audit Committee is responsible for the appointment, compensation, retention and oversight of our outside independent registered public accounting firm. The Audit Committee met or took action in writing six times during the fiscal year ended December 31, 2009. Messrs. Boehm, Glarner and Carr served as the Audit Committee during 2009.

Messrs. Boehm, Glarner, Carr and Westling are the current members of the Audit Committee, of which Mr. Boehm is Chairman.

Compensation Committee. The responsibilities of the Compensation Committee include approving the compensation for our executive officers and setting the terms of and grants of awards under our 2003 Stock Incentive Plan (referred to herein as the 2003 Plan). The Compensation Committee met or took action in writing four times during the fiscal year ended December 31, 2009. Messrs. Boehm, Glarner and Carr served as the Compensation Committee during 2009. Messrs. Boehm, Glarner, Carr and Westling are the current members of the Compensation Committee, of which Mr. Glarner is Chairman.

Board Leadership Structure and Risk Oversight. The board of directors has chosen to combine the principal executive officer and board chairman positions and has not appointed a separate lead director. Joseph C. Levesque has served as the chief executive officer and chairman of our board since 1986. At the present time, we believe that Mr. Levesque's in-depth knowledge of the company's operations and vision for its development make him the best-qualified director to serve as chairman of our board. In addition, we believe that the fact that a majority of our board as well as the entire membership of each of our board committees consists of independent directors balances our governance structure to protect the interests of our stockholders. While we believe that the current board leadership structure is appropriate in the current circumstances, the board may change this structure if it no longer believes it continues to meet our objectives.

Our board administers its risk oversight function directly and through its committees. The board and each of its committees regularly discuss with management our major risk exposures, their potential impact on the company and the steps we take to manage them. In particular, our Compensation Committee is responsible for overseeing the management of risks relating to our compensation arrangements and our Audit Committee oversees management of our financial and business risks. We believe our current board leadership structure helps ensure proper risk oversight, based on the allocation of duties among committees and the role our independent directors in risk oversight.

Shareholder Communications with Our Board. Any shareholder wishing to send communications to our board may send a letter to the board, c/o Corporate Secretary, at Aetrium's address listed above. Any such communication must be clearly labeled "Security Holder-Board Communication" and must include a signed statement as to the submitting shareholder's current status as a shareholder and the number of shares currently held. All communications that are reasonably related to Aetrium or its business will be directed by the Corporate Secretary to the board, or particular board members, not later than the next regularly scheduled meeting of the board. The Corporate Secretary has the authority to discard or disregard or take other appropriate actions with respect to any inappropriate communications, such as unduly hostile, illegal or threatening communications.

Shareholders wishing to submit a recommendation for board membership may do so by sending a letter to the board, c/o Corporate Secretary, at Aetrium's address listed above, that is clearly identified as a "Director Nominee Recommendation" and contains the following information:

- Name of the candidate and a brief biographical sketch and resume of the candidate;
- Contact information for the candidate and the shareholder making the recommendation;
- A document evidencing the candidate's willingness to serve as a director if elected; and
- A signed statement as to the submitting shareholder's current status as a shareholder and the number of shares currently held.

Shareholders who wish to make a recommendation for a nominee to be included in our proxy statement for our 2011 Annual Meeting of Shareholders must submit their recommendations to our board by December 6, 2010 to assure time for collection and meaningful consideration and evaluation of information regarding the nominees by our board.

Compensation of Non-Employee Directors

The following table sets forth the cash and non-cash compensation for our fiscal year ended December 31, 2009 awarded to or earned by our directors other than our named executive officers.

Name	Fees Earned or Paid in Cash (\$)	Stock Awards (\$)	Option Awards (\$) (1)	Non-Equity Incentive Plan Compensation (\$)	Change in Pension Value and Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation (\$) (2)	Total (\$)
Daniel A. Carr	—	—	13,765	—	—	13,816	27,581
Darnell L. Boehm	—	—	4,235	—	—	11,392	15,627
Terrence W. Glarner	—	—	4,235	—	—	—	4,235

- (1) The fair value of option awards and modifications are computed in accordance with FASB ASC Topic 718, "Compensation - Stock Compensation," (ASC 718) but exclude the impact of assumed forfeiture rates. With respect to Mr. Carr, represents the grant date fair value of a stock option award granted in fiscal year 2009. With respect to each of Messrs. Boehm and Glarner, represents the incremental fair value of \$480, \$1,005, \$1,820 and \$930 for four stock options, respectively, repriced in May 2009. At December 31, 2009, there were options for 30,000 shares of our common stock outstanding to Mr. Carr and 60,000 shares of our common stock outstanding to each of Messrs. Boehm and Glarner.
- (2) Represents premiums and health reimbursement account contributions paid for Mr. Boehm and his family and Mr. Carr and his family under our medical and dental group insurance programs.

