

BNY Y03377 000.01.00.00 4 X
ACE



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

SCHEDULE 14A

**PROXY STATEMENT PURSUANT TO SECTION 14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to § 240.14a-12

CAS MEDICAL SYSTEMS, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

BNY Y03377 001.00.00.00 8 X
ACE 



April 26, 2010

Dear Fellow Stockholder:

We will hold our 2010 annual meeting of stockholders at 10:30 a.m. on Wednesday, June 9, 2010 at The WoodWinds, 29 Schoolground Road, Branford, Connecticut.

The notice of annual meeting, proxy statement and proxy card accompanying this letter describe in detail the matters to be acted upon at the meeting.

It is important that your shares be represented at the meeting. Whether or not you plan to attend, please sign, date and return your proxy card in the enclosed envelope as soon as possible.

We look forward to seeing you at the meeting.

Sincerely yours,

Louis P. Scheps
Chairman of the Board

CAS MEDICAL SYSTEMS, INC.

NOTICE OF ANNUAL MEETING

The annual meeting of stockholders of CAS Medical Systems, Inc. will be held at 10:30 a.m. on Wednesday, June 9, 2010 at The WoodWinds, 29 Schoolground Road, Branford, Connecticut.

The items of business at the annual meeting are:

1. Election of six directors.
2. Appointment of independent accountants for 2010.
3. Such other matters as may properly come before the meeting, including any continuation of the meeting caused by any adjournment or any postponement of the meeting.

April 21, 2010 is the record date for the meeting.

This Proxy Statement and accompanying proxy card are being distributed on or about April 28, 2010.

Jeffery A. Baird
Secretary

**THIS PROXY STATEMENT AND THE 2009 ANNUAL REPORT ARE AVAILABLE AT
WWW.CASMED.COM.**

CAS MEDICAL SYSTEMS, INC.

44 East Industrial Road
Branford, Connecticut 06405

PROXY STATEMENT

The Annual Meeting and Voting

Our board of directors is soliciting proxies to be used at the annual meeting of stockholders to be held on Wednesday, June 9, 2010, or at any adjournment of the meeting. This proxy statement contains information about the items being voted on at the annual meeting.

Who is entitled to vote?

Record stockholders of CAS Medical Systems, Inc. (CASMED) common stock at the close of business on April 21, 2010 (the record date) can vote at the meeting. As of the record date, 11,531,584 shares of CASMED common stock were issued and outstanding. Each stockholder has one vote for each share of common stock owned as of the record date. A list of all stockholders entitled to vote at the meeting will be available for examination by any stockholder for any purpose germane to the meeting at our office at 44 East Industrial Road, Branford, Connecticut, for the ten-day period immediately preceding the meeting.

How do I vote?

A form of proxy card and a return envelope for the proxy card are enclosed. Giving your proxy means that you authorize the persons named in the enclosed proxy card to vote your shares at the CASMED annual meeting in the manner you direct. You may vote by proxy or in person at the annual meeting. To vote by proxy, if you are a registered holder, please complete, sign and return your proxy card in the accompanying postage-paid return envelope.

If any proxy is returned without indication as to how to vote, the CASMED common stock represented by the proxy will be voted by the persons named on the proxy in favor of each proposal and in accordance with their best judgment on any other matters which may come before the meeting.

How do I vote if my shares are held in street name?

If your broker holds your shares of CASMED common stock in street name, you must either

direct your broker on how to vote your shares or obtain a proxy from your broker to vote in person at the annual meeting. If your shares are held in street name, you should check the voting form that you receive to determine whether shares may be voted by telephone or the internet.

May I change my vote?

You may revoke your proxy at any time before it is voted at the meeting in several ways. You may (i) send in a revised proxy dated later than the first, (ii) vote in person at the meeting, or (iii) notify our Secretary in writing prior to the meeting that you have revoked your proxy.

What constitutes a quorum?

The holders of a majority of the outstanding shares entitled to vote at the meeting, present in person or represented by proxy, constitute a quorum. Abstentions, broker non-votes and votes withheld from director nominees are included in the count to determine a quorum. If a quorum is present, each of the six director candidates who receive a majority of the votes of the shares present in person or represented by proxy and entitled to vote on the election of directors will be elected. Proposal 2 will be approved if a quorum is present and a majority of the votes cast by holders present in person or represented by proxy are cast in favor of the applicable proposal.

What is the effect of broker non-votes and abstentions?

Under Nasdaq rules, if your broker holds your shares in its "street" name, the broker may under certain circumstances vote your shares on the agenda items even if it does not receive instructions from you. Because broker non-votes and abstentions are not considered votes cast on the matters before the meeting, neither will have an effect on the voting for these proposals.

Stockholder proposals for the 2011 annual meeting

Stockholder proposals intended to be presented at our 2011 annual meeting pursuant to

BNY Y03377 004.00.00.00 9 X
ACE 

Securities Exchange Act Rule 14a-8 must be received by our Secretary not later than December 26, 2010, for inclusion in our proxy statement and form of proxy relating to that

meeting. Stockholder proposals submitted outside the process provided in Rule 14a-8 shall be considered untimely in accordance with Rule 14a-5(e) if made after March 11, 2011.

Which stockholders own at least 5% of CASMED?

Other than a director listed in the director and officer ownership table below, the only persons or groups known to us to be beneficial owners of more than five percent of our outstanding common stock as of April 21, 2010 are reflected in the chart below. The following information is based upon Schedules 13D, 13F and 13G respectively filed with the Securities and Exchange Commission by the persons and entities shown as of the respective dates appearing below or other information obtained by the company.

<u>Name and Address of Beneficial Owners</u>	<u>Amount and Nature of Beneficial Ownership</u>	<u>Percent of Class</u>
BMI Capital Corporation 570 Lexington Avenue New York, NY 10022	2,292,583 (a)	19.9%
J. Sanford Davis 14 Longview Terrace Madison, CT 06443	921,500	8.0%

(a) Based upon information set forth in a Schedule 13F filed with the SEC on February 10, 2010. BMI Capital Corporation holds sole dispositive power over the indicated shares.

How much stock is owned by directors and executive officers?

The following table shows beneficial ownership of CASMED common stock as of April 21, 2010 by our directors and our executive officers and a former executive officer named in the compensation tables in this proxy statement. Shares issuable upon exercise of options or warrants are shown in a separate column.

