

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934
(Amendment No.)

Filed by the Registrant [X]

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))

[X] Definitive Proxy Statement

[] Definitive Additional Materials

[] Soliciting Material under Rule 14a-12

LIGHTWAVE LOGIC, INC.

Name of the 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)(4) and 0-11.

Title of each class of securities to which transaction applies:

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Aggregate number of securities to which transaction applies:

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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):

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Amount Previously Paid:

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Form, Schedule or Registration Statement No.:

.....

Filing Party:

.....

Date Filed:

.....

Lightwave Logic, Inc.

121 Continental Drive, Suite 110
Newark, Delaware 19713

June 16, 2010

Dear Fellow Stockholder:

The 2010 Annual Meeting of Stockholders (the “**Annual Meeting**”) of Lightwave Logic, Inc. (the “**Company**”) will be held at 2:00 p.m. on Thursday, July 8, 2010 at the Hilton Wilmington/Christiana, 100 Continental Drive, Newark, DE 19713. Enclosed you will find a formal Notice of Annual Meeting, Proxy Card and Proxy Statement, detailing the matters which will be acted upon. Directors and Officers of the Company will be present to help host the meeting and to respond to any questions from our stockholders. I hope you will be able to attend.

Please sign, date and return the enclosed Proxy without delay in the enclosed envelope, via telephone or via e-mail. The Company’s Annual Report on Form 10-K (including audited financial statements) for the fiscal year ended December 31, 2009 accompanies the Proxy Statement. The proxy materials and Annual Report included in this package are also available on the internet under the “Investor Info” page of the Company’s website at www.lightwavelogic.com.

All shares represented by Proxies will be voted at the Annual Meeting in accordance with the specifications marked thereon, or if no specifications are made, (i) as to Proposal 1, the Proxy confers authority to vote “FOR” all of the seven (7) persons listed as candidates for a position on the Board of Directors, (ii) as to Proposal 2, the Proxy confers authority to vote “FOR” the approval of the amendment to paragraph 4 of the Company’s 2007 Employee Stock Plan, (iii) as to Proposal 3, the Proxy confers authority to vote “FOR” the ratification of Morison Cogen LLP as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2010, and (iv) as to any other business which comes before the Annual Meeting, the Proxy confers authority to vote in the Proxy holder’s discretion.

The Company’s Board of Directors believes that a favorable vote for each candidate for a position on the Board of Directors and for all other matters described in the attached Notice of Annual Meeting of Stockholders and Proxy Statement is in the best interest of the Company and its stockholders and recommends a vote “FOR” all candidates and all other matters. Accordingly, we urge you to review the accompanying material carefully and to return the enclosed Proxy promptly.

Thank you for your investment and continued interest in Lightwave Logic, Inc.

Sincerely,

/s/ James S. Marcelli
James S. Marcelli
Chief Executive Officer

LIGHTWAVE LOGIC, INC.

121 Continental Drive, Suite 110
Newark, Delaware 19713

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD THURSDAY, JULY 8, 2010

To our Stockholders:

Notice is hereby given that the 2010 Annual Meeting (the “**Annual Meeting**”) of Stockholders of Lightwave Logic, Inc. (the “**Company**”), a Nevada corporation, will be held at the Hilton Wilmington/Christiana, 100 Continental Drive, Newark, DE 19713, on Thursday, July 8, 2010 at 2:00 p.m., for the following purposes:

1. To elect seven (7) Directors to the Board of Directors to serve until the 2011 Annual Meeting of Stockholders or until their successors have been duly elected or appointed and qualified;
2. To approve an amendment to paragraph 4 of the Company’s 2007 Employee Stock Plan (the “**Plan**”) to increase the number of shares of Company common stock available for issuance under the Plan from 3,500,000 to 6,500,000;
3. To ratify the appointment of Morison Cogen LLP to serve as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2010; and
4. To consider and take action upon such other business as may properly come before the Annual Meeting or any adjournments thereof.

The Board of Directors has fixed the close of business on June 16, 2010, as the Record Date for determining the stockholders entitled to notice of, and to vote at, the Annual Meeting or any adjournments thereof.

For a period of 10 days prior to the Annual Meeting, a stockholders list will be kept at the Company’s office and shall be available for inspection by stockholders during usual business hours. A stockholders list will also be available for inspection at the Annual Meeting.

Your attention is directed to the accompanying Proxy Statement for further information regarding each proposal to be made.

STOCKHOLDERS UNABLE TO ATTEND THE MEETING IN PERSON ARE URGED TO COMPLETE, DATE AND SIGN THE ACCOMPANYING PROXY AND MAIL IT IN THE ENCLOSED STAMPED, SELF-ADDRESSED ENVELOPE AS PROMPTLY AS POSSIBLE. IF YOU SIGN AND RETURN YOUR PROXY WITHOUT SPECIFYING YOUR CHOICES IT WILL BE UNDERSTOOD THAT YOU WISH TO HAVE YOUR SHARES VOTED IN ACCORDANCE WITH THE DIRECTORS’ RECOMMENDATIONS. IF YOU ATTEND THE ANNUAL MEETING, YOU MAY, IF YOU DESIRE, REVOKE YOUR PROXY AND VOTE IN PERSON.

By Order of the Board of Directors

/s/ James S. Marcelli

James S. Marcelli
Chief Executive Officer

June 16, 2010

LIGHTWAVE LOGIC, INC.

121 Continental Drive, Suite 110
Newark, Delaware 19713

PROXY STATEMENT

2010 ANNUAL MEETING OF STOCKHOLDERS

This Proxy Statement is furnished in connection with the solicitation by and on behalf of the Board of Directors (the “**Board of Directors**” or “**Board**”) of Lightwave Logic, Inc. of proxies to be voted at the 2010 Annual Meeting of Stockholders to be held at 2:00 p.m. on Thursday, July 8, 2010 at the Hilton Wilmington/Christiana, 100 Continental Drive, Newark, Delaware 19713 and at any adjournments thereof (the “**Annual Meeting**”). In this Proxy Statement, Lightwave Logic, Inc. is referred to as “**we**,” “**us**,” “**our**,” “**Company**” or “**Lightwave Logic**” unless the context indicates otherwise. The Annual Meeting has been called to consider and take action on the following proposals: (i) to elect seven (7) Directors to the Board of Directors to serve until the 2011 Annual Meeting of Stockholders or until their successors have been duly elected or appointed and qualified; (ii) to approve an amendment to paragraph 4 of the Company’s 2007 Employee Stock Plan (the “**Plan**”) to increase the number of shares of Company common stock available for issuance under the Plan from 3,500,000 to 6,500,000; (iii) to ratify the appointment of Morison Cogen LLP to serve as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2010; and (iv) to consider and take action upon such other business as may properly come before the Annual Meeting or any adjournments thereof.

The Board of Directors knows of no other matters to be presented for action at the Annual Meeting. However, if any other matters properly come before the Annual Meeting, the persons named in the proxy will vote on such other matters and/or for other nominees in accordance with their best judgment. **The Company’s Board of Directors recommends that the stockholders vote in favor of each of the Director Nominees and each of the proposals.** Only holders of record of Common Stock of the Company at the close of business on June 16, 2010 (the “**Record Date**”) will be entitled to vote at the Annual Meeting.

The principal executive offices of our Company are located at 121 Continental Drive, Suite 110, Newark, Delaware 19713 and our telephone number is 302-356-2717. The approximate date on which this Proxy Statement, the proxy card and other accompanying materials are first being sent or given to stockholders is June 16, 2010. A copy of the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2009 is enclosed with these materials, but should not be considered proxy solicitation material.

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to Be Held on July 8, 2010.

The Proxy Statement, Annual Report on Form 10-K for the year ending December 31, 2009 and a form of proxy card are under the “Investor Info” page of the Company’s website at www.lightwavelogic.com.

INFORMATION CONCERNING SOLICITATION AND VOTING

Who is entitled to vote?

Stockholders as of the close of business on June 16, 2010 (the “**Record Date**”) are entitled to vote. Each stockholder is entitled to one vote for each share of common stock held on the Record Date. Stockholders are not entitled to cumulative voting.

Who can attend the Annual Meeting?

All stockholders as of the Record Date, or their duly appointed proxies, may attend.

What do I need to be admitted to the Annual Meeting?

In order to be admitted to the Annual Meeting, a stockholder must present proof of ownership of Lightwave Logic stock on the Record Date. Any holder of a proxy from a stockholder must present the proxy card, properly executed. If your shares are held in the name of a bank, broker or other holder of record, you must present proof of your ownership, such as a bank or brokerage account statement, to be admitted to the meeting. All shareholders must also present a form of personal identification in order to be admitted to the meeting.