Directors' Fees. Our directors receive no cash compensation for their services as members of our board, although their out-of-pocket expenses incurred on our behalf are reimbursed.

Option Grants. All of our directors are eligible for grants of options under our 2003 Plan. In February 2009, and pursuant to the 2003 Plan, we granted to Mr. Carr upon his election to the board five-year options to purchase 30,000 shares of our common stock at an exercise price of \$1.265 per share, as disclosed in the "Compensation of Directors" schedule above. As disclosed in the "Executive Compensation and Other Benefits" section below, in May 2009 and pursuant to the 2003 Plan, we repriced options outstanding to Messrs. Levesque, Hemer and Pollock. Also in May 2009, we repriced options outstanding to Messrs. Boehm and Glarner as disclosed in the "Compensation of Directors" table above.

Although our board is not obligated to do so, it currently anticipates that it will grant non-statutory stock options to purchase 30,000 shares of common stock to non-employee directors upon their initial election to our board at an exercise price equal to the fair market value of the common stock on the date of grant. In March 2010, and pursuant to the 2003 Plan, we granted to Mr. Westling upon his election to the board five-year options to purchase 30,000 shares of common stock at an exercise price of \$2.815

per share, the fair market value of the common stock on the date of the grant. The options vest ratably over forty-eight months from date of grant.

SELECTION OF INDEPENDENT PUBLIC ACCOUNTANTS

Proposal 2

The Audit Committee has approved the engagement of Grant Thornton LLP to audit our consolidated financial statements for the 2010 fiscal year. Grant Thornton LLP has been our independent registered public accountant firm since 2006.

Although not required to do so, the board wishes to submit the selection of Grant Thornton LLP to the shareholders for ratification because the board believes it is good corporate practice. The Board recommends a vote **FOR** the ratification of Grant Thornton LLP as our independent public accountants for 2010. Unless a different choice is given, proxies received by the Board will be voted **FOR** the ratification of Grant Thornton LLP. The affirmative vote of a majority of the common stock represented and entitled to vote is required for the ratification of the selection of Grant Thornton LLP, provided that the total number of shares of common stock that vote for the proposal represents more than 25% of the shares outstanding on the record date. If the selection of Grant Thornton LLP is not ratified, the board will reconsider its selection but may retain Grant Thornton LLP.

We have requested and expect one or more representatives of Grant Thornton LLP to be present at the Annual Meeting. Such representative(s) will have the opportunity to make a statement at the meeting if they desire to do so and will be available to respond to appropriate questions.

**SECURITY OWNERSHIP OF CERTAIN
BENEFICIAL OWNERS AND MANAGEMENT**

The table below sets forth information regarding the beneficial ownership of our common stock as of March 3, 2010, unless otherwise noted, by (a) each shareholder who we know owns beneficially more than 5% of our outstanding common stock, (b) each of our directors, nominees for directors and executive officers named in the “Summary Compensation Table” below, and (c) all of our executive officers and directors as a group. The address for all our executive officers and directors is 2350 Helen Street, North St. Paul, Minnesota 55109.

<u>Name of Beneficial Owner</u>	<u>Shares of Common Stock Beneficially Owned (1)</u>	
	<u>Amount</u>	<u>Percent of Class (2)</u>
Archer Advisors LLC	993,215 (3)	9.3%
Wells Fargo & Company	730,283 (4)	6.9%
Joseph C. Levesque	394,203 (5)	3.6%
John J. Pollock	92,713 (6)	*
Douglas L. Hemer	154,531 (7)	1.4%
Daniel M. Koch	128,933 (8)	1.2%
Darnell L. Boehm	119,375 (9)	1.1%
Terrence W. Glarner	82,205 (10)	*
Daniel A. Carr	8,750 (11)	*
Charles B. Westling	1,250 (12)	*
Executive officers and directors as a group (13 persons)	1,370,290 (13)	11.9%

*Less than 1%.