<u>Name of Beneficial Owner</u>	<u>Shares Deemed to be Beneficially Owned (a)</u>	<u>Options and Warrants Exercisable Within 60 Days (b)</u>	<u>Percent of Class</u>
Louis P. Scheps	184,807	714,401	7.3%
Jerome Baron	118,582	7,500	1.1%
Lawrence S. Burstein	96,257(c)	115,000	1.8%
Evan Jones	355,374	13,333	3.2%
Kenneth R. Weisshaar	—	—	—
Andrew E. Kersey	40,658	150,000	1.6%
Jeffery A. Baird	33,711	110,000	1.2%
Nathan B. Harris (d)	2,500	—	*
All current executive officers and directors as a group (7)	829,389	1,110,234	15.3%

* Less than one percent of the class

- (a) Includes restricted stock held by the named individuals as follows: Mr. Scheps — 1,470 shares; Mr. Baron — 1,470 shares; Mr. Burstein — 1,470 shares; Mr. Jones — 1,470 shares; Mr. Kersey — 8,334 shares; and Mr. Baird — 6,500 shares.
- (b) The director or executive officer has the right to acquire beneficial ownership of this number of shares within 60 days of the record date for the annual meeting (April 21, 2010) by exercising outstanding stock options or warrants (as applicable).
- (c) Includes 75,000 shares held in Mr. Burstein’s IRA rollover account and 9,375 shares owned directly and indirectly by a family member.
- (d) Beneficial ownership information for Mr. Harris is as of August 15, 2009. Mr. Harris resigned from the Company as of that date.

Section 16(a) Beneficial Ownership Reporting Compliance

Directors and persons who are considered “officers” of the company for purposes of Section 16(a) of the Securities Exchange Act of 1934 and greater than ten percent stockholders (referred to as reporting persons) are required to file reports with the Securities and Exchange Commission showing their holdings of and transactions in CASMED securities. It is generally our practice to file the forms on behalf of our reporting persons who are directors or officers. We believe that all such forms have been timely filed for 2009.

BNY Y03377 006.00.00.00 7 X
ACE 

Proposal 1: Election of Directors

Six directors, constituting the entire board of directors of CASMED, are to be elected at the annual meeting to serve for a term of one year or until their respective successors are duly elected and qualify. Information about each nominee for director (all of whom are incumbent directors), including the nominee's age, is set forth below. Unless otherwise indicated, each nominee has held his present position for at least five years. The shares represented by the proxies will be voted in favor of the election as directors of the persons named below unless authority to do so is

withheld. Should you choose not to vote for a nominee, you may list on the proxy the name of the nominee for whom you choose not to vote and mark your proxy under Proposal No. 1 for all other nominees. Should any nominee become unable to accept nomination or election as a director (which is not now anticipated), the persons named in the enclosed proxy will vote for a substitute nominee as may be selected by the board of directors, unless the size of the board is reduced.

NOMINEES FOR ELECTION TO BOARD OF DIRECTORS

<u>Name</u>	<u>Age</u>	<u>Year First Became Director</u>	<u>Principal Occupation During the Past Five Years</u>
Louis P. Scheps	78	1990	Currently Chairman of the Board of CASMED. Mr. Scheps held the positions of President and Chief Executive Officer of CASMED from 1990 until March 2007 and held the position of Director of Manufacturing of CASMED from 1986 until 1990. Prior thereto, Mr. Scheps was employed by Posi-Seal International as Vice President from 1969 to 1985. Mr. Scheps received his engineering degree from Purdue University and his business education from the GE Management Program. As our former Chief Executive Officer, Mr. Scheps has extensive knowledge of the Company and considerable experience in manufacturing operations.

BNY Y03377 007.00.00.00 5 X
ACE 

<u>Name</u>	<u>Age</u>	<u>Year First Became Director</u>	<u>Principal Occupation During the Past Five Years</u>
Jerome Baron	83	1986	Mr. Baron has been in the securities industry since 1944. He was a Vice President in the International Department at Loeb Rhoades & Company, a Partner at Andreson & Company, and Chairman and Chief Executive Officer of Foster Securities, Inc., which he founded in 1974. In 1977, Foster Securities merged with Brean Murray and Company, Inc. Mr. Baron is Vice-Chairman of Brean Murray, Carret & Co. He is a Director of Haulbowline Ltd., a private offshore company. He attended Kings Point Merchant Marine Academy and Pace University. Mr. Baron, our audit committee chairman, has extensive knowledge of the capital markets and has been a long-standing member of the Company's Board of Directors where he has become very familiar with the Company's operations.
Lawrence S. Burstein	67	1985	Mr. Burstein has been President and principal stockholder of Unity Venture Capital Associates, Ltd. since March 1996. Prior thereto he was President, a director and principal stockholder of Trinity Capital Corporation since October 1982. Mr. Burstein is a director of <u>three</u> other public companies: THQ, Inc., a manufacturer of video game cartridges, I.D. Systems, Inc., which designs, develops and produces a wireless monitoring and tracking system; and Atrinsic, Inc., which is principally an internet direct marketing company. In addition, Mr. Burstein is a director of Millennium India Acquisition Corporation, a publicly traded 1940 Act investment company. He was formerly a director of American Telecom Services, Inc., a provider of converged telecommunication services. Mr. Burstein received an L.L.B. from Columbia Law School. Mr. Burstein has considerable experience with respect to law and strategic business matters across a variety of industries. He past experience with the Company is important to the Board's ability to evaluate our business strategies and decisions.

