NANOMETRICS INC
Form 10-K/A
April 25, 2008

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(Amendment No. 1)

(Mark One)

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 29, 2007

OR

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from ______ to ______

Commission file number: 0-13470

NANOMETRICS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**94-2276314**
(State or other jurisdiction of	**(I.R.S. Employer**
incorporation or organization)	**Identification Number)**
1550 Buckeye Drive	
Milpitas, California	**95035**
(Address of principal executive offices)	**(Zip Code)**

Registrant s telephone number, including area code: (408) 545-6000

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, $0.001 par value per share

The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the Registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. Yes ¨ No x

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨ Accelerated filer x

Non-accelerated filer ¨ (Do not check if a smaller reporting company) Smaller reporting company ¨

Indicate by check mark whether the Registrant is a shell company (as defined by Rule 12b-2 of the Securities Exchange Act of 1934) Yes ¨ No x

As of June 29, 2007, the last business day of the Registrant s most recently completed second fiscal quarter, the aggregate market value of the common stock of Registrant held by non-affiliates, based upon the closing sales price for the Registrant s common stock for such date, as quoted on the NASDAQ Global Market, was $58,877,933. Shares of common stock held by each officer and director and by each person who owned 5% or more of the outstanding common stock have been excluded because such persons may be deemed to be affiliates as that term is defined under the rules and regulations of the Exchange Act. This determination of affiliate status is not necessarily a conclusive determination for any other purpose.

The number of shares of the Registrant s common stock outstanding as of April 18, 2008 was 18,597,303.

Explanatory Note

This Amendment No. 1 on Form 10-K/A amends our Annual Report on Form 10-K for the fiscal year ended December 29, 2007 that we previously filed with the Securities and Exchange Commission on March 13, 2008. In accordance with General Instruction G to the Form 10-K, the information required by Items 10, 11, 12, 13 and 14 of Part III was omitted from our Form 10-K as filed and was to be incorporated by reference to our definitive proxy statement for our 2008 Annual Meeting of Stockholders. Since we will not file our proxy statement within 120 days from the end of our fiscal year, we are filing this Amendment No. 1 solely for the purpose of providing the information required by Items 10, 11, 12, 13 and 14 of Part III of Form 10-K. Unless otherwise expressly stated, this Amendment No. 1 does not reflect events occurring after the filing of the original Form 10-K, or modify or update in any way disclosures contained in the original Form 10-K.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT
Directors and Executive Officers

The following table sets forth certain information with respect to our directors and executive officers as of April 23, 2008:

Name	Age	Position
Bruce C. Rhine	50	Chairman of the Board of Directors
Vincent J. Coates	83	Vice-Chairman of the Board of Directors
Howard A. Bain III	62	Director
J. Thomas Bentley	58	Director
Joseph F. Dox	65	Director
William G. Oldham	69	Director
Stephen J Smith	61	Director
Edmond R. Ward	69	Director
Timothy J. Stultz	60	President, Chief Executive Officer and director
Gary C. Schaefer	54	Chief Financial Officer and Vice President of Finance and Administration
Bruce A. Crawford	55	Chief Operating Officer

Bruce C. Rhine has served as our Chairman of the Board of Directors since July 2007 and as a director since July 2006. From July 2006 to February 2008, Mr. Rhine served as our Chief Strategy Officer. From March 2007 to August 2007, Mr. Rhine served as our Chief Executive Officer. From August 2000 to July 2006, Mr. Rhine served as Chairman and Chief Executive Officer of Accent Optical Technologies, Inc. and as Accent Optical Technologies, Inc. s President from January 2003 to April 2005 and from August 2000 to September 2001. Mr. Rhine holds a B.S. degree in Chemical Engineering and an M.B.A. in Finance from The Pennsylvania State University.

Vincent J. Coates founded Nanometrics and has served as Vice-Chairman of the Board and Chairman of our Scientific Advisory Board since July 2007, Chairman of the Board from January 1975 through July 2007 and as Secretary from February 1989 until July 2007. From January 1975 until April 1998, Mr. Coates served as the Chief Executive Officer and as President from January 1975 through May 1996, except for the period of January 1986 through February 1987 when he served exclusively as Chief Executive Officer. Mr. Coates holds a B.E. in Mechanical Engineering from Yale University.

Howard A. Bain III has served as a director since April 2008. From November 2001 until November 2004, Mr. Bain served as Senior Vice President and Chief Financial Officer of Portal Software, Inc., a provider of billing solutions for the global communications and media markets. From August 2001 to November 2001, Mr. Bain served as Portal s Vice President and Chief Financial Officer. Mr. Bain currently serves on the board of directors of Learning Tree International Inc., a provider of training and education to managers and information technology professionals working in business and government organizations. Mr. Bain holds a B.S.B.A. in Accounting from California Polytechnic University.