- (1) Shares not outstanding but deemed beneficially owned by virtue of the right of a person or member of a group to acquire them within 60 days of March 3, 2010 are treated as outstanding only when determining the amount and percent owned by such person or group. Unless otherwise noted, all of the shares shown are held by individuals or entities possessing sole voting and investment power with respect to such shares.
- (2) Based on 10,630,512 shares of common stock outstanding as of March 3, 2010.
- (3) Based solely on a Schedule 13G/A dated December 31, 2009, represents 993,215 shares of common stock beneficially owned by Archer Advisors LLC (“Archer”), 150 South Broadway, Wayzata, Minnesota 55391, for which Archer has sole dispositive and voting power.
- (4) Based solely on a Schedule 13G dated January 20, 2010 filed by Wells Fargo & Company (“Wells Fargo”) on its own behalf and on behalf of its subsidiary Wells Fargo Advisors, LLC (“WF Advisors”), represents 730,283 shares of common stock beneficially owned by Wells Fargo and WF Advisors, for which Wells Fargo for itself and through WF Advisors has sole dispositive and voting power. Wells Fargo’s record address is 420 Montgomery Street, San Francisco, California 94104, and WF Advisor’s record address is One North Jefferson Avenue, St. Louis, Missouri 63103.
- (5) Includes options to purchase 199,375 shares of common stock exercisable within 60 days. Also includes an aggregate of 5,300 shares held in educational trusts for Mr. Levesque’s grandchildren, of which he is the trustee.
- (6) Includes options to purchase 66,875 shares of common stock exercisable within 60 days.
- (7) Includes options to purchase 101,458 shares of common stock exercisable within 60 days.

- (8) Includes options to purchase 86,666 shares of common stock exercisable within 60 days.
- (9) Includes options to purchase 49,375 shares of common stock exercisable within 60 days.
- (10) Includes options to purchase 49,375 shares of common stock exercisable within 60 days.
- (11) Represents options to purchase 8,750 shares of common stock exercisable within 60 days.
- (12) Represents options to purchase 1,250 shares of common stock exercisable within 60 days.
- (13) Includes options to purchase 919,413 shares of common stock exercisable within 60 days. Also includes an aggregate of 5,300 shares held in educational trusts for Mr. Levesque's grandchildren, of which he is the trustee.

EXECUTIVE COMPENSATION AND OTHER BENEFITS

Summary Compensation Table

The following table sets forth the cash and non-cash compensation for the fiscal years ended December 31, 2009 and December 31, 2008 awarded to or earned by our Chief Executive Officer and our three other most highly compensated executive officers whose total compensation exceeded \$100,000. The executive officers named in the chart below are referred to in this Proxy Statement as our “named executive officers.”

SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary (\$)	Bonus (\$ (1))	Stock Awards (\$)	Option Awards (\$ (2))	Non-Equity Incentive Plan Compensation (\$ (3))	Change in Pension Value and Non-qualified Deferred Compensation Earnings (\$)	All Other Compensation (\$ (4))	Total (\$)
Joseph C. Levesque, Chief Executive Officer	2009	215,384	—	—	14,765	—	—	—	230,149
	2008	280,000	4,625	—	30,900	—	—	4,927	320,452
John J. Pollock, President	2009	138,884	—	—	8,985	1,400	—	—	149,269
	2008	160,000	4,625	—	30,900	12,200	—	2,992	210,717
Douglas L. Hemer, Chief Administrative Officer and Secretary	2009	167,154	—	—	9,815	—	—	—	176,969
	2008	205,000	4,625	—	30,900	—	—	3,648	244,173
Daniel M. Koch, VP—Worldwide Sales	2009	137,846	—	—	9,320	14,600	—	—	161,766
	2008	160,000	4,625	—	30,900	16,200	—	2,576	214,301

(1) Represents bonuses paid pursuant to our executive officer profit sharing program for fiscal years 2009 and 2008.

- (2) The fair value of option awards and modifications are computed in accordance with FASB ASC Topic 718, "Compensation - Stock Compensation," (ASC 718) but exclude the impact of assumed forfeiture rates. For 2008, represents the grant date fair value of a stock option award granted in fiscal year 2008. For 2009, represents the aggregate incremental fair value of options repriced in May 2009 as follows:

Name	Number of Securities Underlying Repriced Options (#)	Original Option Exercise Price (\$)	Repriced Option Exercise Price (\$)	Incremental Fair Value of Repricing (\$)
Joseph C. Levesque	75,000	3.125	2.2325	2,400
	75,000	4.33	2.34	5,025
	50,000	3.87	2.34	4,550
	30,000	3.095	2.2175	2,790
John J. Pollock	20,000	3.125	2.2325	640
	15,000	4.33	2.34	1,005
	50,000	3.87	2.34	4,550
	30,000	3.095	2.2175	2,790
Douglas L. Hemer	25,000	3.125	2.2325	800
	25,000	4.33	2.34	1,675
	50,000	3.87	2.34	4,550
	30,000	3.095	2.2175	2,790
Daniel M. Koch	20,000	3.125	2.2325	640
	20,000	4.33	2.34	1,340
	50,000	3.87	2.34	4,550
	30,000	3.095	2.2175	2,790

- (3) Represents amounts paid pursuant to our sales incentive program, which applies to certain personnel participating in sales and service activities.
- (4) Represents amounts of matching contributions we made to the named executive officers' respective 401(k) accounts.