BNY Y03377 008.00.00.00 4 X
ACE 

<u>Name</u>	<u>Age</u>	<u>Year First Became Director</u>	<u>Principal Occupation During the Past Five Years</u>
Andrew E. Kersey	49	2007	Mr. Kersey has been President and Chief Executive Officer of CASMED since April 2007. Mr. Kersey has over 20 years experience in the medical device industry and has been with CASMED since 2001. Mr. Kersey served as Chief Operating Officer of CASMED from 2004 until April 2007. Previously, Mr. Kersey was Director of Engineering of CASMED. Prior to joining CASMED, Mr. Kersey held various engineering management positions at Novamatrix Medical Systems, Inc. and Corometrics Medical Systems. Mr. Kersey has extensive experience in the medical device industry and, as our Chief Executive Officer, provides insight to the Board with respect to the management of CASMED and its key issues.
Evan Jones	53	2008	Mr. Jones was a co-founder of Digene Corporation, a publicly traded biotechnology company focused on women's health and molecular diagnostic testing, serving as Chairman of the Board from 1995 through 2007. Mr. Jones was CEO of Digene from 1990 to 2006, and President from 1990 to 1999. In July 2007, Mr. Jones formed jVen Capital, LLC, a life sciences investment company. Mr. Jones is a member of the Board of Directors of the Children's National Medical Center and the Children's Research Institute in Washington DC. He is Chairman of the Campaign for Public Health, an independent, not-for-profit organization dedicated to increasing funding for the Centers for Disease Control and Prevention, and is a member of the Board of Directors and the Executive Committee of Research!America. Mr. Jones received a B.A. from the University of Colorado and an M.B.A. from The Wharton School at the University of Pennsylvania. Mr. Jones has considerable knowledge of the medical device market as well as experience leading a publicly-traded company and interacting with investors and shareholders. His experience is valuable to the Board's ability to assess our strategy and direction and evaluate our business decisions.

BNY Y03377 009.00.00.00 7 X
ACE 

<u>Name</u>	<u>Age</u>	<u>Year First Became Director</u>	<u>Principal Occupation During the Past Five Years</u>
Kenneth R. Weisshaar	59	2010	Mr. Weisshaar currently serves as a member of the Board of Directors of Orthofix International, N.V., a NASDAQ listed company focusing on spine reconstruction and trauma, and Precision Therapeutics Inc., a private oncology services company. Mr. Weisshaar serves on the Board of Directors of Beth Abraham Family of Health Services, a large non-profit nursing home and managed care organization located in the New York area. Mr. Weisshaar previously served as a member of the Board of Directors of Digene Corporation, a publicly traded biotechnology company focused on women's health and molecular diagnostic testing. Mr. Weisshaar served as Chief Operating Officer and Strategy Advisor of Sensatex, Inc. a start-up company developing wireless vital signs monitoring equipment from 2000 to 2002. Mr. Weisshaar previously served in various capacities with Becton Dickinson and Company from 1988 to 1999 including Senior Vice-President and Chief Financial Officer from 1998 to 1999, President of Worldwide Consumer Health Care from 1996 to 1998, Sector President from 1994-1996, Divisional President 1992-1994 and Vice President, Corporate Planning and Development from 1988-1992. Mr. Weisshaar was also employed by McKinsey and Company primarily as a healthcare and manufacturing consultant from 1982 to 1988 and held various positions with Raychem Corporation from 1974 to 1982. Mr. Weisshaar received a B.S. in Chemical Engineering from the Massachusetts Institute of Technology and a MBA from the Harvard Business School. Mr. Weisshaar has extensive operating and financial management experience in the medical device market.

The board of directors recommends that stockholders vote FOR the nominees described in Proposal 1.

Executive Officers

Our executive officers are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Andrew E. Kersey	49	President and Chief Executive Officer
Jeffery A. Baird	56	Chief Financial Officer and Secretary

Information Concerning Executive Officers Who Are Not Directors

Jeffery A. Baird joined CASMED during January 2004. From April 2003 to December 2003, Mr. Baird was CFO of QDx, Inc., a startup venture engaged in the development of novel medical diagnostic products. Mr. Baird was employed by Novamatrix Medical Systems, Inc. from 1988 to 2002 and held various positions including Controller, Treasurer and CFO. Prior to joining Novamatrix, Mr. Baird was employed by Philips Medical Systems, Inc., a medical diagnostic imaging company.

Board Information and Committees

The board met eight times in 2009 and acted twice by unanimous written consent. Each incumbent director attended at least 75 percent of the total number of board meetings and meetings held by the board committees on which he served during 2009. The board has determined that each of our non-employee directors currently serving on the board or who served on the board during 2009, other than Mr. Scheps who is our former President and Chief Executive Officer, is independent based upon the criteria provided by Nasdaq Stock Market rules. Members of the board serve on one or more of the committees described below, except for directors who are also employees or former employees of the company, who do not serve on board committees.

We maintain a leadership structure for CASMED that separates the positions of Chairman of the Board and Chief Executive Officer. By having different individuals serve in these roles, we believe that we provide for additional independence of and oversight by the board of directors and enable our Chief Executive Officer to focus his time and attention on the Company's operations and strategic direction. Our current Chairman of the Board, Louis P. Scheps, served as our Chief Executive Officer from 1990 until March 2007, which we believe gives him additional experience and insight that enhances the ability of the board to oversee CASMED and the Chief Executive Officer.

The board of directors has general risk oversight responsibilities. The board believes that its

structure enables it to effectively oversee risk management.

The board has standing audit and compensation committees, but does not have a standing nominating committee. Further information regarding these committees and the director nomination process is provided below.

The **Audit Committee**, which met seven times in 2009, monitors our financial reporting standards and practices and our internal financial controls to ensure compliance with the policies and objectives established by the board of directors. The committee directly retains and recommends for stockholder approval an independent accounting firm to conduct the annual audit, and discusses with our independent accountants the scope of their examinations, with particular attention to areas where either the committee or the independent accountants believe special emphasis should be directed. The committee reviews the quarterly and annual financial statements and the annual independent accountants' report, invites the accountants' recommendations on internal controls and on other matters, and reviews the evaluation given and corrective action taken by management. It reviews the independence of the accountants and pre-approves audit and permissible non-audit services. It also reviews our internal accounting controls and the scope and results of our internal auditing activities. Members of the audit committee are Lawrence S. Burstein, Jerome Baron, Evan Jones and Kenneth Weisshaar. Mr. Weisshaar joined the Audit Committee upon his appointment to the board in April 2010. Each member of the committee is independent as defined in Rule 10A-3 of the Securities and Exchange Commission and the listing standards of the Nasdaq Stock Market. The board of directors has determined that each of Lawrence S. Burstein, Jerome Baron, Evan Jones and Kenneth Weisshaar qualifies as an "audit committee financial expert" as that term is defined in Regulation S-K of the Securities and Exchange Commission.

