AUGUST TECHNOLOGY CORP Form SC 13D January 28, 2005

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934

AUGUST TECHNOLOGY CORPORATION (Name of Issuer) Common Stock ______ (Title of Class of Securities) 051064 10 5 (CUSIP Number) Stanley Piekos 4900 West 78th Street Bloomington, Minnesota 55435 ______ (Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications) January 21, 2005

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of ss.ss.240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See ss.240.13d-7 for other parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1.	Name of Reporting Persons: Nanometrics Incorporated I.R.S. Identification Nos. of above persons (entities only): No. 94-227631							
2.	Check the Appropria	ate Box if a Member of a Group (See Instruction	ons)(a) [] (b) []					
3.	SEC Use Only							
4.	Source of Funds (See Instructions): 00							
5.	Check if Disclosure or 2(e)	e of Legal Proceedings Is Required Pursuant to	Items 2(d)					
6.	Citizenship or Place of Organization: California							
	er of Shares	7. Sole Voting Power: 0						
Owne	neficially ned by Each porting Person .h	8. Shared Voting Power: 1,738,441(1)						
With		9. Sole Dispositive Power: 0						
		10. Shared Dispositive Power: 0						
11.	Aggregate Amount Beneficially Owned by Each Reporting Person: 1,738,441(2)							
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)							
13.	Percent of Class Represented by Amount in Row (11): 9.44%(3)							
14.	4. Type of Reporting Person (See Instructions): CO							

- (1) Beneficial ownership of the common stock referred to herein is being reported hereunder solely because Nanometrics Incorporated (the "Reporting Person") may be deemed to have beneficial ownership of such shares as a result of the voting agreements and irrevocable proxies described in Item 6 hereof. Neither the filing of this Statement on Schedule 13D nor any of its contents shall be deemed to constitute an admission by Nanometrics Incorporated that it is the beneficial owner of any of the common stock referred to herein for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, or for any other purpose, and such beneficial ownership is expressly disclaimed. 1,170,911 outstanding shares of August Technology Corporation common stock are subject to voting agreements and irrevocable proxies entered into between Nanometrics Incorporated and certain stockholders of August Technology Corporation (discussed in Items 3 and 4 below), which number excludes 567,530shares issuable upon exercise of outstanding options which are either vested or will vest within 60 days of January 21, 2005. In the event that any such options were exercised, the shares of common stock issuable upon the exercise of such options would be subject to such voting agreements and irrevocable proxies also.
- (2) See footnote 1 above.
- (3) Based on the number of shares of Issuer common stock outstanding as of January 20, 2005 (as represented by Issuer in the Merger Agreement discussed in Item 3 hereof), the percent of common stock represented by the amount in Row 11 is approximately 9.44%. Such number includes 567,530 shares of Issuer common stock subject to options that are currently exercisable or exercisable within sixty days of January 21, 2005.

Item 1. Security and Issuer

The class of equity securities to which this Schedule 13D relates is the common stock, of August Technology Corporation, a Minnesota corporation ("Issuer"). Issuer's principal executive officers are located at 4900 West 78th Street, Bloomington, Minnesota 55435.

Item 2. Identity and Background

This Schedule 13D is being filed by Nanometrics Incorporated, a California corporation ("Reporting Person"). The principal executive offices of Reporting Person are located at 1550 Buckeye Drive, Milpitas, California 95035. The principal business of Reporting Person is the design, manufacture, marketing and support of thin film, critical dimension, surface defect inspection and overlay metrology systems for the semiconductor, flat panel display and magnetic recording head industries.

Set forth on Schedule A hereto is (i) the name of each of the executive officers and directors of Reporting Person, (ii) the residence or business address of each of the directors of Reporting Person, (iii) present principal occupation or employment of each of the executive officers and directors of Reporting Person, and the name, principal business and address of any corporation or other organization in which such employment is conducted, in each case as of the date hereof. The business address of the executive officers of Reporting Person is the same as the address of Reporting Person's principal executive office.

Neither Reporting Person nor, to the knowledge of Reporting Person, any person named on Schedule A hereto (i) during the last five years, has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors), or (ii) during the last five years, was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree, or final order enjoining future violations of, or prohibiting or mandating activities subject to, Federal or state securities laws or finding any violation with respect to such laws.