Outstanding Equity Awards at Fiscal Year-End Table

The following table sets forth equity incentive plan awards for each named executive officer outstanding as of the end of our last completed fiscal year.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END—2009

Name	Option Awards				
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price (\$)	Option Expiration Date
Joseph C. Levesque	75,000	—	—	2.2325	8/17/2010
	65,625	9,375 (1)	—	2.34	6/15/2011
	33,333	16,667 (2)	—	2.34	4/23/2012
	12,500	17,500 (3)	—	2.2175	4/30/2013
John J. Pollock	12,500	—	—	2.2325	8/17/2010
	13,125	1,875 (5)	—	2.34	6/15/2011
	33,333	16,667 (2)	—	2.34	4/23/2012
	12,500	17,500 (3)	—	2.2175	4/30/2013
Douglas L. Hemer	25,000	—	—	2.2325	8/17/2010
	21,875	3,125 (4)	—	2.34	6/15/2011
	33,333	16,667 (2)	—	2.34	4/23/2012
	12,500	17,500 (3)	—	2.2175	4/30/2013
Daniel M. Koch	20,000	—	—	2.2325	8/17/2010
	17,500	2,500 (6)	—	2.34	6/15/2011
	33,333	16,667 (2)	—	2.34	4/23/2012
	12,500	17,500 (3)	—	2.2175	4/30/2013

- (1) The stock option was granted on June 15, 2006. Assuming continued employment with us, 1562.5 shares become exercisable on the 15th day of January, 2010 and each month thereafter through June 15, 2010.
- (2) The stock option was granted on April 23, 2007. Assuming continued employment with us, 1041.7 shares become exercisable on the 23rd day of January, 2010 and each month thereafter through April 23, 2011.
- (3) The stock option was granted on April 30, 2008. Assuming continued employment with us, 625 shares become exercisable on the 30th day of January, 2010 and each month thereafter through April 30, 2012.
- (4) The stock option was granted on June 15, 2006. Assuming continued employment with us, 520.8 shares become exercisable on the 15th day of January, 2010 and each month thereafter through June 15, 2010.
- (5) The stock option was granted on June 15, 2006. Assuming continued employment with us, 312.5 shares become exercisable on the 15th day of January, 2010 and each month thereafter through June 15, 2010.
- (6) The stock option was granted on June 15, 2006. Assuming continued employment with us, 416.7 shares become exercisable on the 15th day of January, 2010 and each month thereafter through June 15, 2010.

Executive Compensation Program

Our executive compensation program has three principal components: base salary, equity based awards (historically these have been in the form of nonqualified stock options), and profit sharing bonuses. Our primary objective in determining base salaries is to provide a fair but conservative level of compensation to our executive management that can be sustained through a wide range of industry conditions without unduly and inappropriately burdening the company during lean conditions. Our primary objective in granting equity based awards is to provide appropriate incentive to our executive management to generate long term growth in the value of the company. Our primary objective in granting profit sharing bonuses is to reward executive management for their successes in generating profitability and positive cash flow. We believe that these three components to our executive compensation program are complementary to each other and provide a balance of long term and short term incentives to management and operational flexibility to the company that best serves the interests of the company.

Base Salaries. Historically, base salaries for our executive management have been adjusted infrequently and typically as a result of changes in responsibilities. In setting and adjusting base salaries for our executive management, we take into account the potential impact of the individual on the company and corporate performance, the skills and experience required by the position, the individual performance and potential of the executive officer, and market data for comparable positions in companies in comparable industries and of comparable development, complexity and size. We believe base salaries for our executive management have provided fair but conservative minimum compensation relative to peer companies in our industry.

In April 2007, we adjusted the base salaries of our executive officers in accordance with these factors, adjusting the annual base salaries of Messrs. Levesque, Hemer, Pollock and Koch to \$280,000, \$205,000, \$160,000 and \$160,000, respectively. Prior to that, the base salaries for Mr. Levesque, our chief executive officer, and Mr. Hemer, our chief administrative officer, had not been adjusted for over ten years, except that during the severe downturn in our industry in 2001-2003, their base salaries were reduced by 25% and 20% respectively, at their initiation.

In January 2009, as a part of measures we have taken to address the impact of the worldwide financial collapse that became apparent in late third quarter 2008, at the initiation of our executive management we reduced wage rates of all of our employees by 10% and the salaries for our executive officers by up to 25%. As a result, the base salaries of Messrs. Levesque and Hemer were reduced by 25% and 20%, respectively, and the base salaries of Messrs. Pollock and Koch were reduced by 15% each.