The **Compensation Committee**, which met twice in 2009, oversees our executive and director compensation programs, including establishing our executive and director compensation policies and annually reviewing all components of compensation to ensure that our objectives are

appropriately achieved. These functions are not delegated to our officers or to third-party professionals, although the committee may from time to time retain third-party consultants to provide advice regarding compensation issues. No such consultants were retained during 2009. The committee also considers input from our executive officers although final decisions regarding executive compensation are made by the committee. The committee is also responsible for certain administrative aspects of our compensation plans and stock plans, and approves or recommends changes in these plans. It also approves performance targets and grants under our incentive plans and our stock plan for our executive officers. The committee also reviews officers' potential for growth, and, with the chief executive officer, will be responsible for succession planning and ensuring management continuity. The members are Lawrence S. Burstein, Jerome Baron and Evan Jones.

Each committee is governed by a written charter. Copies of each committee charter are available on our website at www.casmed.com.

Director Compensation

Director Fees. We pay our non-employee directors an annual retainer. The Chairman of the Board receives \$25,000 and each other director receives \$20,000. We also pay an annual

retainer of \$4,000 to the Audit Committee chairman and \$2,000 to the Compensation Committee chairman and pay an annual retainer of \$2,000 to each other Audit Committee member and \$1,000 to each other Compensation Committee member. During 2009, we paid total annual fees of \$78,750 to the non-employee directors and a total of \$12,000 in fees to the non-employee directors for their participation as committee members.

Our non-employee directors are eligible to receive options, restricted stock and other equity-linked grants under our 2003 Equity Incentive Plan. On June 10, 2009, we granted 5,882 shares of restricted common stock under the 2003 Equity Incentive Plan to each of Messrs. Baron, Burstein, Jones and Scheps. The grants were intended to approximate \$10,000 in cash value based upon the market value of the common stock at the date of grant. These restricted stock grants vest in equal quarterly installments during the twelve months from date of grant.

In 2010, the board intends to grant to each non-employee director, on the date of the annual meeting of stockholders, a number of restricted shares equal to \$10,000 divided by the closing price of the common stock on such date. The aforementioned grant would vest quarterly from the date of grant over a one-year period.

Director Compensation Table. The following table shows all compensation paid or granted, during or with respect to the 2009 fiscal year to each of the non-employee directors for services rendered to CASMED during 2009.

2009 DIRECTOR COMPENSATION

<u>Name (a)</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Stock Awards (\$)(b)</u>	<u>All Other Compensation (\$)</u>	<u>Total (\$)</u>
Jerome Baron	\$25,000	\$10,000	\$ 0	\$35,000
Lawrence S. Burstein	\$23,000	\$10,000	\$ 0	\$23,000
Evan Jones	\$24,000	\$10,000	\$ 0	\$34,000
Louis P. Scheps (c)	\$18,750	\$10,000	\$26,923	\$55,673
Kenneth R. Weisshaar (d)	—	—	—	—

(a) As of December 31, 2009, Mr. Baron held an option to purchase 7,500 shares of our common stock, Mr. Burstein held options and warrants to purchase an aggregate of 115,000 shares of our common stock, Mr. Jones held an option to purchase an aggregate of 20,000 shares of our common stock and Mr. Scheps held warrants to purchase 714,401 shares of our common stock. As of December 31, 2009, Messrs. Baron, Burstein, Jones and Scheps each held 2,941 shares of restricted stock.

- (b) Dollar amounts represent the fair market value of 5,882 shares of restricted stock granted to each outside director on June 10, 2009. The fair market value of the grants was \$1.70 per share representing the closing market price on the date of grant. The shares vest quarterly over a one year period from grant date.
- (c) Mr. Scheps served as a part-time employee in a senior executive role through March 31, 2009 at an annualized salary of \$100,000. This payment is reflected in the column entitled "All Other Compensation"
- (d) Mr. Weisshaar was not a member of the Board of Directors during 2009.

Communications with Directors

In order to provide our security holders and other interested parties with a direct and open line of communication to the board of directors, the board of directors has adopted the following procedures. CASMED security holders and other interested persons may communicate with the chairmen of our Compensation Committee or Audit Committee or with the non-management directors as a group by sending written correspondence to our Secretary. The correspondence should specify which of the foregoing is the intended recipient. Communications should be sent by mail addressed in care of the corporate Secretary, CAS Medical Systems, Inc., 44 East Industrial Road, Branford, Connecticut 06405.

All communications received in accordance with these procedures will be reviewed initially by our corporate Secretary. The Secretary will relay all such communications to the appropriate director or directors unless the Secretary determines that the communication:

- does not relate to the business or affairs of CASMED or the functioning or constitution of the board of directors or any of its committees;
- relates to routine or insignificant matters that do not warrant the attention of the board of directors;
- is an advertisement or other commercial solicitation or communication;
- is frivolous or offensive; or
- is otherwise not appropriate for delivery to directors.

The director or directors who receive any such communication will have discretion to determine whether the subject matter of the communication should be brought to the attention of the full

board of directors or one or more of its committees and whether any response to the person sending the communication is appropriate. Any response will be made only in accordance with applicable law and regulations relating to the disclosure of information.

Our Secretary will retain copies of all communications received pursuant to these procedures for a period of at least one year. The board of directors will review the effectiveness of these procedures from time to time and, if appropriate, recommend changes.

We have not established a formal policy regarding director attendance at our annual meetings of stockholders, but our directors generally do attend the annual meeting. The chairman of the board presides at the annual meeting of stockholders, and the board of directors generally holds one of its regular meetings in conjunction with the annual meeting of stockholders. Accordingly, unless one or more members of the board are unable to attend, all members of the board are present for the annual meeting. Each of the five members of the board at the time of our 2009 annual meeting of stockholders attended that meeting.

Nomination of Directors

Due to the small size of our board of directors, the board of directors determined that it is appropriate for the full board to act with respect to director nomination matters. Four of the six board members are independent as set forth in the rules of the Nasdaq Stock Market. The full board has adopted specifications applicable to members of the board of directors, and nominees for the board of directors recommended by the board of directors must meet these specifications.

The specifications provide that a candidate for director should:

- Have a reputation for industry, integrity, honesty, candor, fairness and discretion;
- Be knowledgeable in his or her chosen field of endeavor, which field should have such relevance to our businesses as would contribute to the company's success;
- Be knowledgeable, or willing and able to become so quickly, in the critical aspects of our businesses and operations; and
- Be experienced and skillful in serving as a competent overseer of, and trusted advisor to, senior management of a publicly held corporation.

In addition, nominees for the board of directors should contribute to the mix of skills, core competencies and qualifications of the board through expertise in one or more of the following areas: accounting and finance, the healthcare industry, international business, mergers and acquisitions, leadership, business and management, strategic planning, government relations, investor relations, executive leadership development, and executive compensation.