J. Thomas Bentley has served as a director since April 2004. Mr. Bentley served as a Managing Director at SVB Alliant (formerly Alliant Partners), a mergers and acquisitions firm, since he co-founded the firm in 1990 until October 2005. Mr. Bentley currently serves on the board of directors of Rambus, Inc., a chip interface technology company. Mr. Bentley holds a B.A. degree in Economics from Vanderbilt University and a Masters of Science in Management from the Massachusetts Institute of Technology.

Joseph F. Dox has served as a director since May 2007. Mr. Dox previously served on the board of directors of Accent Optical Technologies, Inc., a supplier of process control and metrology systems to the global semiconductor manufacturing industry which was acquired by us in July 2006. He has also served on the board of directors of Eagle Test Systems, Inc., a semiconductor equipment testing company. Mr. Dox holds a B.S. in Accounting from Northern Arizona University and an M.B.A. from Santa Clara University.

William G. Oldham, Ph.D. has served as a director since June 2000 and as lead independent director since March 2007. Dr. Oldham, now Professor Emeritus, was a faculty member at the University of California at Berkeley from 1964 to 2003. He serves on the board of directors of Cymer, Inc., a supplier of light sources for deep ultraviolet photolithography systems. Dr. Oldham holds B.S., M.S. and Ph.D. degrees from the Carnegie Institute of Technology.

Stephen J Smith, Ph.D. has served as a director since April 2004. Dr. Smith has been a professor in the Department of Molecular and Cellular Physiology at the Stanford University School of Medicine since 1989. Dr. Smith holds a B.A. degree from Reed College and a Ph.D. from the University of Washington.

Edmond R. Ward, Ph.D. has served as a director since July 1999. From January 2002 through 2006, Dr. Ward served as Chief Technical Officer of Unity Semiconductor Corporation, a semiconductor design and manufacturing company. From April 1999 through 2006, Dr. Ward was a General Partner of Virtual Founders, a venture capital firm. Dr. Ward holds BSEE and Ph.D. degrees from Purdue University and a MSEE from Stanford University.

Timothy J. Stultz, Ph.D. has served as President, Chief Executive Officer and a director since August 2007. From June 2003 to August 2007, Dr. Stultz served as the President and Chief Executive Officer and a member of the board of directors of Imago Scientific Instruments Corporation, a supplier of proprietary 3-D atom probe microscopes to the research materials and microelectronics industries. Prior to Imago, Dr. Stultz served as President and Chief Executive Officer for ThauMDx, a developer of diagnostic systems and technologies for the analysis of biomolecules, drugs and chemicals. Dr. Stultz received his B.S., M.S. and Ph.D. in Materials Science and Engineering from Stanford University.

Gary C. Schaefer has served as Chief Financial Officer and Vice President of Finance and Administration since November 2007. Prior to his position as CFO, Mr. Schaefer served as Director of Internal Audit, and was an internal audit consultant for us during 2005 and 2006. Prior to joining Nanometrics, Mr. Schaefer served as a Sarbanes-Oxley consultant with Resources Global Inc., the operating subsidiary of Resources Connection, Inc., a multinational professional services firm, from March 2004 to March 2005. Mr. Schaefer served as CFO of Logic Devices Incorporated, a publicly-traded digital IC company from August 2003 to January 2004. Mr. Schaefer received his Bachelor of Science and Master of Business Administration from Santa Clara University.

Bruce A. Crawford has served as Chief Operating Officer since July 2006. From July 2005 to July 2006, Mr. Crawford served as President and Chief Operating Officer of Accent Optical Technologies, Inc., a supplier of process control and metrology systems to the global semiconductor manufacturing industry, which was acquired by us in July 2006. From February 2003 to July 2005, Mr. Crawford served as Accent Optical Technologies, Inc. s Chief Operating Officer and Executive Vice President and from October 2000 to February 2003, he served as Vice President of Worldwide Operations. Mr. Crawford holds an A.S. degree from De Anza College.