What am I being asked to vote on at the meeting?

We are asking our shareholders to elect directors, amend our 2007 Employee Stock Plan, and to ratify the appointment of our independent registered public accounting firm.

How many votes are needed for approval of each item?

Proposal Number 1. Directors will be elected by a plurality of the votes cast in person or by proxy, meaning the seven nominees receiving the most votes will be elected as directors. Stockholders are not entitled to cumulative voting with respect to the election of directors.

Proposal Number 2. The amendment to our 2007 Employee Stock Plan will be approved if a majority of the votes present in person or by proxy and entitled to vote on the matter vote in favor of the proposal.

Proposal Number 3. The appointment of our independent registered public accounting firm will be ratified if a majority of the votes present in person or by proxy and entitled to vote on the matter vote in favor of the proposal.

What constitutes a quorum?

As of the Record Date, 42,077,042 shares of our common stock were issued and outstanding. The presence, either in person or by proxy, of the holders of a majority of these outstanding shares is necessary to constitute a quorum for the Annual Meeting. Abstentions and broker non-votes are counted as present and entitled to vote for purposes of determining a quorum.

How do I vote?

Record Holders: Stockholders may vote in person at the Annual Meeting, or by proxy via the proxy card, or via telephone or internet as instructed on the proxy card. If you will be returning your vote by use of the proxy card, indicate your voting preferences on the proxy card, sign and date it, and return it in the prepaid envelope provided with this Proxy Statement. If you return a signed proxy card but do not indicate your voting preferences, the proxies named in your proxy card will vote FOR all proposals on your behalf. You have the right to revoke your proxy any time before the meeting by (1) notifying the Company's Secretary, or (2) returning a later-dated proxy. You may also revoke your proxy by voting in person at the meeting.

If you hold your shares in "street name": Your broker, bank or other nominee will ask for your instructions, generally by means of a voting instruction form. If you do not provide voting instructions to your broker or other nominee, your shares will not be voted on any proposal on which your broker or other nominee does not have discretionary authority to vote.

If your shares are held in the name of a bank or brokerage firm, you must obtain a proxy, executed in your favor, from the bank or broker, to be able to vote at the meeting.

What is the difference between being a "record holder" and "holding shares in street name?"

Most stockholders of the Company hold their shares through a Nominee rather than directly in their own name. As summarized below, there are some distinctions between shares held of record and those owned beneficially.

Record Holders: If your shares are registered directly in your name with our Company's transfer agent, StockTrans, you are considered the stockholder of record with respect to those shares, and these proxy materials are being sent directly to you by the Company. As the stockholder of record, you have the right to grant your voting proxy directly to us or to vote in person at the Annual Meeting. We have enclosed a proxy card for you to use.

If you hold your shares in "street name": If your shares are held in a stock brokerage account or by a Nominee, you are considered the beneficial owner of the shares which are held in "street name" and these proxy materials are being forwarded to you by your Nominee, who is considered the stockholder of record with respect to these shares. As the beneficial owner, you have the right to direct your Nominee on how to vote and are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote these shares in person at the Annual Meeting unless you request, complete and deliver a proxy from your Nominee. Your Nominee has enclosed a voting instruction card for you to use in directing the Nominee how to vote your shares.

What happens if I return my signed proxy card but forget to indicate how I want my shares of common stock voted?

If you sign, date and return your proxy and do not mark how you want to vote, your proxy will be counted as a vote "FOR" all of the nominees for directors, "FOR" the approval of

the amendment to the Company's 2007 Employee Stock Plan, and "FOR" the ratification of our independent registered public accounting firm.

What happens if I do not instruct my broker how to vote or if I mark "abstain" or "withhold authority" on the proxy?

If you mark your proxy "abstain" or "withhold authority," your vote will have the same effect as a vote against the proposal or the election of the applicable director. If you do not instruct your broker how to vote, your broker may vote for you on "routine" proposals but not on "non-routine" proposals. The ratification of our auditor is considered routine, but the election of directors is non-routine. Therefore, if you do not vote on the election of directors or provide voting instructions, your broker will not be allowed to vote your shares. Broker non-votes with respect to a matter will not be considered as present and entitled to vote with respect to that matter and thus will have no effect on the vote for that matter.

Can I change my voting instructions before the meeting?

Proxies given by stockholders of record for use at the Annual Meeting may be revoked at any time prior to the exercise of the powers conferred. In addition to revocation in any other manner permitted by law, stockholders of record giving a proxy may revoke the proxy by an instrument in writing, executed by the stockholder or his or her attorney authorized in writing or, if the stockholder is a corporation, by an officer or attorney thereof duly authorized, and deposited either at the corporate headquarters of the Company at any time up to and including the last business day preceding the day of the Annual Meeting, or any adjournments thereof, at which the proxy is to be used, or with the chairman of such Annual Meeting on the day of the Annual Meeting or adjournments thereof, and upon either of such deposits the proxy is revoked. If your shares are held in the name of a bank or brokerage firm, you must obtain a proxy, executed in your favor, from the bank or broker, to be able to vote at the meeting.

Method of Counting Votes

Unless a contrary choice is indicated, all duly executed proxies will be voted in accordance with the instructions set forth on the proxy card. A broker non-vote occurs when a broker holding shares registered in street name is permitted to vote, in the broker's discretion, on routine matters without receiving instructions from the client, but is not permitted to vote without instructions on non-routine matters, and the broker returns a proxy card with no vote (the "non-vote") on the non-routine matter. Under the rules and regulations of the primary trading markets applicable to most brokers, the election of directors is a non-routine matter which requires the broker's client to provide the broker with voting instructions and the ratification of the appointment of auditors is a routine matter on which a broker has the discretion to vote if instructions are not received from the client in a timely manner. Abstentions will be counted as present for purposes of determining a quorum but will not be counted for or against the election of directors or the ratification of independent auditors. As to Item 1, the Proxy confers authority to vote for all of the seven persons listed as candidates for a position on the Board of Directors even though the block in Item 1 is not marked unless the names of one or more candidates are lined out. The Proxy will be voted FOR Items 2 and 3 unless AGAINST or ABSTAIN is indicated. If any other business is presented at the meeting, the Proxy shall be voted in accordance with the recommendations of the Board of Directors.

Who will count the vote?

StockTrans will tabulate the votes and act as inspector of election at the Annual Meeting.

Where can I find the voting results of the Annual Meeting?

We intend to publish the final results in a current report on Form 8-K within four business days after the end of the Annual Meeting.

What does it mean if I get more than one proxy card?

It means that you hold shares registered in more than one account. You must return all proxies to ensure that all of your shares are voted.

How many copies of this Proxy Statement will I receive if I share my mailing address with another security holder?

Unless we have been instructed otherwise, we are delivering only one Proxy Statement to multiple security holders sharing the same address. This is commonly referred to as “householding.” We will however, deliver promptly a separate copy of this Proxy Statement to a security holder at a shared address to which a single copy of this Proxy Statement was delivered, on written or oral request. Requests for copies of the Proxy Statement or requests to cease householding in the future should be directed to Andrew Ashton, Secretary, Lightwave Logic, Inc., 121 Continental Drive, Suite 110, Newark, Delaware 19713. Telephone 302-356-2717. If you share an address with another stockholder and wish to receive a single copy of this Proxy Statement, instead of multiple copies, you may direct this request to us at the address or telephone number listed above. Stockholders who hold shares in “street name” may contact their brokerage firm, bank, broker-dealer or other similar organization to request information about householding.

How can I obtain additional proxy materials or other Company materials?

Copies of the Company’s SEC filings are available under the “Investor Info” page of the Company’s website at www.lightwavelogic.com. Any stockholder desiring additional proxy materials, a copy of any other document incorporated by reference in this Proxy Statement, or a copy of the Company’s bylaws should contact the Company’s Secretary. Requests should be directed to Andrew Ashton, Secretary, Lightwave Logic, Inc., 121 Continental Drive, Suite 110, Newark, Delaware 19713. Telephone 302-356-2717.

Who pays for the cost of this proxy solicitation?

The Company pays for the cost of soliciting proxies on behalf of the Board of Directors. The Company also will reimburse brokerage firms and other custodians, nominees and fiduciaries for their reasonable expenses in forwarding proxy material to beneficial owners. Proxies may be solicited by mail, telephone, other electronic means or in person. Proxies may be solicited by directors, officers and regular, full-time employees of the Company, none of whom will receive any additional compensation for their services.

Who are the largest principal shareholders?