Mr. Weisshaar, who joined the board in 2010, was recommended to the Board by one of our current non-employee directors, Mr. Jones. We did not employ a third party to undertake a search for this position.

The board of directors also seeks nominees who will contribute to the board's diversity. While the board of directors does not maintain a formulaic policy or approach with respect to diversity, it continually seeks a wide range of perspectives and experiences among its members.

The board will consider nominees recommended by stockholders for election at the 2011 annual meeting of stockholders that are submitted prior to the end of 2010 to our Secretary at CAS Medical Systems, Inc., 44 East Industrial Road, Branford, Connecticut 06405. Any recommendation must be in writing and must include a detailed description of the business experience and other qualifications of the recommended nominee as well as the signed consent of the nominee to serve if nominated and elected, so that the candidate may be properly considered. All stockholder

recommendations will be reviewed in the same manner as other potential candidates for board membership.

The board has not received any nominees for election to the board at the 2010 annual meeting from any stockholder or group that has held more than 5% of our common stock for a period of one year.

Code of Ethics

Our board of directors has approved a Code of Ethics in accordance with the rules of the Securities and Exchange Commission and The Nasdaq Stock Market that governs the conduct of each of our directors and senior executive officers, including our principal executive officer, principal financial officer, principal accounting officer and controller. Our Code of Ethics is maintained on our website at www.casmed.com. Any amendments to or waivers of the Code of Ethics that apply to our principal executive officer, principal financial officer or principal accounting officer and that relates to any element of the definition of the term "code of ethics," as the term is defined by the Securities and Exchange Commission, will be posted on our website at www.casmed.com. There are currently no such amendments or waivers.

We recognize the importance of preventing both actual conflicts of interest and the appearance of such conflicts in dealings between CASMED and "related persons" (CASMED directors, director nominees, executive officers, stockholders owning five percent or greater of our common stock or the immediate family members of any of the foregoing). In accordance with its charter, the Audit Committee regularly reviews our corporate policies with respect to conflicts of interest including related party transactions and investigates instances of such conflicts.

Executive Officer Compensation

Executive Contracts and Severance and Change of Control Arrangements

Andrew E. Kersey. On August 10, 2009, we entered into an employment agreement with Andrew E. Kersey, our President and Chief Executive Officer. This agreement supersedes

Mr. Kersey's previous agreement dated March 16, 2007 as amended December 29, 2008. Under the terms of the employment agreement, Mr. Kersey is employed on an "at will" basis, will receive an annual base salary of two hundred fifty thousand dollars (\$250,000) and will be eligible for an annual bonus in the form of cash or CASMED common stock as determined at the sole discretion of the Compensation Committee of the board. Mr. Kersey will also be entitled to participate in all of our employee benefit programs as such programs may be in effect from time to time.

If we terminate Mr. Kersey's employment without Serious Cause (as defined in the Employment Agreement) or Mr. Kersey terminates his employment for Good Reason (as defined in the Employment Agreement), we will continue to pay Mr. Kersey his then-current base salary for a period of six (6) months from the date of such termination and he will be entitled to participate in our health benefit plans (with standard employee payment not to exceed the payment level prior to termination) for the six (6) month period. This would represent a payment of approximately \$127,600 based upon his current salary and benefits level. In addition, if Mr. Kersey terminates his employment for Good Reason or if we terminate Mr. Kersey's employment without Serious Cause, all of Mr. Kersey's equity-linked grants (such as stock options and restricted stock) shall immediately accelerate and vest in full. If we (or a successor company) terminate Mr. Kersey's employment without Serious Cause or Mr. Kersey terminates his employment for Good Reason, within the period commencing on the date that a Change of Control (as defined in the Employment Agreement) is formally proposed to our board of directors and ending on the second anniversary of the date on which such Change of Control occurs, then Mr. Kersey will be entitled to receive his then-current base salary for a period of one (1) year from the date of such termination and in addition will be entitled to participate in our health benefit plans (with standard employee payment not to exceed the payment level prior to the change in control) for the period of one (1) year. This would represent a payment of approximately \$255,200 based upon his current salary and benefits level.

Jeffery A. Baird. On August 10, 2009, we entered into an employment agreement with Jeffery A. Baird pursuant to which Mr. Baird is serving as our Chief Financial Officer. Under the terms of the employment agreement, Mr. Baird is employed on an "at will" basis, will receive an annual base salary of two hundred thousand dollars (\$200,000) and will be eligible for an annual bonus in the form of cash or CASMED common stock as determined at the sole discretion of the Compensation Committee of the board. Mr. Baird will also be entitled to participate in all of our employee benefit programs as such programs may be in effect from time to time.

If we terminate Mr. Baird's employment without Serious Cause (as defined in the Employment Agreement) or Mr. Baird terminates his employment for Good Reason (as defined in the Employment Agreement), we will continue to pay Mr. Baird his then-current base salary for a period of six (6) months from the date of such termination and he will be entitled to participate in our health benefit plans (with standard employee payment not to exceed the payment level prior to termination) for the six (6) month period. This would represent a payment of approximately \$97,800 based upon his current salary and benefits level. In addition, if Mr. Baird terminates his employment for Good Reason or if we terminate Mr. Baird's employment without Serious Cause, all of Mr. Baird's equity-linked grants (such as stock options and restricted stock) shall immediately accelerate and vest in full. If we (or a successor company) terminate Mr. Baird's employment without Serious Cause or Mr. Baird terminates his employment for Good Reason, within the period commencing on the date that a Change of Control (as defined in the Employment Agreement) is formally proposed to our board of directors and ending on the second anniversary of the date on which such Change of Control occurs, then Mr. Baird will be entitled to receive his then-current base salary for a period of one (1) year from the date of such termination and in addition will be entitled to participate in our health benefit plans (with standard employee payment not to exceed the payment level prior to the change in control) for the period of one (1) year. This would represent a payment of approximately \$195,600 based upon his current salary and benefits level.