Audit Committee and Audit Committee Financial Expert

Nanometrics has established a standing Audit Committee which is composed of Howard A. Bain III, J. Thomas Bentley, Edmond R. Ward and Joseph F. Dox. Each of the members of the Audit Committee is independent as that term is defined under the applicable SEC Rules and NASDAQ Global Stock Market listing standards. Our board has determined that each member of the Audit Committee is able to read and understand financial statements. Further, the Board has determined that Mr. Bain, Chairman of the Audit Committee, qualifies as an audit committee financial expert as that term is used in Item 7(d)(3)(iv) of Schedule 14A under the Exchange Act.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our executive officers and directors, and persons who own more than 10% of a registered class of our equity securities, to file reports of ownership and changes in ownership with the Securities and Exchange Commission. Executive officers, directors and greater than 10% stockholders are required by Securities and Exchange Commission regulations to furnish Nanometrics with copies of all Section 16(a) forms that they file. Based solely on our review of the copies of such forms received by it or written representations from certain reporting persons, we believe that during the fiscal year ended December 29, 2007, our executive officers, directors and greater than 10% stockholders complied with all applicable filing requirements, except for a Form 4 filed on behalf of Mr. Coates reporting an open market purchase of shares, a Form 4 filed on behalf of Mr. Crawford reporting the vesting commencement of a performance based option grant and Forms 4 filed on behalf of Messrs. Crawford, Dox and Rhine reporting forfeiture of shares pursuant to an escrow agreement in connection with the acquisition of Accent Optical Technologies, Inc. that were inadvertently filed late by us.

Code of Ethics

We have adopted a code of business conduct and ethics that applies to all executive officers and employees. We post our code of business conduct and ethics on our website at www.nanometrics.com. We intend to disclose any amendment to the provisions of the code of business conduct and ethics that apply specifically to executive officers by filing such information on a Current Report on Form 8-K with the SEC, to the extent such filing is required by SEC Rules or the NASDAQ Stock Market LLC s listing requirements; otherwise, we will disclose such waiver by posting such information on our website.

ITEM 11. EXECUTIVE COMPENSATION

COMPENSATION DISCUSSION AND ANALYSIS

Overview

Nanometrics executive compensation program is intended to enable us to attract, retain and motivate high-quality executives and to align their compensation with our short-term and long-term performance. In accordance with the Compensation/Stock Option Committee Charter, a copy of which may be obtained on our website at www.nanometrics.com, the Compensation/Stock Option Committee, or Compensation Committee, acts on behalf of the board of directors and, by extension, our stockholders to establish, implement and continually monitor adherence with our compensation philosophy. The Compensation Committee ensures that the total compensation paid to our named executive officers is competitive and consistent with our compensation philosophy. In addition to being independent directors as defined by the NASDAQ Stock Market, all members of the Compensation Committee are non-employee, outside directors. The Compensation Committee relies upon our employees and our human resources department to provide information and recommendations to establish specific compensation packages for executives.

Philosophy and Objectives

Nanometrics compensation philosophy is set by the Compensation Committee and approved by the board of directors. The Compensation Committee believes that the most effective executive compensation program is one that is designed to align executives interest with that of the stockholders in terms of producing short-term and long-term enhanced stockholder value. The Compensation Committee also recognizes that competitive compensation is critical to our ability to attract, motivate and retain key employees who are crucial to our long-term success.

Accordingly, in 2007, the Compensation Committee continued its efforts to refine the overall executive compensation structure and process consistent with evolving good governance practices. The Compensation Committee s principal objectives are to: (1) develop and approve compensation packages that will attract and retain key executive talent; (2) reward and motivate these individuals to achieve short-term and long-term corporate objectives that enhance stockholder value; (3) link executive compensation to the achievement of financial, management or other performance goals; and (4) support the Company s culture and core values, by promoting equity among the executive team and maintaining the competitiveness of our overall compensation when compared with external opportunities.

Role of Executive Officers in Compensation Decisions

The Compensation Committee makes all compensation decisions for our executive officers, including the named executive officers, and approves recommendations regarding equity awards to all executive officers. The Compensation Committee has delegated its authority to grant stock options to non-executive level employees or consultants to the management Stock Option Committee composed of our Chief Executive Officer and Chief Financial Officer currently Timothy J. Stultz and Gary C. Schaefer, respectively . Each year, the Compensation Committee reviews the total compensation of our named executive officers, including salaries, target bonus award opportunities, target annual long-term incentive award values, perquisites and other benefits (including retirement, health, and welfare benefits), and severance arrangements. The Compensation Committee then sets each executive s compensation target for the current year. Typically, this involves establishing their annual bonus opportunities and granting long-term equity incentive awards. The Compensation Committee s decisions are reviewed and ratified by the board of directors.