See “*Security Ownership of Certain Beneficial Owners*” elsewhere in this Proxy Statement for a table setting forth each owner of greater than 5% of the Company’s common stock as of the Record Date.

What percentages of stock do the directors and officers own?

Together, they own approximately 21.21% of our Company common stock as of the Record Date. For information regarding the ownership of our common stock by management, see the section entitled “*Security Ownership of Management*” elsewhere in this Proxy Statement.

Do I have dissenters’ rights of appraisal?

Under Nevada Revised Statutes, our stockholders are not entitled to appraisal rights with respect to any of the items proposed to be voted upon at the Annual Meeting.

Where can I find general information about the Company?

General information about us can be found on our website at www.lightwavelogic.com. The information on our website is for informational purposes only and should not be relied upon for investment purposes. The information on our website is not incorporated by reference into this Proxy Statement and should not be considered part of this or any other report that we file with the Securities and Exchange Commission (“SEC”). We make available free of charge, either by direct access on our website or a link to the SEC’s website, our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC. Our reports filed with, or furnished to, the SEC are also available directly at the SEC’s website at www.sec.gov.

ALL PROXIES RECEIVED WILL BE VOTED IN ACCORDANCE WITH THE CHOICES SPECIFIED ON SUCH PROXIES. PROXIES WILL BE VOTED IN FAVOR OF EACH DIRECTOR NOMINEE AND FOR A PROPOSAL IF NO CONTRARY SPECIFICATION IS MADE. ALL VALID PROXIES OBTAINED WILL BE VOTED AT THE DISCRETION OF THE PERSONS NAMED IN THE PROXY WITH RESPECT TO ANY OTHER BUSINESS THAT MAY COME BEFORE THE ANNUAL MEETING.

INFORMATION REGARDING DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Board of Directors

Our bylaws provide that the number of directors under our bylaws is determined by resolution of the Board of Directors. Our Board of Directors currently consists of seven directors. Each director is elected to serve until the next annual meeting of stockholders and until the election and qualification of his or her successor or his or her earlier resignation or removal.

The names of our directors, including the seven nominees to be elected at the Annual Meeting, and certain information about each of them are set forth below.

Identity of directors

<u>Name</u>	<u>Age</u>	<u>Position</u>	<u>Term/Period Served</u>
James S. Marcelli	62	Director, Chief Executive Officer, President	1 yr./Since 2008
Frederick J. Goetz, Jr.	34	Director, Chief Science Officer	1 yr./Since 2004
Andrew J. Ashton	33	Director, Senior Vice President, Treasurer, Secretary	1 yr./Since 2004
Philips W. Smith	72	Non-Executive Chair of The Board of Directors	1 yr./Since 2010
Ross Fasick	77	Director	1 yr./Since 2008
William C. Pickett, III	66	Director	1 yr./Since 2008
Thomas E. Zelibor	55	Director	1 yr./Since 2008

Business experience of directors

Mr. James S. Marcelli. Mr. Marcelli has served as an officer and director of our Company since August 2008. Mr. Marcelli is in charge of the day-to-day operations of our Company and its movement to a fully functioning commercial corporation. Since 2000, Mr. Marcelli has served as the president and chief executive officer of Marcelli Associates, a consulting company that offers senior management consulting, mentoring, and business development services to start-up and growth companies. Business segments Mr. Marcelli has worked with included an Internet networking gaming center, high speed custom gaming computers, high tech manufacturing businesses and business service companies.

Mr. Frederick J. Goetz, Jr. Mr. Goetz has served as an officer and director of our Company since July 2004. He is a leader in the corporate coding and operation of electrostatic simulation software for nonlinear optic materials development and aids in the development of novel molecular designs and quantum mechanical interpretation at our Company. Prior to joining

our Company, Mr. Goetz began his career at Lawrence Berkeley Laboratory and the Army Research Laboratory on Aberdeen Proving Grounds after graduating first in his class in physics from the University of Delaware in 1997.

Mr. Andrew J. Ashton. Mr. Ashton has served as an officer and director of our Company since July 2004. Since that time his assistance in the creation of the synthetic chemistry of our novel molecular architecture has been fundamental to our Company's success. His current duties include the development of chemical synthesis, providing extensive analytical support and assisting with our Company's management goals. Mr. Ashton is a skilled computer scientist and organic chemist who began his career in 1998 at the Army Research Laboratory on the Aberdeen Proving Grounds where he helped to design and implement computer interfaces for fiberglass composite analysis. At that time he joined PSI-TEC Corporation as a financial manager and was responsible for day to day administrative duties. He was instrumental in securing government funding, PSI-TEC's sole financial source, until 2003.

Dr. Philips W. Smith. Dr. Smith has served as Non-Executive Chair of the Board of Directors of our Company since January 2010. Dr. Smith is the father of Thomas P. Smith, who in January 2010, resigned as board member. In 2001, Dr. Smith brought TASER International, Inc. public through an IPO and most recently served as Chairman of TASER International, Inc. (NasdaqGS: TASR) until his retirement from that position in December 2004. Dr. Smith subsequently resigned his TASER board seat in October 2006. Since then, Dr. Smith has been actively involved as an investor in start-up companies. Dr. Smith's educational experience includes a B.S. from West Point, an M.B.A. from Michigan State University and a PhD from St. Louis University.

Dr. Ross Fasick. Dr. Ross Fasick has served as a director of our Company since July 2008. Dr. Fasick has a broad spectrum of global business and chemistry experience that spans over thirty years. Dr. Fasick spent the early years of his career with DuPont as a research chemist primarily working with polymers and dyes. During his thirty year tenure at Dupont, Dr. Fasick held diverse positions ranging from manufacturing and business development to making divestitures and acquisitions. He served as both President of DuPont's Brazil division and Director of worldwide paint operations. He completed his DuPont career as Senior VP of Polymers and Automotive, a division that generates multi-billion dollar annual revenues. Since his retirement, Dr. Fasick has remained an active board and committee member for private college and pre-college level institutions. Dr Fasick earned his Ph.D in organic chemistry at the University of Delaware.

Mr. William C. Pickett, III. Mr. Pickett has served as a director of our Company since January 2008. Mr. Pickett enjoyed a 32 year career with E.I. DuPont de Nemours & Co., where he worked in numerous financial leadership positions, including serving from February 2002 to April 2004 as Chief Financial Officer of Invista, DuPont's \$7 billion man-made fibers company, which was ultimately sold to Koch Industries, Inc. Since February 2005 Mr. Pickett has been serving as a member of the Board of Directors, Executive Committee, Treasurer and Chair of the Finance Committee of the Ronald McDonald House of Delaware; and since December 2004, Mr. Pickett has been serving as Chair of Audit Committee and Chief Compliance Officer of the Operation Warm charity. Mr. Pickett received his MBA from Harvard Business School and a BA from Trinity College.

Thomas E. Zelibor, Rear Admiral, USN (Ret). RADM Zelibor has served as a director of our Company since July 2008. RADM Zelibor has over twenty years of strategic planning and senior leadership experience. Currently, RADM Zelibor serves as the Chief Executive Officer and President of Flatirons Solutions Corp. a professional services firm that provides consulting, systems integration, systems & software engineering, and program management expertise to corporate and government clients. Previously, from July 2006 RADM Zelibor, served as the Dean of the College of Operational and Strategic Leadership at the United States Naval War College where he was responsible for the adoption of a corporate approach to leadership development. Prior to that time,, RADM Zelibor served in a number of positions, including as Director of Global Operations, United States Strategic Command; Director, Space, Information Warfare, Command and Control on the Navy staff; Department of the Navy, Deputy Chief Information Officer (CIO), Navy; Commander, Carrier Group Three and Commander, Naval Space Command.

Each Director of the Company holds such position until the next annual meeting of shareholders and until his successor is duly elected and qualified. The officers hold office until the first meeting of the Board of Directors following the annual meeting of shareholders and until their successors are chosen and qualified, subject to early removal by the Board of Directors.

Transactions with Related Persons

On January 8, 2009, Thomas P. Smith resigned as a member of our Board of Directors, and on January 8, 2009, our Board of Directors invited Dr. Philips W. Smith to be appointed as a member of our Company's Board of Directors and as our full-time Non-executive Chair of the Board of Directors, and on January 13, 2010, Dr. Smith accepted the invitation to be appointed to those positions with our Company. Dr. Philips W. Smith is the father of then board member Thomas P. Smith. In exchange for serving as a member of our Board of Directors and as Non-Executive Chair of the Board of Directors, Dr. Smith received as compensation a warrant to purchase up to 650,000 shares of our common stock at an exercise price of \$1.51 per share for a period of up to five years.