In November 2009, we increased Mr. Pollock's annual base salary from \$160,000 to \$180,000 to reflect his added responsibilities as president of the company, and then reduced his base salary by 17% to reflect the continuing wage reductions of our executive officers during the current difficult industry conditions.

Equity Based Awards. We have granted equity based awards under our 2003 Plan and its predecessor plans periodically to achieve an appropriate balance of outstanding options to provide ongoing incentive to executive management to build value in the company over time. As indicated above, historically our equity based awards have been in the form of nonqualified stock options, and we have no current plans to grant other forms of equity based awards. The number of stock options we have granted to executives, including our chief executive officer, has been based upon a number of factors, including base salary level and how such base salary level relates to those of other companies in our industry, the number of options previously granted, individual and corporate performance during the year, the number of options being granted to other executives, and management's recommendations. The Compensation Committee determines the number of options to be granted to an executive based upon its overall

subjective assessment of these factors. There are no formulas, objective criteria or other established relationships between the factors taken into account and the number of options granted to the executive.

We typically grant options on dates we believe the market value of our stock is at relatively low levels to maximize the incentive offered by the stock option awards. The designated grant date for all options that have been granted has always been the date the award was made. We have had no historical practice of awarding options on dates near company public releases of material information, and it is our policy not to do so.

In May 2009 and pursuant to the 2003 Plan and shareholder approval, we repriced most of our outstanding options, including options outstanding to Messrs. Levesque, Hemer, Pollock and Koch as indicated in the “Summary Compensation Table” above.

Profit Sharing Bonuses. Under our executive officer profit sharing program, which the board adopted in 2004, the Compensation Committee may award up to an aggregate of 10% of our pre-tax operating income (before such awards) for the quarter as cash bonuses to our executive officers. Bonuses are awarded only for quarters in which we are profitable. The Compensation Committee determines aggregate bonuses to be awarded for a quarter based on its overall subjective assessment of cash flow availability and management’s performance. The Compensation Committee determines the amount of each executive’s bonus based upon its overall subjective assessment of the individual executive’s contributions to the success of our operations. There are no formulas, objective criteria or other established relationships between the factors taken into account and the amount of the bonuses awarded.

Sales Incentive Bonuses. Certain executive officers involved in supporting our sales and service efforts are included in our sales incentive plan under which they are paid daily rates for qualifying travel as bonuses in addition to their base salaries. The Compensation Committee reviews all bonuses under this program made to executive management and ratifies the bonuses as made in conformance with the program.

There were no profit sharing bonuses paid in 2009. All bonuses paid to our named executive officers in 2009 under the sales incentive program are reflected in the “Summary Compensation Table” above.

Potential Payments Upon Termination or Change-in-Control.

Effective as of April 1, 1986, we entered into an employment agreement with Mr. Levesque to serve as our Chief Executive Officer. This employment agreement has no stated term. The employment agreement provides that we will review Mr. Levesque’s performance and compensation package on an annual basis and make such adjustments to his compensation package as we deem appropriate. The employment agreement provides that Mr. Levesque may voluntarily terminate his employment with three months’ written notice to us. The employment agreement also provides that if Mr. Levesque’s employment is involuntarily terminated (including by reason of death or disability, but excluding for cause), we will pay Mr. Levesque six months’ salary as severance pay. Any severance pay provided to Mr. Levesque pursuant to the terms of this employment agreement will be made according to our regular payroll practices and policies.

Effective as of January 6, 2004, or upon their later employment, we entered into Change of Control Agreements with certain of our high-level executives, including all of the named executive officers, that provide severance pay and other benefits in the event of a change of control. The Agreements provide for severance payments of two times the executive’s annual base salary in the event the executive’s employment is terminated, either voluntarily with “good reason” or involuntarily, during

the two-year period following a change in control. The severance payments are to be made over twenty-four months following the date of employment termination according to our regular payroll practices and policies. An executive receiving severance payments is also entitled to reimbursement of the employer portion of group medical and group dental premiums under COBRA continuation coverage. The Agreements also provide for immediate vesting of all unvested options outstanding to the executive upon a change in control. Severance payments to Mr. Levesque under his Change of Control Agreement would be in lieu of any severance otherwise due Mr. Levesque under his employment agreement discussed above. In January 2008 the Agreements were amended to conform to Section 409A of the Internal Revenue Code.

For purposes of the Change of Control Agreements, a change of control would be deemed to have occurred upon:

- the sale or other transfer of all or substantially all of our assets;
- the approval by our shareholders of a liquidation or dissolution of the company;
- any person, other than a bona fide underwriter, becoming the owner of more than 40% of our outstanding shares of common stock;
- a merger, consolidation or exchange involving the company, but only if our shareholders prior to such transaction own less than 65% of the combined voting power of the surviving or acquiring entity following the transaction; or
- the current members of our board, or future members of our board who were approved by at least a majority of our current board, ceasing to constitute at least a majority of the board.