To the knowledge of Reporting Person, except as set forth on Schedule A hereto, each of the individuals set forth on Schedule A hereto is a citizen of the United States.

Item 3. Source and Amount of Funds or Other Consideration

On January 21, 2005, Reporting Person, Major League Merger Corporation ("Merger Sub 1"), a wholly-owned subsidiary of Reporting Person and a Minnesota corporation, Minor League Merger Corporation ("Merger Sub 2"), a wholly-owned subsidiary of Reporting Person and a Delaware corporation, and Issuer, entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement"). Pursuant to the terms and subject to the conditions set forth in the Merger Agreement, Reporting Person will merge with and into Merger Sub 2 (the "Migratory Merger"), with Merger Sub 2 continuing as the surviving corporation (following the Migratory Merger, Merger Sub 2 is referred to herein as "Nanometrics Delaware"). Following the Migratory Merger, Merger Sub 1 will merge with and into Issuer (the "Acquisition Merger", and together with the Migratory Merger, the "Mergers"), with Issuer continuing as the surviving corporation and becoming a wholly owned subsidiary of Nanometrics Delaware. At that time, Nanometrics Delaware will be renamed August Nanometrics Inc.

In connection with the Migratory Merger, each share of Reporting Person

common stock that is outstanding at the effective time of the Migratory Merger (the "Migratory Merger Effective Time") will be converted into one share of common stock of Nanometrics Delaware. Each outstanding option to purchase Reporting Person common stock will be converted at the into an option to acquire Nanometrics Delaware common stock and will continue to have, and be subject to, the same terms and conditions as are in effect immediately prior to the Migratory Merger Effective Time.

In connection with the Acquisition Merger, each share of Issuer common stock that is outstanding at the effective time of the Acquisition Merger (the "Acquisition Merger Effective Time") will be converted into the right to receive 0.6401 shares of common stock of Nanometrics Delaware. Each outstanding option to purchase Issuer common stock will be converted at the Acquisition Merger Effective Time into an option to acquire Nanometrics Delaware common stock and shall continue to have, and be subject to, the same terms and conditions as are in effect immediately prior to the Acquisition Merger Effective Time. No fractional shares of Nanometrics Delaware's common stock will be issued as a result of the share exchange pursuant to the Acquisition Merger.

Concurrently with the execution of the Merger Agreement, and in consideration thereof certain shareholders of Issuer entered into individual agreements with Reporting Person whereby each such shareholder agreed to vote all of the shares of the common stock of Issuer beneficially owned by such shareholder in favor of the Acquisition Merger and the other transactions contemplated by the Merger Agreement (the "Voting Agreements"), and to grant a proxy to certain representatives of Reporting Person to enable Reporting Person to direct the voting of all such shares in the foregoing manner. Reporting Person did not pay additional consideration to any of the foregoing shareholders to induce such shareholders to enter into such voting agreements or grant such proxies.

Pursuant to the Voting Agreements, such Issuer shareholders have agreed to vote (or cause to be voted) their shares of Issuer common stock (i) in favor of the approval of the Merger Agreement and (ii) against approval of any proposal made in opposition to the transactions contemplated by the Merger Agreement, (iii) against any actions (other than those contemplated by the Merger Agreement) for the merger, consolidation, sale or lease of assets, reorganization, liquidation, change in the capitalization or corporate structure of Issuer or any other action that would interfere with the actions contemplated by the Merger Agreement; and (iv) in favor of waiving any notice that may have been or may be required relating to any reorganization of Issuer. Such Issuer shareholders cannot sell, transfer or otherwise dispose of the shares subject to the Voting Agreement unless the transferee becomes a party to the Voting Agreement. In addition, such shareholders cannot transfer the shares into a voting trust or enter into an arrangement whereby the voting rights would be transferred.

The Voting Agreements terminates on the earlier of (i) such date and time as the Merger Agreement shall have been validly terminated in accordance with its terms and conditions, or (ii) such date and time as the Merger shall become effective in accordance with its terms and conditions.

References to, and descriptions of, the Merger Agreement, the Acquisition Merger and the Voting Agreements set forth herein are qualified in their entirety by reference to the copies of the Merger Agreement and the Voting Agreements included as Exhibits 1 and 2, respectively, to this Schedule 13D, each of which is incorporated herein by reference in its entirety where such references appear.