Corporate Governance

Code of Ethics

We have not yet adopted a code of ethics for our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions or any other position due to our development stage, the small number of executive officers involved with our Company, and the fact that we operate with few employees. Our Board of Directors will continue to evaluate, from time to time, whether a code of ethics should be developed and adopted.

Audit Committee

We do not have a separately designated standing audit committee in place. Our full Board of Directors currently serves in that capacity. This is due to our development stage, lack of

business operations, the small number of executive officers involved with our Company, and the fact that we operate with few employees. Our Board of Directors will continue to evaluate, from time to time, whether a separately designated standing audit committee should be put in place. We do not have an audit committee charter.

Our Board of Directors is comprised of James S. Marcelli, Frederick J. Goetz, Jr., Andrew J. Ashton, Ross Fasick, William C. Pickett, III, Philips W. Smith, and Thomas E. Zelibor. Mr. Pickett serves as our audit committee financial expert as that term is defined by the rules promulgated by the Securities and Exchange Commission.

Our audit committee has reviewed and discussed the audited financial statements with management and has discussed with its independent auditors the matters required to be discussed by the statement on Auditing Standards No. 61, as amended (AICPA, Professional Standards, Vol. 1, AU section 380),¹ as adopted by the Public Company Accounting Oversight Board in Rule 3200T. The audit committee has received the written disclosures and the letter from its independent accountant required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the audit committee concerning independence, and has discussed with its independent accountant its independent accountant's independence. Based on the review and discussions described above, the audit committee recommended that the audited financial statements be included in the our Annual Report on Form 10-K for the last fiscal year for filing with the Securities and Exchange Commission.

Compensation Committee

Our Board of Directors does not have a standing compensation committee or committee performing similar functions. This is due to our development stage, lack of business operations, the small number of executive officers involved with our Company, and the fact that we operate with few employees. Our full Board of Directors currently participates in the consideration of executive officer and director compensation. We do not have an audit compensation charter. Our Board of Directors is responsible for reviewing, recommending and approving our compensation policies and benefits, including the compensation of all of our executive officers and directors. Our Board of Directors also has the principal responsibility for the administration of our employee stock plan. Our Board of Directors will continue to evaluate, from time to time, whether it should appoint a standing compensation committee.

Executive officers who are also directors participate in determining or recommending the amount or form of executive and director compensation, but the ultimate determination of executive compensation is determined by the independent directors. Neither the board nor management utilizes compensation consultants in determining or recommending the amount or form of executive and director compensation.

Nominating Committee

Our Board of Directors does not have a nominating committee. This is due to our development stage and lack of business operations. Instead of having such a committee, our Board of Directors historically has searched for and evaluated qualified individuals to become nominees for membership on our Board of Directors. The directors recommend candidates for

nomination for election or reelection for each annual meeting of stockholders and, as necessary, to fill vacancies and newly created directorships.

All of our director nominees have expressed their willingness to continue to serve as our directors. When new candidates for our Board of Directors are sought, all of our directors evaluate each candidate for nomination as director within the context of the needs and the composition of the board as a whole. The Board of Directors conducts any appropriate and necessary inquiries into the backgrounds and qualifications of candidates. When evaluating director nominees, our Board of Directors generally seeks to identify individuals with diverse, yet complementary backgrounds. Our directors consider both the personal characteristics and experience of director nominees, including each nominee's independence, diversity, age, skills, expertise, time availability and industry background in the context of the needs of the Board of Directors and the Company. The Board of Directors believes that director nominees should exhibit proven leadership capabilities and experience at a high level of responsibility within their chosen fields, and have the experience and ability to analyze business and/or scientific issues facing our Company. In addition to business expertise, the Board of Directors requires that director nominees have the highest personal and professional ethics, integrity and values and, above all, are committed to representing the long-term interests of our stockholders and other stakeholders. To date, all new candidates have been identified by members of our Board of Directors, and we have not paid any fee to a third party to assist in the process of identifying or evaluating director candidates.

Our directors will consider candidates for nomination as director who are recommended by a stockholder and will not evaluate any candidate for nomination for director differently because the candidate was recommended by a stockholder. To date, we have not received or rejected any suggestions for a director candidate recommended by any stockholder or group of stockholders owning more than 5% of our common stock.

When submitting candidates for nomination to be elected at our annual meeting of stockholders, stockholders should follow the following notice procedures and comply with applicable provisions of our bylaws. To consider a candidate recommended by a stockholder for nomination at the 2011 Annual Meeting of Stockholders, the recommendation must be delivered or mailed to and received by our Secretary within the time periods discussed elsewhere in this Proxy Statement under the heading "Stockholder Proposals for 2011 Annual Meeting." The recommendation must include the information specified in our bylaws for stockholder nominees to be considered at an annual meeting, along with the following:

- The stockholder's name and address and the beneficial owner, if any, on whose behalf the nomination is proposed;
- The stockholder's reason for making the nomination at the annual meeting, and the signed consent of the nominee to serve if elected;
- The number of shares owned by, and any material interest of, the record owner and the beneficial owner, if any, on whose behalf the record owner is proposing the nominee;
- A description of any arrangements or understandings between the stockholder, the nominee and any other person regarding the nomination; and
- Information regarding the nominee that would be required to be included in our Proxy Statement by the rules of the Securities and Exchange Commission, including the

nominee's age, business experience for the past five years and any other directorships held by the nominee.

The information listed above is not a complete list of requisite information. The secretary will forward any timely recommendations containing the required information to our independent directors for consideration.

Director Independence

Although we are currently listed on the Over-the-Counter Bulletin Board, our Board has reviewed each of the directors' relationships with the Company in conjunction with Section 121 of the listing standards of the NYSE Amex and has affirmatively determined that four of our directors, Ross Fasick, William C. Pickett, III, Philips W. Smith and Thomas E. Zelibor, are independent directors in that they are independent of management and free of any relationship that would interfere with their independent judgment as members of our Board of Directors. Additionally, prior to his resignation, Thomas P. Smith was determined to be such an independent director.

Board Leadership Structure

Our bylaws provide the Board of Directors with flexibility to combine or separate the positions of chairman of the Board of Directors and Chief Executive Officer in accordance with its determination that utilizing one or the other structure is in the best interests of our company. Our current structure is that of separate Chief Executive Officer and Chair of the Board of Directors. James Marcelli serves as our Chief Executive Officer and is responsible for the day-to-day leadership of the Company. Philips W. Smith serves as our full-time Non-executive Chair of the Board of Directors. Dr. Smith is considered an independent director. From time to time, each of the other independent directors works with Dr. Smith to perform a variety of functions related to our corporate governance, including coordinating board activities, setting relevant items on the agenda (in consultation with our chief executive officer, as necessary or appropriate) and ensuring adequate communication between the Board of Directors and management. In addition, our Board of Directors has determined that maintaining the independence of a majority of our directors helps maintain its independent oversight of management.

Risk Oversight

The Board of Directors is actively involved in the oversight of risks, including strategic, operational and other risks, which could affect our business. The Board of Directors does not have a standing risk management committee, but administers this oversight function directly through the Board of Directors as a whole, which oversee risks relevant to their respective functions. The Board of Directors considers strategic risks and opportunities and administers its respective risk oversight function by evaluating management's monitoring, assessment and management of risks, including steps taken to limit our exposure to known risks, through regular interaction with our senior management and in board and committee deliberations that are closed to members of management. The interaction with management occurs not only at formal board and committee meetings but also through periodic and other written and oral communications.

Stockholder Communications with the Board

Stockholders who desire to communicate with the board, or a specific director, may do so by sending the communication addressed to either the Board of Directors or any director, c/o Lightwave Logic, Inc., 121 Continental Drive, Suite 110, Newark, Delaware 19713. These communications will be delivered to the board, or any individual director, as specified.

Meetings of the Board and Committees

During 2009, there were 12 meetings of the Board of Directors. Each current director attended at least 75% of the total number of meetings of the board held in 2009. The Board of Directors also acted at times by unanimous written consent, as authorized by our bylaws and the Nevada Revised Statutes.

Section 16(a) Beneficial Ownership Reporting Compliance

To the best of our knowledge, no officer, director and/or beneficial owner of more than 10% of our Common Stock, failed to file reports as required by Section 16(a) of the Exchange Act during the period covered by this report.

Executive Officers

Identity of executive officers and significant employees

<u>Name</u>	<u>Age</u>	<u>Position</u>
James S. Marcelli	62	Director, Chief Executive Officer, President
Frederick J. Goetz, Jr.	34	Director, Chief Science Officer
David F. Eaton	63	Chief Technology Officer
Andrew J. Ashton	33	Director, Senior Vice President, Treasurer, Secretary
Terry Turpin	67	Optical Computing Guru(1)

- (1) Optical Computing Guru is not an executive officer position, but our Company anticipates that Mr. Turpin's expertise in optical computing and his respect in the optical computing community will significantly contribute to the development of our Company.