Compensation Committee

The Compensation Committee consists of Messrs Boehm, Glarner, Carr and Westling, each of whom is a non-employee director and is independent as defined under the Nasdaq listing standards and by the SEC. Mr. Glarner serves as Chairman of the Compensation Committee. The Compensation Committee approves the compensation for our executive officers. With respect to all eligible recipients except members of the Compensation Committee, the Compensation Committee also administers our 2003 Plan and determines the participants and the amount, timing and other terms and conditions of awards under the Plan. The board as a whole exercises these responsibilities with respect to members of the Compensation Committee as eligible recipients under the Plan.

The Role of the Compensation Committee. The Compensation Committee operates under a written charter adopted by our board on February 21, 2007. We have posted our Compensation Committee Charter on our website at www.aetrium.com. Pursuant to the charter, the members of the Committee are appointed by the board and are to consist of at least three (3) members of the board, each of whom meet the independence requirements defined under the Nasdaq listing standards and by the SEC. The primary duties and responsibilities of the Compensation Committee are to:

- establish the compensation philosophy and policy for our executive officers;
- review and evaluate the performance of the chief executive officer and other executive officers and approve their annual compensation packages;
- review and approve, or recommend to the full board, executive incentive compensation plans and stock based plans in which executive officers and members of the board are eligible to participate;

- supervise and oversee the administration of the 2003 Plan;
- have sole authority to retain and terminate executive compensation consultants; and
- review and reassess periodically the adequacy of the Compensation Committee Charter.

There is no provision for the Compensation Committee to delegate any of its duties and responsibilities to any other persons. The Compensation Committee has not used any compensation consultants in determining or recommending the amount or form of executive compensation.

AUDIT COMMITTEE REPORT

Membership and Role of the Audit Committee

The current members of the Audit Committee are Messrs. Boehm, Glarner, Carr and Westling. Mr. Boehm serves as Chairman of the Audit Committee. All members of the Audit Committee are independent as defined under the Nasdaq listing standards and the rules and regulations of the SEC. The board has determined that all members of the Audit Committee are audit committee financial experts, as defined by the SEC, based on their past business experience and financial certifications.

The Audit Committee operates under a written charter adopted by our board on February 18, 2004 as our Amended and Restated Audit Committee Charter. In connection with the preparation of the materials for our 2010 Annual Meeting, the Audit Committee determined that the Audit Committee charter is adequate and no revisions need to be made to such charter. We have posted our Audit Committee charter as currently in force on our website at www.aetrium.com. The primary function of the Audit Committee is to assist the board in fulfilling its oversight responsibilities by reviewing the financial information that will be provided to the shareholders and others, the systems of internal and disclosure controls that management and the board have established, and the audit process, and by overseeing our accounting and financial reporting processes, the audits of our financial statements, and our independent registered public accounting firm. The Audit Committee's primary duties and responsibilities are to:

- be directly responsible for the appointment, compensation, retention and oversight of the work of our independent registered public accounting firm;
- approve all engagements of our independent registered public accounting firm to render audit or non-audit services prior to such engagement, or pursuant to policies and procedures that are detailed as to the particular service and that do not include delegation of the Audit Committee's responsibilities to management;
- evaluate our quarterly financial performance as well as our compliance with laws and regulations;
- oversee management's establishment and enforcement of financial policies and business practices;
- review and determine approval of all related party transactions required to be disclosed by us under SEC rules and regulations;
- establish procedures for the receipt, retention and treatment of complaints we receive regarding accounting, internal accounting controls or auditing matters, and for the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;
- investigate any matter brought to its attention within the scope of its duties; and

- provide an open avenue of communication among the independent registered public accounting firm, financial and senior management, counsel, internal audit personnel and our board.

All services provided by our independent registered public accounting firm, Grant Thornton LLP, are subject to pre-approval by our Audit Committee. The Audit Committee's pre-approval policies and procedures are described below under the caption "Independent Registered Public Accounting Firm—Pre-Approval Policies and Procedures."

Review of Our Audited Financial Statements for the Fiscal Year ended December 31, 2009

The Audit Committee has reviewed and discussed our audited financial statements for the fiscal year ended December 31, 2009 with management. The Audit Committee has discussed with Grant Thornton LLP, our independent registered public accounting firm, the matters required to be discussed by Statement on Auditing Standards Nos. 61 (Communication with Audit Committees) (Codification of Statements on Auditing Standards, ASC 380).