Item 4: Purpose of Transaction

- (a) (b) As described in Item 3 above, this Schedule 13D relates to the merger of Issuer and Reporting Person pursuant to the Merger Agreement. The purpose of the Voting Agreements is to enable Reporting Person and Issuer to consummate the transactions contemplated by the Merger Agreement.
 - (c) Not applicable.
- (d) Upon the consummation of the Acquisition Merger, the board of directors of August Nanometrics Inc. will be expanded to seven members, consisting of three Issuer directors, three Reporting Person directors and one mutually acceptable director. Upon consummation of the Acquisition Merger, the initial officers of the surviving corporation will be the officers of Merger Sub 1 immediately prior to the effective time of the Merger, until his respective successor is duly appointed. Reporting Person will appoint each of the directors and officers of Merger Sub 1.
- (e) Other than as a result of the Mergers $\,$ described in Item 3 and Item 4 above, not applicable.
 - (f) Not applicable.
- (g) Upon consummation of the Acquisition Merger, the articles of incorporation of Merger Sub 1 will be the articles of incorporation of the surviving corporation of the Acquisition Merger, until thereafter amended in accordance with applicable law. Upon consummation of the Acquisition Merger, the Bylaws of Merger Sub 1, will be the Bylaws of the surviving corporation of the Acquisition Merger until thereafter amended in accordance with applicable law.
- (h-i) Upon consummation of the Acquisition Merger, all Issuer common stock will be deregistered under the Securities Exchange Act of 1934, as amended, and delisted from the Nasdaq National Market.
- (j) Other than described above, Reporting Person currently has no plan or proposals which relate to, or may result in, any of the matters listed in Items 4(a) (j) of Schedule 13D, inclusive, although Reporting Person reserves the right to develop such plans.

Item 5. Interest in Securities of Issuer

(a)-(b) As a result of the Voting Agreements, the aggregate number of shares of Issuer common stock that Reporting Person may be deemed to beneficially own is 1,738,441. Such number constitutes approximately 9.44% of the outstanding Issuer common stock based on the 17,841,620 shares of Issuer common stock outstanding as of January 20, 2005 (as represented by Issuer in the Merger Agreement discussed in Item 3 above) and assuming the issuance of 567,530 shares of Issuer common stock subject to options that are currently exercisable or exercisable within sixty days of January 21, 2005. Reporting Person also may be deemed to have shared voting power with respect to the foregoing shares of Issuer common stock with respect to those matters described above. However, Reporting Person (a) is not entitled to any rights as a stockholder of Issuer as to the foregoing shares of Issuer common stock, and (b) disclaims any beneficial ownership of the shares of Issuer common stock which are covered by the Voting Agreements.

Set forth on Schedule B hereto is the name of those stockholders of Issuer that have entered into a Voting Agreement with Reporting Person, and to the knowledge of Reporting Person, each of their respective present principal occupation or employment, including the name, principal business and address of any corporation or other organization in which such employment is conducted.

- (c) To the knowledge of Reporting Person, no transactions in the class of securities reported on this Statement have been effected during the past 60 days by the persons named in response to Item 5(a) and Item 2.
- (d) To the knowledge of Reporting Person, no other person has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the class of securities reported on this Schedule 13D.
 - (e) Not applicable.
- Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of Issuer

Other than the Merger Agreement and the exhibits thereto, including the Voting Agreements, to the knowledge of Reporting Person, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 of Schedule 13D and between such persons and any person with respect to any securities of Issuer, including, but not limited to transfer or voting of any of the class of securities reported on this Statement, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies.

Item 7. Material to Be Filed as Exhibits

- 1. Agreement and Plan of Merger and Reorganization by and among Nanometrics Incorporated, Major League Merger Corporation, a wholly-owned subsidiary of the Nanometrics Incorporated and a Minnesota corporation, Minor League Merger Corporation, a wholly-owned subsidiary of the Nanometrics Incorporated and a Delaware corporation, and August Technology Corporation.
- 2. Form of Voting Agreement.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

January 28, 2005			
Date			
/s/ Paul Nolan			
Signature			
Paul Nolan, Chief Financial Officer	of	Nanometrics Incorporated	
Name/Title			

SCHEDULE A

DIRECTORS AND EXECUTIVE OFFICERS OF NANOMETRICS INCORPORATED

The following table sets forth the name, business address and present principal occupation or employment of each executive officer and director of Reporting Person.