Business experience of executive officers and significant employees

The business experience of Messrs. Marcelli, Goetz and Ashton is described above under the caption "Business experience of directors."

Dr. David F. Eaton. Mr. Eaton has served as an officer of our Company since May 2007. For over 30 years, Mr. Eaton was employed in DuPont’s chemical division, with his most recent appointment being its technology director. Most recently, from September 2003 to present, Mr. Eaton founded and is the principal of Light Insights, LLC, a consulting firm, and from March 2005 to present, Mr. Eaton has served as vice president of technology for software company Precision Cure, LLC. Mr. Eaton has a bachelor’s degree in chemistry from Wesleyan University and a Ph.D. in chemistry from the California Institute of Technology.

Mr. Terry Turpin. Mr. Turpin has served as our Optical Computing Guru since March 2008. Since October 2006, Mr. Turpin has been a member of the UMBC College of Natural Science and Mathematics Advisory Board. Until January 2007, when Essex Corporation was acquired by Northrop Grumman Space & Mission Systems Corp., Mr. Turpin was a director of Essex Corporation. Mr. Turpin remained Senior Vice President and Chief Scientist for Essex Corporation after its acquisition until April 2007. Mr. Turpin was appointed as a director of Essex Corporation in January 1997 and became its Senior Vice President and Chief Scientist in 1996. He joined Essex Corporation through a merger with SEDC where he was Vice President and Chief Scientist from September 1984 through June 1989. From December 1983 to September 1984 he was an independent consultant. From 1963 through December 1983, Mr. Turpin was employed by the National Securities Agency (NSA). He was Chief of the Advanced Processing Technologies Division for ten years. He holds patents for optical computers and adaptive optical components. Mr. Turpin represented NSA on the Tri-Service Optical Processing Committee organized by the Under Secretary of Defense for Research and Engineering. He received a Bachelor of Science degree in Electrical Engineering from the University of Akron in 1966 and a Master of Science degree in Electrical Engineering from Catholic University in Washington, D.C. in 1970.

Executive Compensation.

The table below summarizes all compensation awarded to, earned by, or paid to our named executive officers for the fiscal years ended December 31, 2009 and 2008.

Summary Compensation Table

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary</u>	<u>Bonus</u>	<u>Stock Awards</u>	<u>Option Awards</u>	<u>Non-Equity Incentive Plan Compensation</u>	<u>Nonqualified Deferred Compensation</u>		<u>Total</u>
							<u>Earnings</u>	<u>All Other Compensation</u>	
(a)	(b)	(\$) (c)	(\$) (d)	(\$) (e)	(\$) (f)	(\$) (g)	(\$) (h)	(\$) (i)	(\$) (j)
James S. Marcelli CEO, President Director(1)	2009	174,000	14,500	0	516,233	0	0	7,200	711,933
	2008	73,100	0	360,000	215,555	0	0	9,350	658,005
Harold R. Bennett Director CEO(2)	2008	100,000	0	0	48,738	0	0	0	148,738
Frederick J. Goetz, Jr., Chief Science Officer, Director(3)	2009	96,000	0	0	13,206	0	0	0	109,206
	2008	96,000	0	0	0	0	0	0	96,000
Andrew J. Ashton, Treasurer, Sr. VP,	2009	96,000	0	0	13,206	0	0	0	109,206
	2008	96,000	0	0	0	0	0	0	96,000

Secretary
Director(4)

David F. Eaton, Chief Technology officer (5)	2009	48,250	0	58,000	99,617	0	0	13,206	219,073
	2008	26,400	0	0	99,889	0	0	31,444	157,733

- (1) Mr. Marcelli was appointed to serve as our Chief Executive Officer in August 2008. Pursuant to his employment agreement, Mr. Marcelli receives a salary of \$14,500 per month, a \$600 per month offsite car allowance, 200,000 shares of restricted stock in 2008, and an option to purchase up to 1,050,000 shares of common stock at an exercise price of \$1.75 per share. In 2009 Mr. Marcelli received a bonus of \$14,500 and the right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share. Additionally, in the event Mr. Marcelli's employment terminates upon his death and the key man life insurance is in place for Mr. Marcelli, our Company will continue to pay the base cash compensation described in Mr. Marcelli's employment agreement to his estate through the remainder of term of his employment agreement, or 90 days, whichever is longer. The values described in column (f) reflect vested Options.
- (2) Mr. Bennett served as our Chief Executive Officer from March 2007 to August 2008. Mr. Bennett received \$12,000 per month for his services as the Company's chief executive officer. On April 17, 2007, Mr. Bennett received a warrant to purchase up to 300,000 shares of common stock at a purchase price of \$0.25 per share. The values described in column (f) reflect vested Options.
- (3) Mr. Goetz receives an annual salary of \$96,000. In January 2009 Mr. Goetz received a right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share.
- (4) Mr. Ashton receives an annual salary of \$96,000. In January 2009, Mr. Ashton received a right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share.
- (5) Dr. Eaton was named as our Chief Technology Officer on January 1, 2008 pursuant to an employment agreement dated January 1, 2008 whereby Dr. Eaton received \$400 per day, which was increased to \$500 per day on November 1, 2008. Additionally, on February 5, 2008, Dr. Eaton was awarded an option to purchase up to 501,000 shares of common stock at an exercise price of \$.72 per share. In January 2009 Dr. Eaton received a right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share and 100,000 shares of restricted stock. The values described in column (f) and (i) reflect vested options and warrants.

At no time during the last fiscal year was any outstanding option otherwise modified or re-priced, and there was no tandem feature, reload feature, or tax-reimbursement feature associated with any of the stock options we granted to our executive officers or otherwise.

We grant stock awards and stock options to our executive officers based on their level of experience and contributions to our Company. The aggregate fair value of awards and options are computed in accordance with FASB ASC 718 and are reported in the Summary Compensation Table above in the columns (e) and (f).

The table below summarizes all of the outstanding equity awards for our named executive officers as of December 31, 2009, our latest fiscal year end.

Outstanding Equity Awards At Fiscal Year-End

Name	Option Awards					Stock Awards			
	Number of Securities Underlying Unexercised Options (#) <u>Exercisable</u>	Number of Securities Underlying Unexercised Options (#) <u>Unexercisable</u>	Equity Incentive Plan Awards: Number Of Securities Underlying Unexercised	Option Exercise Price (\$)	Option Expiration Date	Number Of Shares Or Units That Have Not	Market Value Of Shares Or Units That	Equity Incentive Plan Awards: Number Of Unearned Shares,	Equity Incentive Plan Awards: Market Or Payout Value Of Unearned

	(b)	(c)	Unearned Options (#) (d)			Vested (#) (g)	Have Not Vested (\$) (h)	Units Or Other Rights That Have Not Vested (#) (i)	Shares, Units Or Other Rights That Have Not Vested (\$) (j)
James S. Marcelli CEO, President Director(1)	437,500	612,500	---	1.75	07/31/2013	---	---	---	---
Frederick J. Goetz, Jr., Chief Science Officer, Director	---	---	---	---	---	---	---	---	---
Andrew J. Ashton, Treasurer, Sr. VP, Secretary Director	---	---	---	---	---	---	---	---	---
David F. Eaton, Chief Technology Officer	334,000 150,000	167,000 ---	---	0.72	11/17/2012 0.25 04/17/2010	---	---	---	---

- (1) On August 1, 2008 Mr. Marcelli received an option to purchase up to 1,050,000 shares of company common stock. The options vest quarterly over three years in equal installments of 87,500 shares per quarter beginning November 1, 2008.
- (2) On February 5, 2008, Dr. Eaton was awarded an option to purchase up to 501,000 shares of common stock at an exercise price of \$.72 per share which vest as follows: 41,750 shares vest at the end of every three month period commencing November 17, 2007. On April 17, 2007 Dr. Eaton received a warrant to purchase up to 150,000 shares of company stock, 12,500 of which vested on April 17, 2007, and the remaining vested in 11 equal monthly installments thereafter.