Compensation Discussion and Analysis

Our Compensation Committee, which is comprised of three independent non-employee directors, has formulated a compensation philosophy that is designed to enable us to attract, retain and reward capable employees who can contribute to the success of CASMED, principally through a combination of (1) base salaries, (2) annual incentive opportunities and (3) longer term incentive opportunities for senior management. We believe that implementation of a system of compensation that emphasizes performance-based compensation provides a strong alignment to stockholders' interests. Five key principles serve as the guiding framework for compensation decisions for all executive officers of CASMED:

- To attract and retain the most highly qualified management and employee team.
- To pay competitively compared to similar companies in our industry.
- To encourage superior employee performance by aligning rewards with stockholder interests.
- To motivate senior executives to achieve CASMED's annual and long-term business goals by providing equity-based incentive opportunities.
- To strive for fairness in administration by emphasizing performance related contributions as the basis for pay decisions.

To implement these policies, we have designed the framework for a four-part executive compensation program consisting of base salary, annual incentives, long-term incentive opportunities for senior management, and other employment benefits.

Base Salary. We will seek to maintain levels of compensation that are competitive with similar companies in our industry. Base salary represents the fixed component of the executive compensation program. CASMED's philosophy regarding base salaries is to maintain salaries for the aggregate officer group at the competitive industry average. Periodic increases in base salary will relate to individual contributions evaluated against established objectives, length of service, and the industry's annual competitive pay

practice movement. We believe that base salary for 2009 for our chief executive officer and for the other executive officers was generally at the competitive industry average.

Annual Incentive Program. Each year the Compensation Committee assesses whether to pay bonuses to our employees including senior executives either in cash or stock based upon performance. Payment of the performance bonuses is at the sole discretion of the Compensation Committee and is not based on specific metrics, although the Compensation Committee bases its decisions on numerous factors, including overall corporate and personal performance. No cash bonus payments were made to the named executive officers for 2009.

Long-Term Incentives. We believe that long-term incentives should provide senior executives with an opportunity to increase their ownership and potentially gain financially from CASMED stock price increases. By this approach, the best interests of stockholders and senior executives will be closely aligned. Therefore, senior executives are eligible to receive restricted stock and are also eligible to receive stock options, giving them the right to purchase shares of common stock at a specified price in the future. These grants will vest based upon the passage of time, the achievement of performance metrics, or both. We believe that the use of restricted stock and stock options as the basis for long-term incentive compensation meets our defined compensation strategy and business needs by achieving increased value for stockholders and retaining key employees.

Other Benefits. Our philosophy is to provide competitive health and welfare-oriented benefits to executives and employees, but to maintain a conservative posture relative to executive benefits. We do provide life insurance and supplemental disability insurance to our senior executive officers.

Compliance with Section 162(m) of the Internal Revenue Code. Section 162(m) of the Internal Revenue Code generally disallows a tax deduction to a public corporation for compensation over \$1 million paid to a corporation's chief executive officer and four other most highly compensated executive officers. Qualifying performance-based compensation will not be subject to the cap if certain requirements are met. The salaries for our

highest paid executives will be set, in part based on independent studies, at the competitive industry average but are not expected to reach \$1 million in the near future. We intend to structure the overall compensation of our executive officers in a manner that should ensure that CASMED does not lose any tax deductions because of the \$1 million compensation limit in the foreseeable future.

Our 2003 Equity Incentive Plan incorporates maximum limitations on individual annual stock option and restricted stock grants so as to meet the requirements of Section 162(m). The 2003 Equity Incentive Plan also identifies performance measures to be used if we decide to use performance-based vesting restricted stock in the future to meet the requirements of Section 162(m).

Compensation Disclosure Tables

Summary Compensation Table. The following table (Table I) shows all compensation paid or granted, during or with respect to the 2008 and 2009 fiscal years to (i) our chief executive officer and (ii) the other most highly compensated executive officer, other than the CEO, whose total compensation during 2009 exceeded \$100,000 and who was serving as an executive officer as of December 31, 2009 and (iii) one former executive officer whose total compensation exceeded \$100,000 during 2009. (Persons in this group are referred to individually as a “named executive officer” and collectively as the “named executive officers,” and, unless otherwise noted, the titles listed are the titles held as of the end of the 2009 fiscal year.)

TABLE I
2008-2009 SUMMARY COMPENSATION TABLE

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Bonus (\$)</u>	<u>Stock Awards (\$) (a)</u>	<u>Option Awards (\$) (a)</u>	<u>Non-Equity Incentive Plan Compensation (\$)</u>	<u>All Other Compensation (\$) (b)</u>	<u>Total (\$)</u>
Andrew E. Kersey	2009	\$242,055	\$0	\$ 0	\$ 0	\$0	\$2,622	\$244,677
President and Chief Executive Officer	2008	\$245,192	\$0	\$87,000	\$ 0	\$0	\$2,535	\$334,727
Jeffery A. Baird	2009	\$193,614	\$0	\$ 0	\$ 0	\$0	\$3,544	\$197,158
Chief Financial Officer	2008	\$196,154	\$0	\$65,250	\$ 0	\$0	\$3,457	\$264,861
Nathan B. Harris	2009	\$139,457	\$0	\$ 0	\$ 0	\$0	\$ 0	\$139,457
Former Vice President Sales and Marketing (c)	2008	\$ 63,500	\$0	\$79,000	\$165,200	\$0	\$ 0	\$307,700

- (a) Dollar amounts set forth with regard to restricted stock and stock options grants are computed in accordance with FASB ASC Topic 718. Share value utilized for purposes of this determination is the applicable fair market value on the date of grant. Fair market value utilized for restricted stock grants represents the closing market price on the date of grant. Fair market value utilized for stock option grants are based upon on a Black-Scholes calculation assuming a 3.6% risk free interest rate, volatility of 63%, a term of seven years and an annual dividend rate of zero. For a further discussion of the assumptions underlying these amounts, reference is made to the footnotes to CASMED’s financial statements set forth in Form 10-K for the fiscal year ended December 31, 2009.
- (b) Amounts shown consist of the cost of term life and disability insurance for Messrs. Kersey and Baird.
- (c) Mr. Harris joined the Company on September 15, 2008 and resigned August 15, 2009.

Grants of Plan-Based Awards Table. There were no equity or non-equity grants made by CASMED during the 2009 fiscal year to the named executive officers.

Outstanding Equity Awards at Fiscal Year-End Table. Shown in Table II below is information with respect to outstanding equity-based awards (consisting of unexercised options to purchase CASMED common stock and unvested restricted CASMED common stock) held by the named executive officers at December 31, 2009.