The Chief Executive Officer annually reviews the performance of each executive officer (other than the Chief Executive Officer whose performance is reviewed by the board of directors) using the elements described under 2007 Executive Compensation Components below and makes recommendations about the structure of the overall compensation program and individual compensation arrangements to the Compensation Committee. The Compensation Committee decisions are based in part, on these annual performance reviews, including with respect to salary adjustments, annual bonus amounts, annual stock option grants and annual restricted stock unit grants. The Chief Executive Officer is generally present at Compensation Committee meetings when compensation, other than his own, is considered and approved; however, the Compensation Committee can exercise its discretion in modifying any recommendations of the Chief Executive Officer and has done so in the past and will continue to do so when appropriate.

Setting Executive Compensation

Based on the foregoing philosophy and objectives, the Compensation Committee has structured our overall executive compensation in order to motivate executives to achieve the business goals set by us; to reward the executives for achieving such goals and to make us attractive from a compensation standpoint when compared to its peers. In order to aid the Compensation Committee in obtaining its objectives, the Compensation Committee consulted with our human resources department to evaluate equity grant information and to make recommendations with respect to compensation matters. The Compensation Committee also analyzes data and suggestions from our human resources department, including benchmarking against the compensation peer group of publicly-traded and privately-held semiconductor equipment manufacturing companies. This peer group consists of companies against which the Compensation Committee believes we must compete for talent and for stockholder investment. In 2007, the companies that comprised our peer group were various semiconductor equipment and materials industry companies of similar size as follows:

Advanced Micro Devices, Inc.	Asyst Technologies, Inc.
Atmel Corporation	Cascade Microtech, Inc.
Cymer, Inc.	Intevac, Inc.
Mattson Technology, Inc.	Novellus Systems, Inc.
Photon Dynamics, Inc.	Rudolph Technologies, Inc.
Therma-Wave, Inc.	Vitesse Semiconductor Corporation
Zygo Corporation	

Data on the compensation practices of the above-mentioned peer group generally is gathered through searches of publicly available information, including publicly available databases. Publicly available information does not typically include information regarding target cash compensation, so Nanometrics relies upon compensation surveys to benchmark target cash compensation levels against the above peer group. Peer group data is gathered with respect to base salary, bonus targets and all equity awards, including stock options and restricted stock units. It does not include deferred compensation benefits or generally available benefits such as 401(k) plans or health care coverage.

Using the information from the peer group surveys, the Compensation Committee compares each executive officers position to similar positions. Where there is no similar position, the Compensation Committee compares the Nanometrics position to a range of positions in the peer group that are the closest matches. The Compensation Committee uses these comparisons in its determinations of preliminary salary recommendations, preliminary bonus award opportunities, and the target long-term equity incentive award value for each executive position. This framework provides a guide for the Compensation Committee s deliberations. The actual total compensation and/or amount of each compensation element for an individual executive officer may be more or less than these comparative figures.

Nanometrics compensation program generally reflects base pay at the 60^{th} to 75^{th} percentile among its peer group and total target cash compensation at the market s 65^{th} percentile. However, in determining base salary, the Compensation Committee also considers other factors such as job performance, skill set, prior experience, the executive s time in his position and/or with Nanometrics, internal consistency regarding pay levels for similar positions or skill levels with Nanometrics, external pressures to attract and retain talent, and market conditions. Positioning base pay at approximately the 60^{th} to 75^{th} percentile of peer companies aids Nanometrics in controlling fixed costs. Targeting total cash compensation at approximately the 65^{th} percentile, and therefore providing higher incentive compensation opportunity, rewards exceptional goal achievement and allows total compensation to be more competitive as a whole, while taking into account business cyclicality. Base pay and target cash compensation are analyzed by management to determine variances to our compensation targets using the combination of publicly available information and survey data as described above.

Nanometrics competes with many larger companies for top executive-level talent. As such, the Compensation Committee generally sets compensation for its executive officers within a competitive range of compensation paid to similarly situated executives of the companies comprising the peer group. The Compensation Committee s process also includes an evaluation of our overall performance as well as the individual performance of its executive officers. That evaluation is taken into account when determining cash bonuses, salary adjustments and equity awards.

Decisions about individual compensation elements and total compensation are ultimately made by the Compensation Committee using its judgment, focusing primarily on the executive officer s performance against his or her individual financial and strategic objectives, as well as Nanometrics overall performance. The Compensation Committee also considers a variety of qualitative factors, including the business environment in which the results were achieved. Thus, the compensation of our executives is not entirely determined by any formula.

2007 Executive Compensation Components

Nanometrics approach to total compensation is to create a comprehensive compensation package designed to reward individual performance based on our short-term and long-term performance and how this performance links to Nanometrics corporate strategy. For the fiscal year ended December 29, 2007, the principal components of compensation for named executive officers were:

- Base salary;
- Cash bonus;
- Stock option grants;
- Restricted stock unit awards;
- Retirement and other benefits; and
- Perquisites and other personal benefits.