Securities Authorized for Issuance under Equity Compensation Plans

Equity Compensation Plans as of December 31, 2009

<u>Equity Compensation Plan Information</u>			
Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders (1)	2,619,450	\$1.29	-0-

Equity compensation plans not approved by security holders (2)	3,792,917	\$0.51	1,392,450
Total	6,412,367	\$0.83	1,392,450

1. Reflects our 2007 Employee Stock Plan for the benefit of our directors, officers, employees and consultants. We initially reserved 3,500,000 shares of common stock for such persons pursuant to that plan.
2. Comprised of common stock purchase warrants we issued to consultants and additional securities issued to our directors, officers, employees and consultants pursuant to our 2007 Employee Stock Plan pursuant to an amendment to that plan not yet approved by our security holders.

Director Compensation

The following table summarizes the compensation we paid to our non-employee directors in 2009.

Name	Fees Earned or Paid in Cash (\$)	Stock Awards (\$)	Option Awards (\$)(5)	Non-Equity Incentive Plan Compensation (\$)	Non-Qualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
Ross Fasick (1)	--	--	75,386	--	--	13,206	88,592
William C. Pickett, III (2)	--	--	43,470	--	--	13,206	56,676
Thomas P. Smith (3)	--	--	61,346	--	--	13,206	74,552
Thomas E. Zelibor (4)	--	--	71,579	--	--	13,206	84,785

- (1) On July 21, 2008, Dr. Fasick received an option to purchase up to 100,000 shares of company stock at an exercise price of \$1.75 that vest pursuant to the following schedule: 25,000 shares vested immediately; and the remaining options vest in 3 equal annual installments of 25,000 options per year commencing on July 21, 2009. On August 29, 2008, Dr. Fasick received an option to purchase up to 150,000 shares of company stock at an exercise price of \$1.42 that vest pursuant to the following schedule: 37,500 shares vest immediately and 37,500 shares vest at the end of every 12 month period commencing August 29, 2008. In January 2009, Dr. Fasick received a 22 day right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share.
- (2) On January 8, 2008, Mr. Pickett received an option to purchase up to 100,000 shares of company stock at an exercise price of \$.72 that vest pursuant to the following schedule: 25,000 shares vested immediately; and the remaining options vest in 3 equal annual installments of 25,000 options per year commencing on January 8, 2009. On August 29, 2008, Mr. Pickett received an option to purchase up to 250,000 shares of company stock at an exercise price of \$1.42 that vest pursuant to the following schedule: 137,500 shares vest immediately and 37,500 shares vest at the end of every 12 month period commencing August 29, 2008. Mr. Pickett was awarded 250,000 options instead of 150,000 options on August 29, 2008 in recognition of the additional assistance he provided to the Company during his initial tenure as a director. In January 2009, Mr. Pickett received a 22 day right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share.
- (3) On November 6, 2008 Mr. Smith received an option to purchase up to 250,000 shares of company stock at an exercise price of \$.65 that vest pursuant to the following schedule: 62,500 options vested immediately; and the remaining options vest in 3 equal annual installments of 62,500 options per year commencing on November 6, 2009. In January 2009, Mr. Smith received a 22 day right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share.

- (4) On July 11, 2008, Mr. Zelibor received an option to purchase up to 100,000 shares of company stock at an exercise price of \$1.75 that vest pursuant to the following schedule: 25,000 shares vested immediately; and the remaining options vest in 3 equal annual installments of 25,000 options per year commencing on July 11, 2009. On August 29, 2008, Mr. Zelibor received an option to purchase up to 150,000 shares of company stock at an exercise price of \$1.42 that vest pursuant to the following schedule: 37,500 shares vested immediately and 37,500 shares vest at the end of every 12 month period commencing August 29, 2008. In January 2009, Mr. Zelibor received a 22 day right to purchase 40,000 shares of restricted stock at an exercise price of \$0.25 per share.
- (5) The values described in this column reflect vested Options.

Voting Securities and Principal Holders Thereof

As of the Record Date, we had outstanding 42,077,042 shares of common stock. Each share of our common stock is entitled to one vote with respect to each matter on which it is entitled to vote. Pursuant to our bylaws and the Nevada Revised Statutes, directors will be elected by a plurality of the votes cast in person or by proxy, meaning the seven nominees receiving the most votes will be elected as directors. A majority of shares entitled to vote on the subject matter and represented in person or by proxy at a meeting at which a quorum is present is required for all other items. Stockholders are not entitled to cumulative voting with respect to any matter.

The following table sets forth, as of the Record Date, the names, addresses, amount and nature of beneficial ownership and percent of such ownership of each person or group known to our Company to be the beneficial owner of more than five percent (5%) of our common stock:

Security Ownership of Certain Beneficial Owners

<u>Name and Address of Beneficial Owner (1)</u>	<u>Amount and Nature Of Beneficial Ownership(3)</u>	<u>% of Class Owned (5)</u>
Frederick J. Goetz, Jr. (2)	3,371,667	8.01%
Frederick J. Goetz (2)	6,496,667(4)	15.44%
Mary Goetz (2)	6,496,667(4)	15.44%
Andrew J. Ashton	2,981,667	7.09%

- (1) In care of our Company at 121 Continental Drive, Suite 110, Newark, Delaware 19713.
- (2) Frederick J. Goetz and Mary Goetz are Husband and wife, and Frederick J. Goetz, Jr. is their son.
- (3) To our best knowledge, as of the date hereof, such holders had the sole voting and investment power with respect to the voting securities beneficially owned by them, unless otherwise indicated herein. Includes the person's right to obtain additional shares of common stock within 60 days from the date hereof.
- (4) Consists of (i) 3,365,000 shares of common stock owned by Frederick J. Goetz; and (ii) 3,131,667 shares of common stock owned by Mary Goetz. Each of Frederick J. Goetz and Mary Goetz disclaim any beneficial ownership of their spouse's shares of common stock.
- (5) Based on 42,077,042 shares of common stock outstanding on the Record Date. Does not include shares underlying: (i) options to purchase shares of our common stock under our 2007 Plan, or (ii) outstanding warrants to purchase shares of our common stock.

The following table sets forth, as of the Record Date, the names, addresses, amount and nature of beneficial ownership and percent of such ownership of our common stock of each of our officers and directors, and officers and directors as a group:

Security Ownership of Management

<u>Name and Address of Beneficial Owner</u> (1)	<u>Amount and Nature of Beneficial Ownership</u> (2)	<u>% of Class Owned</u> (3)(4)
James S. Marcelli Director, Chief Executive Officer, President	852,500(5)	2.03%
Frederick J. Goetz, Jr. Director, Chief Science Officer	3,371,667	8.01%
Andrew J. Ashton Director, Executive Vice President, Treasurer Secretary	2,981,667	7.09%
David F. Eaton, Chief Technology officer	667,500(6)	1.59%
Ross Fasick Director	429,000(7)	1.02%
William C. Pickett, III Director	270,550(8)	*
Philips W. Smith Non-Executive Chair of The Board of Directors	162,500(9)	*
Thomas E. Zelibor Director	190,000(10)	*
Directors and Officers as a Group (8 Persons)	8,925,384	21.21%

* Less than 1%.

- (1) In care of our Company at 121 Continental Drive, Suite 110, Newark, Delaware 19713.
- (2) To our best knowledge, as of the date hereof, such holders had the sole voting and investment power with respect to the voting securities beneficially owned by them, unless otherwise indicated herein. Includes the person's right to obtain additional shares of common stock within 60 days from the date hereof.
- (3) Based on 42,077,042 shares of common stock outstanding on the Record Date. Does not include shares underlying: (i) options to purchase shares of our common stock under our 2007 Plan, or (ii) outstanding warrants to purchase shares of our common stock.
- (4) If a person listed on this table has the right to obtain additional shares of common stock within 60 days from the date hereof, the additional shares are deemed to be outstanding for the purpose of computing the percentage of class owned by such person, but are not deemed to be outstanding for the purpose of computing the percentage of any other person.
- (5) Consists of 240,000 shares of common stock and an option to purchase up to 612,500 shares of common stock exercisable within 60 days from the date hereof.
- (6) Consists of 250,000 shares of common stock; an option to purchase up to 417,500 shares of common stock exercisable within 60 days from the date hereof.

- (7) Consists of 279,000 shares of common stock; an option to purchase up to 150,000 shares of common stock exercisable within 60 days from the date hereof.
- (8) Consists of 20,550 shares of common stock; and an option to purchase up to 250,000 shares of common stock exercisable within 60 days from the date hereof.
- (9) Consists of a warrant to purchase up to 162,500 shares of common stock exercisable within 60 days from the date hereof.
- (10) Consists of 40,000 shares of common stock; and an option to purchase up to 150,000 shares of common stock exercisable within 60 days from the date hereof.

We are not aware of any arrangements that could result in a change of control.