The Audit Committee has also received the written disclosures and the letter from Grant Thornton LLP regarding their independence as required by applicable requirements of the Public Company Accounting Oversight Board regarding Grant Thornton LLP's communications with the Audit Committee concerning independence, and has discussed with Grant Thornton LLP its independence.

Based on the Audit Committee's review and discussions noted above, the Audit Committee recommended to our board that our audited financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009 for filing with the SEC.

Audit Committee

Darnell L. Boehm (Chair)
Terrence W. Glarner
Daniel A. Carr
Charles B. Westling

Notwithstanding anything to the contrary set forth in any of our previous or future filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, that might incorporate this Proxy Statement, in whole or in part, the Audit Committee Report will not be deemed to be incorporated by reference into any such filing.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Selection of Independent Registered Public Accounting Firm

We have selected Grant Thornton LLP as our independent registered public accounting firm for fiscal year 2010. We have requested that the shareholders ratify this selection under Proposal 2, above. We have requested and expect one or more representatives of Grant Thornton LLP to be present at the Annual Meeting. Such representatives will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Pre-Approval Policies and Procedures

All services provided by our independent registered public accounting firm are subject to pre-approval by our Audit Committee. The Audit Committee has authorized each of its members to approve services by our independent registered public accounting firm in the event there is a need for such approval prior to the next full Audit Committee meeting. The Audit Committee has also adopted policies and procedures that are detailed as to the particular service and that do not include delegation of the Audit Committee's responsibilities to management under which management may engage our independent registered public accounting firm to render audit or non-audit services. Any interim approval given by an Audit Committee member and any such engagement by management must be reported to the Audit Committee no later than its next scheduled meeting. Before granting any approval, the Audit Committee (or a committee member if applicable) gives due consideration to whether approval of the proposed service will have a detrimental impact on the independence of the independent registered public accounting firm. The full Audit Committee pre-approved all services provided by Grant Thornton LLP in fiscal years 2009 and 2008.

Audit and Non-Audit Fees

The following table presents aggregate fees billed for professional services rendered by Grant Thornton LLP for fiscal years 2009 and 2008. Other than as set forth below, no other professional services were rendered or fees billed by Grant Thornton LLP during fiscal years 2009 or 2008.

<u>Services Rendered</u>	<u>2009</u>	<u>2008</u>
Audit Fees (1).....	\$110,460	\$107,630
Audit-Related Fees (2).....	2,375	2,800
Tax Fees (3).....	20,296	28,405
All Other Fees (4).....	13,780	—

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- (1) These fees include the audits of our annual financial statements for fiscal years 2009 and 2008, the reviews of our financial statements included in our Quarterly Reports on Form 10-Q for fiscal years 2009 and 2008 and to services provided in connection with regulatory filings for those fiscal years.
 - (2) These fees were related to consultations regarding stock option modifications in 2009 and Section 404 of the Sarbanes-Oxley Act of 2002 in 2008.
 - (3) These fees were for the preparation of federal and state tax returns and tax advice.
 - (4) These fees were related to consultations regarding a potential business acquisition.

CODE OF ETHICS

Effective February 18, 2004, the board formally adopted a Code of Business Conduct and Ethics, which covers a wide range of business practices and procedures and is intended to ensure to the greatest extent possible that Aetrium's business is conducted in a consistently legal and ethical manner. The Code is consistent with how we have always conducted our business and applies to all of our directors, officers and other employees, including our principal executive officer and principal financial and accounting officer. We have posted the Code on our website at www.aetrium.com. We intend to promptly disclose any grant of waivers from or amendments to a provision of the Code on our website following such amendment or waiver.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE SHAREHOLDER MEETING TO BE HELD ON MAY 19, 2010

The 2010 Annual Shareholders Meeting Notice and Proxy Statement and 2009 Annual Report to Shareholders of Aetrium Incorporated are available at <https://materials.proxyvote.com/00817R>. As noted above, our shareholders will be asked to ratify the selection of Grant Thornton LLP as our auditors in 2010 and will be electing directors at our 2010 Annual Meeting, which will be held at the company's corporate headquarters located at 2350 Helen Street, North St. Paul, Minnesota.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors and executive officers and all persons who beneficially own more than 10% of the outstanding shares of our common stock to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock. Executive officers, directors and greater than 10% beneficial owners are also required to furnish us with copies of all Section 16(a) forms they file. Based upon a review of the copies of such reports furnished to us and written representations, we believe that for the year ended December 31, 2009, none of our directors, executive officers or beneficial owners of greater than 10% of our common stock failed to file on a timely basis the forms required by Section 16 of the Exchange Act.