Nanometrics has chosen these components because we believe that each supports achievement of one or more of our compensation objectives, and that together they have been and will continue to be effective in this regard. The use and weight of each compensation component is based on a determination by the Compensation Committee of the importance of each compensation objective in supporting our business and talent strategies, as well as the use of these elements for executives at peer companies. This determination varies for each executive officer depending on a number of factors, including but not limited to, scope of his or her responsibilities, leadership skills and values, performance and length of service with Nanometrics.

Base Salary

Base salaries serve as the foundation of Nanometrics compensation program. The majority of other executive compensation elements, including annual short-term incentives, long-term incentives, and retirement benefits are driven from base salary. Nanometrics provides named executive officers and other employees with base salary to compensate them for services rendered during the fiscal year and are set at a level which the Compensation Committee believes will effectively attract and retain top talent. Base salaries for named executive officers are determined for each executive based on their position and responsibility. Base salary ranges are designed to be competitive with the salaries paid to high tech executives of similarly-sized companies in our peer group. During its review of base salaries for executives, the Compensation Committee primarily considers:

- the salaries of executive officers in similar positions at comparably-sized peer companies;

our financial performance over the past year based upon revenues and operating results; and

the individual s performance of the executive officer s duties and areas of responsibility as evaluated by the Chief Executive Officer (except in the case of the Chief Executive Officer whose performance is evaluated by the board of directors).

Salary levels are typically considered annually as part of our performance review process as well as upon a promotion or other change in job responsibility. Stock price performance has not been a factor in determining annual base salary compensation because the price of our common stock is subject to a variety of factors outside of our control.

Salary increases for Nanometrics named executive officers in 2007 were determined by the Compensation Committee after considering salary data from our peer comparison groups, as well as consideration of the internal pay relationships for our executives based on their relative duties and responsibilities.

Cash Bonus

The Compensation Committee also approves cash bonuses awarded to certain named executive officers. The Compensation Committee views such bonuses as an integral part of its performance based compensation program and is designed to align participants interests with our annual goals and objectives and stockholders interests. Such bonuses are based on our financial and operational performance for the year and are determined as a percentage of the executive officer s salary.

The Compensation Committee recommends and the board of directors approve cash bonus targets for all named executive officers based on an evaluation of competitive market data. Such bonuses are earned based on the achievement of performance goals set by the Compensation Committee. At the conclusion of each performance period, the cash bonus award for each named executive officer is reviewed by the Compensation Committee and approved by the board of directors.

The actual bonuses paid to Nanometrics named executive officers for 2007 were determined by the Compensation Committee based on its subjective evaluation of each executive s performance with input from our then serving Chief Executive Officer, the director of our human resources department and the board of directors. Based on the Chief Executive Officer s evaluation of each executive s performance against goals established for the year, Mr. Rhine and Dr. Stultz submitted proposed bonus recommendations to the Compensation Committee. The Compensation Committee exercised its judgment to adjust these recommendations based on its own evaluation of each executive s performance, the executive s relative contribution to our overall performance and the executive s response to unplanned or unforeseen events.

On May 24, 2007, the Compensation Committee approved an incentive cash award program for the remainder of 2007. Under the terms of the program, a pool of 5% of our operating profitability as measured on a quarterly basis was available to pay cash bonuses to participating individuals. The Compensation Committee also determined the applicable percentage of the bonus pool available for payment of these quarterly bonuses to participating individuals as follows: Bruce C. Rhine, Chairman of the Board of Directors, former Chief Strategy Officer and Chief Executive Officer 20%; Quentin B. Wright, Vice President External Reporting and Strategic Projects and former interim Chief Financial Officer 20%; Bruce A. Crawford, Chief Operating Officer 20%; and the remaining 40% to be distributed at the discretion of the Chief Executive Officer among certain other senior-level employees other than the aforementioned executive officers. No bonus was paid under this program in a quarter in which we incurred a loss.

For fiscal year 2008, the Compensation Committee approved a 2008 Executive Bonus Plan (the 2008 Plan). Under the terms of the 2008 Plan, quarterly bonus payments are based on the quarterly achievement by Nanometrics of certain financial goals based on our annual operating plan and individualized program objectives for certain named executive officers. Subject to the minimum amounts referenced below, no bonus will be paid in a particular quarter under the 2008 Plan if we are not profitable in such quarter, as determined in accordance with generally accepted accounting principals, or GAAP.