PROPOSAL ONE

ELECTION OF DIRECTORS

At the Annual Meeting, seven directors are to be elected to serve until the next annual meeting of stockholders and until a successor for such director is elected and qualified, or until the death, resignation or removal of such director. There are seven nominees, all of whom currently serve on our Board of Directors.

Nominees

Set forth below is information regarding the nominees for election to our Board of Directors:

<u>Name</u>	<u>Position(s) with the Company</u>	<u>Year First Elected Director</u>
James S. Marcelli	Director, Chief Executive Officer, President	2008
Frederick J. Goetz, Jr.	Director, Chief Science Officer	2004
Andrew J. Ashton	Director, Senior Vice President, Treasurer, Secretary	2004
Philips W. Smith	Non-Executive Chair of the Board of Directors	2010
Ross Fasick	Director	2008
William C. Pickett, III	Director	2008
Thomas E. Zelibor	Director	2008

Each person nominated has agreed to serve if elected, and our Board of Directors has no reason to believe that any nominee will be unavailable or will decline to serve. In the event, however, that any nominee is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for any nominee who is designated by the current Board of Directors to fill the vacancy.

Vote Required

Directors will be elected by a plurality of the votes cast at the Annual Meeting. For the purposes of election of directors, although abstentions will count toward the presence of a quorum, they will not be counted as votes cast and will have no effect on the result of the vote. Each holder of common stock is entitled to one vote for each share held.

Recommendation of the Board of Directors

The Board of Directors Recommends a Vote “**FOR**” the Election of All of the Above Nominees.

PROPOSAL TWO

AMENDMENT OF OUR COMPANY'S 2007 EMPLOYEE STOCK PLAN TO INCREASE THE NUMBER OF SHARES OF COMMON STOCK AVAILABLE FOR ISSUANCE UNDER THE PLAN FROM 3,500,000 TO 6,500,000

Purpose of the Proposal

The Board of Directors of the Company has approved and is recommending to stockholders of the Company an amendment to our Company's 2007 Employee Stock Plan (the "**Plan**") to amend paragraph 4 of the Plan to increase the number of shares of Common Stock available for issuance under the Plan from 3,500,000 to 6,500,000 so that a sufficient amount of awards are available for issuance in the future.

The Board of Directors approved the Plan and subsequently, the Plan's amendment, to ensure that the Company has adequate ways in which to provide stock based compensation to its directors, officers, employees, and consultants. The Board of Directors believes that the ability to grant stock-based compensation is important to the Company's future success. The grant of stock-based compensation, such as stock options, can motivate high levels of performance and provide an effective means of recognizing employee and consultant contributions to the Company's success. In addition, stock-based compensation can be valuable in recruiting and retaining highly qualified technical and other key personnel who are in great demand, as well as rewarding and providing incentives to the Company's current employees and consultants. Our Board of Directors believes that the increase in the number of common shares available for issuance under the Plan is necessary to continue to offer stock-based compensation programs that will allow our Company to retain current key employees and to attract new employees critical to the growth and success of our Company.

Summary of the Plan

The principal terms and provisions of the Plan, as amended (the "**Amended Plan**"), are summarized below. As a summary, the description below is not a complete description of all the terms of the Amended Plan and is qualified in its entirety by reference to the full text of the Amended Plan.

Types Of Awards. Both incentive stock options, or ISOs, and nonqualified stock options, or NSOs, and stock grants and stock purchase rights may be granted under the Amended Plan. ISOs receive favorable tax treatment on exercise, and may receive favorable tax treatment on a qualifying disposition of the underlying shares. However, ISOs must comply with certain requirements regarding exercise price, maximum term and post termination exercise period, and must be issued under a stockholder-approved plan. NSOs are not subject to these requirements, nor may they receive this favorable tax treatment upon exercise.

Administration. The Amended Plan is administered by either the Board of Directors of the Company or a Stock Plan Committee ("**Committee**") appointed by the Board of Directors.

Eligibility. Awards under the Amended Plan may only be made as follows: ISOs may be granted to any employee of the Company. Officers and directors of the Company who are not

employees may not be granted ISOs under the Plan. Non-Qualified Options, stock grants and authorizations to make stock purchases may be granted to any director (whether or not an employee), officer, employee or consultant of the Company.

Number of Shares. The aggregate number of shares that may be issued pursuant to the Amended Plan is 6,500,000, subject to adjustment as described below.

Adjustments. In the event of a subdivision of the outstanding common stock, a declaration of a dividend payable in shares of common stock, a combination or consolidation of the outstanding common stock into a lesser number of shares of common stock, a recapitalization, a reclassification or a similar occurrence, the Committee shall make appropriate adjustments, subject to the limitations set forth in the Amended Plan.

Transferability. No ISO shall be assignable or transferable by the grantee except by will or by the laws of descent and distribution, and during the lifetime of the grantee each ISO shall be exercisable only by him. All other awards under the Amended Plan shall be freely transferable subject to certain limitations imposed by the Amended Plan, when applicable.

Termination Of Service. Each option shall set forth the extent to which the optionee shall have the right to exercise their option following termination of the optionee's employment with the Company. Such provisions shall be determined in the sole discretion of the Board of Directors or Committee, and need not be uniform among all options issued pursuant to the Amended Plan. Notwithstanding the foregoing, and to the extent required by applicable law, each option shall provide that the optionee shall have the right to exercise the vested portion of any option held at termination for at least ninety (90) days following termination of employment with the Company for any reason, and that the optionee shall have the right to exercise the option for at least twelve (12) months if the optionee's employment terminates due to death or disability.

Amendment and Termination. The Plan became effective on October 1, 2007, the date of its adoption by the Board of Directors, subject to the approval of the holders of a majority of the outstanding shares of common stock of the Company within 12 months therefrom. Unless sooner terminated pursuant to the terms of the Amended Plan, the Amended Plan will terminate on September 30, 2016. The Board of Directors may terminate or amend the Amended Plan at any time except that, the holders of a majority of the outstanding shares of common stock must approve certain amendments. Except as provided for in the Amended Plan, the Board of Directors or stockholders cannot alter or impair the rights of an optionee, without his consent, under any award previously granted to him under the Amended Plan.

Tax Aspects of the Plan

Federal Income Tax Consequences. The following discussion summarizes the material federal income tax consequences to the Company and the participants in connection with the Amended Plan under existing applicable provisions of the Internal Revenue Code (the "Code") and the regulations adopted pursuant to such Code. The discussion is general in nature and does not address issues relating to the income tax circumstances of any specific individual employee or holder. The discussion is subject to possible future changes in the Code or other relevant law. The discussion does not address the consequences of state, local or foreign tax laws.

Nonqualified Stock Options. A recipient will not have any taxable income at the time an NSO is granted nor will the Company be entitled to a deduction at that time. When an NSO is exercised, the grantee will have taxable ordinary income (whether the option price is paid in cash or by surrender of already owned shares of Common Stock), and the Company will be entitled to a tax deduction, in an amount equal to the excess of the fair market value of the shares to which the option exercise pertains over the option exercise price.

Incentive Stock Options. A grantee will not have any taxable income at the time an ISO is granted or at the time the ISO is exercised. If a grantee disposes of the shares acquired on exercise of an ISO after two years after the grant of the ISO and one year after exercise of the ISO, the gain, if any, will be long-term capital gains eligible for favorable tax rates under the Code. If the grantee disposes of the shares within two years of the grant of the ISO or within one year of exercise of the ISO, the disposition is a “disqualifying disposition,” and the grantee will have taxable ordinary income in the year of the disqualifying disposition equal to the lesser of (a) the difference between the fair market value of the shares and the exercise price of the shares at the time of option exercise, or (b) the difference between the sales price of the shares and the exercise price of the shares. Any gain realized from the time of option exercise to the time of the disqualifying disposition would be long-term or short-term capital gains, depending on whether the shares were sold more than one year or up to and through one year respectively, after the ISO was exercised. The Company is not entitled to a deduction as a result of the grant or exercise of an ISO. If the grantee has ordinary income taxable as compensation as a result of a disqualifying disposition, the Company will then be entitled to a deduction in the same amount as the grantee recognizes as ordinary income.