Reporting Person.		
Directors and Executive Officers	Title of Present Principal Occupation	Business Address
Vincent J. Coates	Chairman of the Board, Secretary	Nanometrics Incorporated 1550 Buckeye Dr. Milpitas, California 95035
John D. Heaton	President, Chief Executive Officer and Director	Nanometrics Incorporated 1550 Buckeye Drive Milpitas, California 95035
Paul B. Nolan	Vice President and Chief Financial Officer	Nanometrics Incorporated 1550 Buckeye Drive Milpitas, California 95035
Roger Ingalls Jr.	Vice President of Sales	Nanometrics Incorporated 1550 Buckeye Drive Milpitas, California 95035
Edmond R. Ward	Director; Chief Technical Officer, Unity Semiconductor and General Partner, Virtual Founders	Unity Semiconductor 250 North Wolfe Road Sunnyvale, California 94085
William G. Oldham	Director; faculty member, University of California, Berkeley	University of California, Berkeley Berkeley, CA 94720
Stephen J. Smith	Director; professor, Stanford University School of Medicine	Stanford University School of Medicine Department of Molecular and Cellular Physiology 300 Pasteur Drive Stanford, CA 94305
J. Thomas Bentley	Director	Nanometrics Incorporated 1550 Buckeye Drive Milpitas, California 95035
Norman Coates	Director	Nanometrics Incorporated 1550 Buckeye Drive Milpitas, California 95035

SCHEDULE B

STOCKHOLDERS PARTY TO A VOTING AGREEMENT WITH NANOMETRICS INCORPORATED

Stockholder Party
to Voting Agreement

Title and Present
Shares Beneficially
Principal
Owned
Add

Occupation

The following table sets forth the name, business address and present principal occupation or employment of each stockholder party to a Voting Agreement with Nanometrics Incorporated and the aggregate number of shares of August Technology Corporation Common Stock beneficially owned by each such stockholder as of January 21, 2005.

Jeffrey L. O'Dell	Chief Executive Officer and Director			Au 49 B]
Stanley D. Piekos	Chief Financial Officer	52 , 532		Aı 49 B]
David A. Klenk	President and Chief Operating Officer	134,841	(3)	Ai 49 BJ
Scott A. Gabbard	Chief Accounting Officer and Vice President, Finance	68 , 565	(4)	Au 49 B]
D. Mayson Brooks	Vice President, Global Sales and Field Operations	98 , 593		Aı 49 BJ
Cory M. Watkins	Chief Technical Officer	35,002		Aı 49 BJ
James A. Bernards	Director; President, Facilitation, Inc.		(7)	Fa 72 Ec
Roger E. Gower	Chief Executive Officer and Chairman of Micro Component Technology, Inc.	43,796		Mi Te 23 St
Michael W. Wright	Director; Chief Operating Officer Officer of Entegris, Inc.	51,026	(9)	Er 35 Ch
Linda Hall Whitman	Director; Chief Executive Officer of MinuteClinic Inc.	32,354		Mi 33

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- (1) Includes 1,090,686 outstanding shares of August Technology Corporation Common Stock, and 13,250 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (2) Includes 0 outstanding shares of August Technology Corporation Common Stock, and 52,532 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (3) Includes 2,250 outstanding shares of August Technology Corporation Common Stock, and 132,591 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (4) Includes 0 outstanding shares of August Technology Corporation Common Stock, and 68,565 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (5) Includes 2,887 outstanding shares of August Technology Corporation Common Stock, and 95,706 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (6) Includes 0 outstanding shares of August Technology Corporation Common Stock, and 35,002 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (7) Includes 75,088 outstanding shares of August Technology Corporation Common Stock, and 42,708 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (8) Includes 0 outstanding shares of August Technology Corporation Common Stock, and 43,796 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (9) Includes 0 outstanding shares of August Technology Corporation Common Stock, and 51,026 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.
- (10) Includes 0 outstanding shares of August Technology Corporation Common Stock, and 32,354 shares of August Technology Corporation Common Stock issuable upon the exercise of options to purchase August Technology Corporation Common Stock which are exercisable within 60 days of January 21, 2005.