SHAREHOLDER PROPOSALS FOR 2011 ANNUAL MEETING

Shareholder proposals intended to be presented in our proxy materials relating to our next Annual Meeting of Shareholders must be received by us at our principal executive offices on or before December 6, 2010 and must satisfy the requirements of the proxy rules promulgated by the SEC.

A shareholder who wishes to make a proposal at our next Annual Meeting without including the proposal in our proxy materials must notify us by February 19, 2011. If a shareholder fails to give notice by this date, then the persons named as proxies in the proxy card solicited by us for the next Annual Meeting will have discretionary authority to vote on the proposal.

OTHER BUSINESS

We know of no business that will be presented for consideration at the Annual Meeting other than that described in this Proxy Statement. As to other business, if any, that may properly come before the Annual Meeting, it is intended that proxies solicited by our board will be voted in accordance with the judgment of the person or persons voting the proxies.

MISCELLANEOUS

WE WILL FURNISH, WITHOUT CHARGE, A COPY OF OUR ANNUAL REPORT ON FORM 10-K (EXCLUSIVE OF EXHIBITS) FOR THE FISCAL YEAR ENDED DECEMBER 31, 2009 TO EACH PERSON WHO WAS A SHAREHOLDER OF AETRIUM AS OF MARCH 31, 2010 UPON RECEIPT FROM ANY SUCH PERSON OF A WRITTEN REQUEST FOR SUCH AN ANNUAL REPORT. SUCH REQUEST SHOULD BE SENT TO: AETRIUM INCORPORATED, 2350 HELEN STREET, NORTH ST. PAUL, MINNESOTA 55109; ATTN.: SHAREHOLDER INFORMATION.

By Order of the Board of Directors

A handwritten signature in black ink, appearing to read 'J. Levesque', with a long horizontal flourish extending to the right.

Joseph C. Levesque
*Chairman of the Board
and Chief Executive Officer*

April 8, 2010
North St. Paul, Minnesota

AETRIUM INCORPORATED

ANNUAL PROXY CARD

This Proxy is solicited by the Board of Directors

The undersigned hereby appoints JOSEPH C. LEVESQUE and DOUGLAS L. HEMER, and each of them, as Proxies, each with full power of substitution, and hereby authorizes each of them to represent and to vote, as designated below, all the shares of Common Stock of Aetrium Incorporated held of record by the undersigned on March 31, 2010 at the Annual Meeting of Shareholders to be held on May 19, 2010 or any postponement or adjournment thereof.

1. **ELECTION OF DIRECTORS.** The Board recommends a vote FOR the following nominees.

	<u>Name of Nominee</u>	<u>For</u>	<u>Withhold</u>
01	JOSEPH C. LEVESQUE	<input type="checkbox"/>	<input type="checkbox"/>
02	DARNELL L. BOEHM	<input type="checkbox"/>	<input type="checkbox"/>
03	TERRENCE W. GLARNER	<input type="checkbox"/>	<input type="checkbox"/>
04	DANIEL A. CARR	<input type="checkbox"/>	<input type="checkbox"/>
05	CHARLES B. WESTLING	<input type="checkbox"/>	<input type="checkbox"/>
06	JOHN J. POLLOCK	<input type="checkbox"/>	<input type="checkbox"/>
07	DOUGLAS L. HEMER	<input type="checkbox"/>	<input type="checkbox"/>

2. **RATIFICATION OF GRANT THORNTON LLP.** The Board recommends a vote FOR ratification of Grant Thornton LLP as the company's auditors for 2010.

<u>For</u> <input type="checkbox"/>	<u>Against</u> <input type="checkbox"/>	<u>Abstain</u> <input type="checkbox"/>
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3. In their discretion, the Proxies are authorized to vote upon such other business as may properly come before the meeting.

This proxy, when properly executed, will be voted in the manner directed herein by the undersigned shareholder. If no direction is made, this proxy will be voted FOR all nominees named in Proposal 1 above and FOR Proposal 2 above. Please sign exactly as name appears below. When shares are held by joint tenants, both should sign. When signing as attorney, executor, administrator, trustee or guardian, please give full title as such. If a corporation, please sign in full corporate name by President or other authorized officer. If a partnership, please sign in partnership name by authorized person.

Dated: _____, 2010

Signature

Signature if held jointly

PLEASE MARK, SIGN, DATE AND RETURN THIS PROXY CARD PROMPTLY USING THE ENCLOSED ENVELOPE, WHICH REQUIRES NO POSTAGE IF MAILED IN THE UNITED STATES.

Important notice regarding Internet availability of proxy materials for the annual meeting of shareholders to be held on May 19, 2010: The Proxy Statement and the 2009 Annual Report to Shareholders are available at <https://materials.proxyvote.com/00817R>.