Awards Under the Amended Plan

The following table sets forth, as of the Record Date, information regarding the benefits or amounts that will be received by or allocated to each of the following under the Amended Plan:

<u>Name and Position</u>	<u>Dollar Value (\$)</u>	<u>Number of Units</u>
James S. Marcelli, Chief Executive Officer	\$ 1,627,500	1,050,000 (1)
Harold R. Bennett, Chief Executive Officer	\$ 0	0 (2)
Frederick J. Goetz, Jr., Chief Science Officer	\$ 0	0
Andrew Ashton, Treasurer	\$ 0	0
Dr. David Eaton, Chief Technology Officer	\$ 776,550	501,000 (3)
Executive Group	\$ 2,404,050	1,551,000 (4)
Non-Executive Director Group	\$ 1,317,500	850,000 (5)
Non-Executive Officer Employee Group	\$ 892,800	576,000 (6)

1. Mr. Marcelli was appointed to serve as our Chief Executive Officer in August 2008. Consists of an option to purchase up to 1,050,000 shares of common stock at the purchase price of \$1.75 per share.
2. Mr. Bennett served as our Chief Executive Officer from March 2007 to August 2008..
3. Consists of an option to purchase up to 501,000 shares of common stock at the purchase price of \$0.72 per share.

4. Consists of an option to purchase up to 501,000 shares of common stock at the purchase price of \$0.72 per share and an option to purchase up to 1,050,000 shares of common stock at the purchase price of \$1.75 per share.
5. Consists of an option to purchase up to 100,000 shares of common stock at the purchase price of \$0.72 per share, an option to purchase up to 200,000 shares of common stock at the purchase price of \$1.75 per share and an option to purchase up to 550,000 shares of common stock at the purchase price of \$1.42 per share.
6. Consists of an option to purchase up to 25,000 shares of common stock at the purchase price of \$0.25 per share, an option to purchase up to 25,000 shares of common stock at the purchase price of \$0.34 per share, an option to purchase up to 25,000 shares of common stock at the purchase price of \$0.45 per share and an option to purchase up to 501,000 shares of common stock at the purchase price of \$0.72 per share.

Copy of Plan and Amendment

A complete copy of our Company's 2007 Employee Stock Plan (the "**Plan**") is attached as Exhibit A to our Schedule 14C Information Statement filed with the SEC on February 18, 2008. A copy of the proposed amendment to the Plan is attached hereto as **Appendix A**.

Vote Required

The vote required to approve the proposed amendment of the Plan to increase the number of shares of Common Stock available for issuance under the Plan from 3,500,000 to 6,500,000, is the affirmative vote of the holders of a majority of the votes cast at the Annual Meeting. Each holder of common stock is entitled to one vote for each share held.

Recommendation of the Board of Directors

The Board of Directors Recommends That the Shareholders Vote "**FOR**" Approval of the Amendment to the 2007 Employee Stock Plan.

PROPOSAL THREE

RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR 2010

We are asking stockholders to ratify the appointment of Morison Cogen LLP to serve as our Company's independent registered public accounting firm for the fiscal year ending December 31, 2010. Morison Cogen LLP was our independent registered public accounting firm for our fiscal years ended December 31, 2009 and 2008.

Representatives of Morison Cogen, LLP are expected to be present at the Annual Meeting, will have the opportunity to make a statement if they desire to do so and will be available to respond to appropriate questions.

Audit Fees.

The aggregate fees billed for the years ended December 31, 2009 and 2008 for professional services rendered by Morison Cogen, LLP for the audit of the Company's annual financial statements and review of financial statements included in the Company's Form 10-QSB or services that are normally provided by the accountant in connection with statutory and regulatory filings or engagements for the year ended December 31, 2009 was \$45,450; and for the year ended December 31, 2008 was \$43,000.

Audit-Related Fees.

Fees billed for the year ended December 31, 2009 for assurance and related services by Morison Cogen, LLP was \$1,500 that are reasonably related to the performance of the audit or review of the Company's financial statements and are not reported under the category Audit Fees described above and no fees were billed for the years ended December 31, 2008.

Tax Fees.

Fees billed for the year ended December 31, 2009 for tax compliance by Morison Cogen, LLP was \$6,000; and for the year ended December 31, 2008 was \$6,000.

All Other Fees.

No fees were billed for the fiscal years ended December 31, 2009 and 2008 for products and services provided by Morison Cogen, LLP other than the services reported in the Audit Fees, Audit-Related Fees, and Tax Fees categories above.

Audit Committee Pre-Approval Policies.

The Company's audit committee currently does not have any pre-approval policies or procedures concerning services performed by Morison Cogen, LLP. All the services performed by Morison Cogen, LLP that are described above were pre-approved by the Company's audit committee.

None of the hours expended on Morison Cogen, LLP 's engagement to audit the Company's financial statements for the years ended December 31, 2009 were attributed to work performed by persons other than Morison Cogen, LLP's full-time, permanent employees.

Vote Required

The vote required to ratify the appointment of Morison Cogen LLP to serve as our Company's independent registered public accounting firm for the fiscal year ending December 31, 2010 is the affirmative vote of the holders of a majority of the votes cast at the Annual Meeting. Each holder of common stock is entitled to one vote for each share held.

Recommendation of the Board of Directors

The Board of Directors Recommends That the Shareholders Vote "**FOR**" the proposal to ratify the appointment of Morison Cogen LLP to serve as our Company's independent registered public accounting firm for the fiscal year ending December 31, 2010.

STOCKHOLDER PROPOSALS FOR 2011 ANNUAL MEETING

Deadline for Stockholder Proposals to be Considered for Inclusion in the Company's Proxy Materials Pursuant to Rule 14a-8.

To be considered for inclusion in our Proxy Statement relating to the 2011 Annual Meeting of Stockholders pursuant to Rule 14a-8 of Regulation 14A under the Exchange Act, stockholder proposals must be received no later than February 10, 2011. Such proposals should be delivered to Andrew Ashton, Secretary, Lightwave Logic, Inc., 121 Continental Drive, Suite 110, Newark, Delaware 19713.

Requirements for Stockholder Proposals to be Brought Before the Annual Meeting Outside of Rule 14a-8.

To be considered for inclusion in our Proxy Statement relating to the 2011 Annual Meeting of Stockholders outside of Rule 14a-8 of Regulation 14A under the Exchange Act, stockholder proposals must be received a reasonable time prior to June 11, 2011, but no later than April 25, 2011, and in accordance with the Company's bylaws. A copy of the full text of our bylaws is available to stockholders upon written request. Requests should be directed to Andrew Ashton, Secretary, Lightwave Logic, Inc., 121 Continental Drive, Suite 110, Newark, Delaware 19713.

In addition, the proxy solicited by the Board of Directors for the 2011 Annual Meeting of Stockholders will confer discretionary authority to vote on (i) any proposal presented by a stockholder at that meeting for which we have not been provided with notice on or prior to April 25, 2011 and (ii) any proposal made in accordance with the bylaw provisions, if the 2011 Proxy Statement briefly describes the matter and how management's proxy holders intend to vote on it, if the stockholder does not comply with the requirements of Rule 14a-4(c)(2) under the Securities Exchange Act of 1934.

OTHER MATTERS

Our Board of Directors knows of no other matters to be presented for stockholder action at the Annual Meeting. However, if other matters do properly come before the Annual Meeting or any adjournments or postponements thereof, our Board of Directors intends that the persons named in the proxies will vote upon such matters in accordance with the best judgment of the proxy holders.

Whether or not you intend to be present at the meeting, you are urged to fill out, sign, date and return the enclosed proxy at your earliest convenience.

Newark, Delaware 19713
June 16, 2010

**AMENDMENT No. 2
TO
LIGHTWAVE LOGIC, INC. 2007 EMPLOYEE STOCK PLAN**

The Lightwave Logic 2007 Employee Stock Plan (the “**Plan**”) is hereby amended as follows (capitalized terms used herein and not defined herein shall have the respective meaning ascribed to such terms in the Plan):

1. Paragraph 4 of the Plan shall be deleted in its entirety and replaced with the following:

4. Stock. The stock subject to Options, Awards and Purchases shall be authorized but unissued shares of Common Stock of the Company, \$0.001 par value (the “Common Stock”), or shares of Common Stock reacquired by the Company in any manner. The aggregate number of shares that may be issued pursuant to the Plan is 6,500,000, subject to adjustment as provided in paragraph 13. Any such shares may be issued as ISOs, Non-Qualified Options or Awards, or to persons or entities making Purchases, so long as the number of shares issued does not exceed such number, as adjusted. If any Option granted under the Plan shall expire or terminate for any reason without having been exercised in full or shall cease for any reason to be exercisable in whole or in part, or if the Company shall reacquire any unvested shares issued pursuant to Awards or Purchases, the unpurchased shares subject to such Options and any unvested shares so reacquired by the Company shall again be available for grants of Stock Rights under the Plan.

2. All other provisions of the Plan remain in full force and effect, other than any provision that conflicts with the terms and spirit of this amendment.

Adopted by the Board of Directors on April 22, 2010.

Adopted by the Shareholders on July 8, 2010.

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