The maximum available annual payout under the 2008 Plan to Dr. Stultz is $420,000, which is based on 150% achievement of target goals in each quarter. At 100% achievement of target goals in each quarter, Dr. Stultz s annualized aggregate bonus payout will be $200,000. For each of the first and second quarters of 2008, Dr. Stultz s minimum bonus payout will be $50,000 and for each of the third and fourth quarters of 2008, his minimum bonus payout will be $25,000. The maximum available annual payout under the 2008 Plan to Mr. Schaefer is $252,000, which is based on 150% achievement of target goals in each quarter. At 100% achievement of target goals in each quarter, Mr. Schaefer s annualized aggregate bonus payout will be $120,000. For each of the first and second quarters of 2008, Mr. Schaefer s minimum bonus payout will be $30,000. The maximum available annualized aggregate payout under the 2008 Plan to Mr. Crawford is $329,000, which is based on 150% achievement of target goals in each quarter. At 100% achievement of target goals in each quarter, Mr. Crawford s annual payout will be $156,500.

Stock Option Grants

The Compensation Committee believes that equity compensation plans are an essential tool to link the long-term interests of stockholders and employees, especially the executive officers, including the named executive officers, and serve to motivate executives to make decisions that will, in the long run, give the best returns to stockholders.

Grants under Nanometrics Stock Option Plans enable us to:

- enhance the link between the creation of stockholder value and long-term executive incentive compensation;
- provide an opportunity for increased equity ownership by executives; and
- maintain competitive levels of total compensation.

Stock option award levels are determined based on market data and on our guidelines. Option awards vary among participants based on their positions within Nanometrics and are granted at the Compensation Committees regularly scheduled and special meetings throughout the year. Management recommends that the Compensation Committee approve grants to newly hired or promoted executives, at the first meeting following their hire or promotion. Management recommends to the Compensation Committee that newly hired executive officers who are eligible to receive options are awarded such options at the next regularly scheduled Compensation Committee meeting following their hire date, unless the Compensation Committee has acted previously to approve their grants.

Options are awarded at the closing price of our common stock on the date of the grant. We have never granted options with an exercise price that is less than the closing price of our common stock on the grant date and do not intend to do so in the future.

The majority of the options granted by the Compensation Committee vest at a rate of 33 1/3% per year over the first three years of the seven-year option term. Vesting ceases upon termination of employment and, except in the case of death (subject to a one year limitation), disability or retirement, the vested stock options may generally be exercised for 90 days following the date of termination. Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option, including voting rights and the right to receive dividends or dividend equivalents.

Restricted Stock Unit Grants

In 2007, the Compensation Committee began awarding restricted stock units or RSUs to our named executive officers. Similar to stock options, the Compensation Committee believes that RSUs, which increase in value as the market price of our common stock increases, create the proper incentive for the executive officers to work towards the goal of creating stockholder value. RSUs also provide retention value even if our stock price does not increase or declines, and subjects executive officers to the same downside risk experienced by stockholders. In addition, the Compensation Committee believes that RSUs will be used increasingly by other companies and we will need to offer such incentives to remain competitive in attracting and retaining executive talent.

The majority of the RSU s awarded by the Compensation Committee vest at a rate of 33 1/3% per year over three years. Vesting ceases upon termination of employment and, except in the case of death (subject to a one year limitation), disability or retirement. Prior to the vesting of RSUs, the holder has no rights as a stockholder with respect to the shares subject to such RSUs, including voting rights and the right to receive dividends or dividend equivalents. However, the 20,000 RSUs awarded to Mr. Crawford in July 2007 will vest on the one year anniversary of the date of the award.

Profitability Bonus

In June 2007, the Compensation Committee also approved the issuance of non-qualified options to purchase up to an aggregate of 160,000 shares of our common stock under our 2005 Equity Incentive Plan. Under the program, option awards were made to Quentin B. Wright, our former Interim Chief Financial Officer, Bruce A. Crawford, our Chief Operating Officer, and other senior-level employees. Messrs. Wright and Crawford were each granted an option to purchase up to 25,000 shares. Each option grant vests in accordance with the following schedule: 25% of the shares subject to an option began vesting in accordance with the two-year time-based vesting described below upon the attainment of one of the four performance milestones. For each performance milestone that was not attained, 25% of the shares subject to an option did not vest and were forfeited immediately upon the determination that the performance milestone had not been attained. The first, second and third performance milestones were the determination by our Chief Financial Officer that we had attained quarterly operating profitability during the second fiscal quarter of 2007, the third fiscal quarter of 2007 and the fourth fiscal quarter of 2007, respectively. The fourth performance milestone was the determination by our Chief Financial Officer that we had attained quarterly operating profitability during each of the second, third and fourth fiscal quarters of 2007. Our Chief Financial Officer determined that the first and second milestones were attained, but the third and fourth were not, so a maximum of 50% of the shares subject to the option vest in accordance with the two-year time-based vesting described below and the remainder did not vest and were forfeited immediately. Upon attainment of the first and second performance milestones, 25% of the shares subject to an option began to vest ratably monthly over a two-year period beginning on the date of the determination by our Chief Financial Officer that the performance milestone was attained and subject, in each case, to the optionee s continued employment with Nanometrics on each relevant vesting date.