**TABLE II
 OUTSTANDING EQUITY AWARDS AT 2009 FISCAL YEAR END**

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Option Awards			Stock Awards	
		Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$) (a)
Andrew E. Kersey	50,000	0	\$0.57	10/11/2011		
	20,000	0	\$0.70	7/17/2013		
	20,000	0	\$1.50	6/2/2014		
	20,000	0	\$2.30	2/17/2015		
	40,000	0	\$3.10	6/15/2015		
					15,001	\$31,802
Jeffery A. Baird	50,000	0	\$1.40	1/6/2014		
	20,000	0	\$2.30	2/17/2015		
	40,000	0	\$3.10	6/15/2015		
					11,500	\$24,380
Nathan B. Harris	0	0	—	—		
					0	0

(a) These values are based on \$2.12 per share, the market price of a share of CASMED common stock as of December 31, 2009 (the final trading day of 2009).

Option Exercises and Stock Vested Table. The following table (Table III) shows information with respect to all stock options or warrants exercised by the named executive officers during 2009 and information regarding restricted stock held by those persons that vested during 2009.

**TABLE III
 OPTION EXERCISES AND STOCK VESTED TABLE**

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting \$
Andrew E. Kersey	—	—	8,333	\$13,133
Jeffery A. Baird	—	—	6,500	\$10,320
Nathan B. Harris	—	—	0	0

BNY Y03377 018.00.00.00 8 X
ACE 

Equity Compensation Plan Table. The following table (Table IV) sets forth general information concerning our equity compensation plans as of December 31, 2009.

TABLE IV
EQUITY COMPENSATION PLAN INFORMATION

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights (col. a)</u>	<u>Weighted-average exercise price of outstanding options, warrants and rights (\$) (col. b)</u>	<u>Number of securities remaining available for issuance under equity compensation plans (excluding securities reflected in column (a)) (col. c)</u>
Equity compensation plans approved by security holders: (a)	488,175	\$2.19	402,273
Equity compensation plans not approved by security holders: (a)	<u>964,401</u>	<u>\$0.50</u>	<u>0</u>
Total	<u>1,452,576</u>	<u>\$1.03</u>	<u>402,273</u>

(a) The equity compensation plans not approved by security holders consist of warrants granted to the chairman of the board of directors, a former director, and current outside directors of the company as compensation for services rendered to the company. These warrants generally have no specific expiration date and have an exercise price range of \$0.30 to \$1.44. Equity compensation plans approved by security holders consist of the 1994 Employees' Incentive Stock Option Plan (referred to as the 1994 Plan) and the 2003 Equity Incentive Plan. The 1994 Plan expired on December 31, 2003 and, as such, there are no further options available for issuance thereunder.

Audit Committee Report

The Audit Committee reviews CASMED's financial reporting function on behalf of the board of directors. Management has the primary responsibility for preparing the financial statements in accordance with accounting standards generally accepted in the United States and the reporting process, including the system of internal controls. CASMED's independent accountants are responsible for expressing an opinion on the annual financial statements as to whether or not they are presented in conformity in all material respects with accounting principles generally accepted in the United States. The Audit Committee monitors these processes through periodic meetings with management and the independent registered public accounting firm.

In this context, the Audit Committee has reviewed and discussed with management and the independent accountants the audited financial statements for the year ended December 31, 2009, including the audit scope, internal control matters, and audit results. The Audit Committee also met with the independent accountants without management present. The Audit Committee has discussed with the independent accountants the matters required to be discussed by auditing standards. In addition, the Audit Committee has received from the independent accountants the written disclosures and letter required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the Audit Committee concerning independence, and discussed with them their independence from CASMED and its management. The Audit Committee has also considered whether all non-audit services rendered by the independent accountants to CASMED are compatible with the accountants' independence.

In reliance on the reviews and discussions referred to above, the Audit Committee recommended to the board of directors, and the board has approved, that the financial statements for the year ended December 31, 2009 be included for filing in CASMED's annual report on Form 10-K for the year ended December 31, 2009.

Audit Committee of the Board of Directors

- Jerome Baron
- Lawrence S. Burstein
- Evan Jones
- Kenneth R. Weisshaar

Audit Committee Pre-Approval Policy

The Audit Committee operates under a written charter. Under this charter, the Audit Committee is responsible for selecting, approving, compensating and overseeing the independence, qualifications and performance of the independent accountants. Further, the Audit Committee has adopted a pre-approval policy pursuant to which certain permissible non-audit services may be provided by the independent accountants. Pre-approval is generally provided for up to one year and may be detailed as to the particular service or category of services and may be subject to a specific budget. The Audit Committee may also pre-approve particular services on a case-by-case basis. In assessing requests for services from the independent accountants by management, the Audit Committee considers whether such services are consistent with the auditor's independence; whether the independent accountants are likely to provide the most effective and efficient service based upon their familiarity with the company; and whether the service could enhance our ability to manage or control risk or improve audit quality.

Notwithstanding the pre-approval policy, all of the audit-related, tax and other services provided by UHY LLP in fiscal year 2009 were approved in advance by the Audit Committee.

Proposal 2:

Approval of Appointment of CASMED's Independent Accountants

The Audit Committee of our board of directors has selected J.H. Cohn LLP as our independent registered public accounting firm for the year ending December 31, 2010, and has directed that the selection of independent accountants be submitted for ratification by stockholders at the annual meeting. A representative of J.H. Cohn LLP is expected to be present at the annual meeting and will have an opportunity to make a statement if he or she desires and will be available to respond to appropriate questions.

Stockholder ratification of the selection of J.H. Cohn LLP as our independent accountants is not required by our Bylaws or otherwise. However, the Audit Committee is submitting the selection of J.H. Cohn LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection were ratified, the Audit Committee in its discretion may direct the appointment of a different independent accounting firm at any time during the year if the Audit Committee determines that such a change would be in the best interests of CASMED and its stockholders.

Change of Independent Accountants

On April 19, 2010 UHY LLP ("UHY"), our prior independent registered public accounting firm, informed us that effective April 16, 2010, its New England practice was acquired by Marcum LLP. UHY also informed us that, as a result of this transaction, it declined reappointment as our independent registered public accounting firm for the fiscal year ending December 31, 2010.

UHY audited our financial statements for the fiscal years ended December 31, 2009 and 2008. The audit reports of UHY on our financial statements for those years did not contain an adverse opinion, or a disclaimer of opinion, or qualification or modification as to any uncertainty, audit scope, or accounting principles.