Retirement Benefits and Generally Available Benefits Programs

All employees in the United States, including the named executive officers, are eligible to participate in our 401(k) plan, as amended and restated in August 2007, medical, dental and vision insurance, employee stock purchase plan, as well as our life and disability insurance policy.

In fiscal 2007, all Section 16 officers and non-employee directors were also eligible to participate in an Exec-U-Care Reimbursement Plan to supplement our basic health plan by reimbursing expenses not covered under the underlying plan.

Nanometrics 401(k) Plan and other generally available benefits programs allow us to remain competitive for employee talent, and we believe that the availability of these benefits programs generally enhances employee productivity and loyalty to Nanometrics. The main objectives of Nanometrics benefits programs are to give employees access to quality healthcare, financial protection from unforeseen events, assistance in achieving retirement financial goals, enhanced health and productivity, and support global workforce mobility, in full compliance with applicable legal requirements. These generally available benefits typically do not specifically factor into decisions regarding an individual named executive officer s total compensation or equity award package.

Perquisites and Other Personal Benefits

Nanometrics provides named executive officers with a limited number of perquisites and other personal benefits that we and the Compensation Committee believe are reasonable and consistent with our overall compensation program and with other similar companies in our peer group. The Compensation Committee periodically reviews the levels of perquisites and other personal benefits provided to named executive officers to better enable us to retain and attract executive-level employees for key positions. Although the Compensation Committee seeks the advice of its human resources department on general market competitiveness for these benefits, it does not use formal benchmarking information.

The former President and Chief Executive Officer, Mr. Heaton was provided use of a company automobile and participation in the plans and programs described above. In addition, Mr. Heaton had access to a golf club membership sponsored by Nanometrics, as did Mr. Coates. Since May 2007, we do not provide or reimburse for country club memberships for any named executive officers.

Our Chairman of the Board of Directors and former Chief Executive Officer, Mr. Rhine, was provided limited personal use of private air transportation with a cost to us of approximately $99,010. The board of directors initially approved this perquisite in March 2007 as in incentive to recruit Mr. Rhine to serve as our Chief Executive Officer by providing transportation from his home in Bend, Oregon to our executive offices in Milpitas, California. In August 2007, in connection with Mr. Rhine s transition to Chairman of the Board of Directors, the board of directors approved the continuation of this perquisite as a competitive retention tool and to provide an efficient way to minimize travel time commitments, allowing more productive use of his time, which, in turn, allows greater focus on Nanometrics-related activities.

Attributed costs of the personal benefits described above for the named executive officers for the fiscal year ended December 29, 2007, are included in the Summary Compensation Table on page 12.

Chief Executive Officer Benefits and Perquisites

The board of directors determined that in addition to the benefits and perquisites detailed above, in order to attract Dr. Stultz to Nanometrics, relocation benefits, an automobile allowance and reimbursement for select expenses associated with his initial employment were appropriate and reasonable. As part of his employment, Dr. Stultz relocated his family from Verona, Wisconsin to the San Francisco Bay area in the proximity of the Nanometrics headquarters in Milpitas, California. As part of the relocation benefits, the board of directors approved a living allowance of $8,000 per month for up to 12 months, reimbursements for two house hunting trips, shipment of personal goods and storage of relocated personal goods in the San Francisco Bay Area for six months, and an automobile allowance of $1,200 per month or the use of a company-leased car of equivalent value. Dr. Stultz was also granted a one-time lump sum cash signing bonus payment of $100,000, less applicable withholdings, upon completion of one month of service with Nanometrics. We believes that these additional relocation benefits were a key incentive for Dr. Stultz to join us and also provide an efficient way to minimize travel time commitments and help mitigate business continuity risk.

Change in Control Severance Benefits

The Compensation Committee considers maintaining a stable and effective management team to be essential to protecting and enhancing the best interests of Nanometrics and its stockholders. Accordingly, the Compensation Committee decided to take appropriate steps to encourage the continued attention, dedication and continuity of members of our management to their assigned duties without the distraction that may arise from the possibility of termination of employment without cause or in connection with a change in control. As a result, we have entered into agreements with certain named executive officers which provide severance payments and benefits upon a termination of employment, including following a change in control of Nanometrics, as described in greater detail below in the section headed Employment Contracts and Termination of Employment and Change-in-Control Arrangements.