During the fiscal years ended December 31, 2009 and 2008 and subsequently to April 19, 2010, there were no disagreements with UHY on any

matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure that, if not resolved to UHY's satisfaction, would have caused UHY to make reference to the subject matter of the disagreement in connection with its audit reports nor were there any "reportable events" (as that term is described in Item 304(a)(1)(v) of Regulation S-K).

UHY issued a letter dated April 21, 2010 addressed to the Securities and Exchange Commission stating that UHY agreed with the above statements.

Through March 2010, UHY had a continuing relationship with UHY Advisors, Inc. ("Advisors"). Under this relationship UHY leased auditing staff who were full time, permanent employees of Advisors. UHY partners provide non-audit services through Advisors. UHY has only a few full time employees. Therefore, few, if any, audit services performed were provided by permanent full-time employees of UHY. UHY manages and supervises the audit services and audit staff, and is exclusively responsible for the opinion rendered in connection with its audit.

Our audit committee appointed J.H. Cohn LLP as the successor independent registered public accounting firm on April 21, 2010. Prior to such appointment, we had not consulted with J.H. Cohn LLP with respect to: 1) the application of accounting principles to a specified transaction, either completed or proposed; 2) the type of audit opinion that might be rendered on our financial statements; or 3) any matter that was either the subject of a disagreement (as defined in Item 304(a)(1)(iv) of Regulation S-K) or a reportable event (as described in Item 304(a)(1)(v) of Regulation S-K). The audit committee made its determination based in part on maintaining continuity of service due to the current UHY lead account partner joining J.H. Cohn LLP.

Audit Fees

J.H. Cohn LLP has not performed any services to CASMED for the years ended 2009 or prior.

BNY Y03377 021.00.00.00 8 X
ACE 

UHY LLP performed the audit of our annual consolidated financial statements included in the annual report on Form 10-K and the review of interim consolidated financial statements included in quarterly reports on Form 10-Q and the review and audit of the application of new accounting pronouncements and SEC releases. Aggregate fees billed by UHY LLP were \$147,386 and \$154,820 for the years ended December 31, 2009 and 2008, respectively.

Audit-Related Fees

UHY LLP also provided 401(K) Plan audit services to the Company during 2009 and 2008

The board of directors recommends that stockholders vote FOR the appointment of J.H. Cohn LLP as the company's independent accountants for 2010.

Additional Information

Solicitation of Proxies

In addition to the use of the mails, proxies may be solicited by the directors, officers, and employees of the company without additional compensation in person, or by telephone, facsimile, email or otherwise. Arrangements may also be made with brokerage firms and other custodians, nominees, and fiduciaries for the forwarding of solicitation material to the beneficial owners of CASMED common stock, and we will reimburse these brokers, custodians, nominees, and fiduciaries for reasonable out-of-pocket expenses incurred. The cost of solicitation will be borne entirely by CASMED.

for the plan years ended December 31, 2008 and 2007. Fees billed by UHY LLP for those services were \$12,666 and \$12,647, respectively.

Tax Fees

UHY LLP did not provide tax services to CASMED during the years ended December 31, 2009 and 2008.

All Other Fees

UHY LLP did not provide any services in addition to those described above during the years ended December 31, 2009 and 2008.

Other Matters

Directions to the annual meeting can be obtained by making a written or oral request to our Secretary, c/o CAS Medical Systems, Inc., 44 East Industrial Road, Branford, Connecticut 06405 or by telephone (203-488-6056).

Management knows of no other matters which may be presented for consideration at the meeting. However, if any other matters properly come before the meeting, it is the intention of the individuals named in the enclosed proxy to vote in accordance with their judgment.

By order of the board of directors.

Jeffery A. Baird
Secretary

[E/O]

CRC: 8987
EDGAR 2

Queue: BNY_CPS
Description: Proxy Card

BNY Y03377 050.00.00.00 0/6


ANNUAL MEETING OF STOCKHOLDERS OF CAS MEDICAL SYSTEMS, INC.

June 9, 2010

NOTICE OF INTERNET AVAILABILITY OF PROXY MATERIAL:
The Notice of Meeting, proxy statement and proxy card
are available at www.casmed.com

Please sign, date and mail
your proxy card in the
envelope provided as soon
as possible.

↓ Please detach along perforated line and mail in the envelope provided. ↓

20630000000000000000 6

060910

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF DIRECTORS AND "FOR" PROPOSAL 2.
PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE

1. Election of Directors.

NOMINEES:

- FOR ALL NOMINEES
 - WITHHOLD AUTHORITY FOR ALL NOMINEES
 - FOR ALL EXCEPT (See Instructions below)
- Jerome Baron
 - Lawrence S. Burstein
 - Evan Jones
 - Andrew E. Kersey
 - Louis P. Scheps
 - Kenneth R. Weisshaar

INSTRUCTION: To withhold authority to vote for any individual nominee(s), mark "FOR ALL EXCEPT" and fill in the circle next to each nominee you wish to withhold, as shown here: ●

2. To ratify the selection of J. H. Cohn LLP as independent auditors for the Company's fiscal year ending December 31, 2010. FOR AGAINST ABSTAIN

To transact such other business as may properly come before the annual meeting.

This proxy, when properly executed, will be voted in the manner directed by the undersigned stockholder. If no direction is made, this proxy will be voted FOR proposals 1 and 2. Please sign exactly as name appears on the left.

PLEASE MARK, SIGN, DATE AND RETURN THE PROXY CARD PROMPTLY USING THE ENCLOSED ENVELOPE.

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method.

Signature of Stockholder Date: Signature of Stockholder Date:

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.

□

CAS MEDICAL SYSTEMS, INC.

44 East Industrial Road, Branford, Connecticut 06405

This Proxy is Solicited on Behalf of the Board of Directors

The undersigned hereby appoints Louis P. Scheps and Andrew E. Kersey, and each of them, as the true and lawful attorneys, agents and proxies of the undersigned, each with full power of substitution, to represent and vote all shares of common stock of CAS Medical Systems, Inc. held of record by the undersigned on April 21, 2010 at the Annual Meeting of Stockholders to be held on June 9, 2010 and at any adjournment thereof, as specified on the reverse side of this proxy card and in their discretion upon such other matters as may properly come before such Annual Meeting and at any adjournment thereof. Any and all proxies heretofore given are hereby revoked.

(Continued and to be signed on the reverse side)