After considering industry practices and reviewing the policies and practices of the companies in our peer group, the Compensation Committee determined that these agreements were necessary and appropriate to provide competitive compensation to the types of individuals we wanted to recruit and retain. The Compensation Committee also believes that these agreements are consistent with our overall compensation philosophy. The Compensation Committee continues to periodically monitor industry practice in this area to ensure that these agreements remain consistent with our overall compensation philosophy of targeting the competitive median while preserving our ability to attract and retain key executives.

Tax and Accounting Implications

Deductibility of Executive Compensation

As part of its role, the Compensation Committee reviews and considers the deductibility of executive compensation under Section 162(m) of the Internal Revenue Code, which provides that we may not deduct compensation of more than $1,000,000 that is paid to certain executive officers, unless certain exemption requirements are met. Exemptions to this deductibility limit may be made for various forms of performance-based compensation. We believe that compensation paid under the management incentive plans is generally fully deductible for federal income tax purposes. However, in certain situations, the Compensation Committee may approve compensation that will not meet these requirements in order to ensure competitive levels of total compensation for its executive officers.

Section 4999 and Section 280G of the Internal Revenue Code provide that executives could be subject to additional taxes if they receive payments or benefits that exceed certain limits in connection with a change in control of Nanometrics and that we could lose an income tax deduction for such payments. We have not provided any executive with tax gross up or other reimbursement for tax amounts the executive might be required to pay under to Section 4999.

Section 409A of the Internal Revenue Code imposes additional taxes and interest on underpayments in the event an executive defers compensation under a plan that does not meet the requirements of Section 409A. We believe we are operating in good faith compliance with Section 409A and have structured our compensation and benefits programs and individual arrangements in a manner intended to comply with the requirements thereof.

Accounting for Stock-Based Compensation

Beginning on January 1, 2006, we began accounting for stock-based payments in accordance with the requirements of FASB Statement 123(R).

Compensation of Executive Officers

The following table sets forth the compensation that we paid during the past three fiscal years to (i) our Chief Executive Officer, (ii) our Chief Financial Officer, and (iii) each of our three most highly compensated executive officers (or such lesser number of executive officers as we may have) not serving as Chief Executive Officer or Chief Financial Officer; and (iv) up to an additional two individuals that would have been included under item (iii) but for the fact that the individuals were not serving as executive officers as of December 29, 2007, all of whom are collectively referred to as the named executive officers.

SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary ($)	Bonus ($)(1)	Stock Award ($)	Option Awards ($) (2)	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
Bruce C. Rhine (3)	2007	$ 279,008	$ 22,150				$ 113,051(4)	$ 414,209
	2006	$ 115,681			$ 192,474		$ 6,250(5)	$ 314,405
Chairman of the Board of Directors, former Chief Executive Officer and former Chief Strategy Officer	2005							
Timothy J. Stultz	2007	$ 123,250	$ 168,681	$ 367,500	$ 771,240		$ 54,815(6)	$ 1,485,486
	2006							
President, Chief Executive Officer and director	2005							
Gary C. Schaefer	2007	$ 137,307	$ 23,946	$ 187,800	$ 370,930			$ 719,983
	2006							
Chief Financial Officer and Vice President of Finance and Administration	2005							
Bruce A. Crawford (3)	2007	$ 302,462	$ 16,613	$ 136,000	$ 40,214		$ 2,490(7)	$ 499,779
	2006	$ 94,769			$ 664,519		$ 30,984(8)	$ 790,272
Chief Operating Officer	2005							
John D. Heaton (9)	2007	$ 93,288			$ 12,327		$ 589,102(10)	$ 694,717
	2006	$ 375,027	$ 202,125		$ 618,520		$ 57,102(11)	$ 1,252,774
Former President and Chief Executive Officer	2005	$ 364,400	$ 51,360				$ 26,000(12)	$ 441,760
Douglas J. McCutcheon, (13)	2007	$ 95,365					$ 205,491(14)	$ 300,856
	2006	$ 285,000	$ 119,700					$ 404,700
Former Executive Vice President, Finance and Administration and Chief Financial Officer	2005	$ 80,019	$ 25,000		$ 1,014,645			$ 1,119,664
Quentin B. Wright	2007	$ 251,482	$ 16,613		$ 40,214		$ 1,043(7)	$ 309,352
	2006	$ 205,661			$ 88,350			$ 294,011
Vice President External Reporting and Strategic Projects, former interim Chief Financial Officer and Chief Accounting Officer	2005	$ 142,191						