

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

SCHEDULE 14A

(RULE 14a-101)
INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a)
of the Securities Exchange Act of 1934

Filed by the Registrant
Filed by a Party other than the Registrant

Check the appropriate box:

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

VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC.

(Name of Registrant as Specified in its Charter)

APPLIED MATERIALS, INC.

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

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - (1) Title of each class of securities to which transaction applies: N/A

 - (2) Aggregate number of securities to which transaction applies: N/A

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

 - (4) Proposed maximum aggregate value of transaction: N/A

 - (5) Total fee paid: N/A

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

 - (2) Form, Schedule or Registration Statement No.: N/A

 - (3) Filing Party: N/A

 - (4) Date Filed: N/A

Important Information

On May 24, 2011, Applied Materials, Inc. ("Applied") held its fiscal second-quarter earnings call (the "Earnings Call"). Excerpts from the transcript of the Earnings Call are provided below and are filed herewith pursuant to Rule 14a-12.

Additional Information and Where to Find It

Varian intends to file with the Securities and Exchange Commission (the "SEC") a proxy statement in connection with the proposed acquisition. The definitive proxy statement will be sent or given to the stockholders of Varian and will contain important information about the proposed acquisition and related matters. SECURITY HOLDERS ARE URGED TO READ THE PROXY STATEMENT CAREFULLY WHEN IT BECOMES AVAILABLE. The proxy statement and other relevant materials (when they become available), and any other documents filed by Varian with the SEC, may be obtained free of charge at the SEC's website, at www.sec.gov. In addition, security holders will be able to obtain free copies of the proxy statement from Varian by contacting Investor Relations by mail at Varian Semiconductor, 35 Dory Road, Gloucester, MA 01930, Attn: Investor Relations Department; or by telephone at 978-282-2000.

Participants in the Solicitation

Varian and Applied and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from Varian's stockholders in connection with the proposed transaction. Information about Varian's directors and executive officers is set forth in Varian's proxy statement for its 2011 Annual Meeting of Stockholders, which was filed with the SEC on December 1, 2010, and its Annual Report on Form 10-K for the year ended October 1, 2010, which was filed with the SEC on November 22, 2010. These documents are available free of charge at the SEC's web site at www.sec.gov, and from Varian by contacting Investor Relations by mail at Varian Semiconductor, 35 Dory Road, Gloucester, MA 01930, Attn: Investor Relations Department; or by telephone at 978-282-2000, or by going to Varian's Investor Relations page on its corporate web site at www.vsea.com. Information about Applied's directors and executive officers is set forth in Applied's proxy statement for its 2011 Annual Meeting of Stockholders, which was filed with the SEC on January 27, 2011, and its Annual Report on Form 10-K for the year ended October 31, 2010, which was filed with the SEC on December 10, 2010. These documents are available free of charge at the SEC's web site at www.sec.gov, and from Applied by contacting Investor Relations by mail at Applied Materials, 3050 Bowers Avenue M/S 1261, P.O. Box 58039, Santa Clara, CA 95052-8039, Attn: Investor Relations Department, or by going to Applied's Investor Relations page on its corporate web site at www.appliedmaterials.com. Additional information regarding the interests of participants in the solicitation of proxies in connection with the transaction will be included in the proxy statement that Varian intends to file with the SEC.

Forward Looking Statements

These documents contain forward-looking statements, including those related to Applied's proposed acquisition of Varian and the expected benefits of the transaction. These statements are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements, including but not limited to: satisfaction of conditions to closing of the transaction, including the ability to secure regulatory approvals in a timely manner or at all, and approval by Varian's stockholders; and other risks described in Applied's SEC filings. All forward-looking statements are based on management's estimates, projections and assumptions as of the date hereof, and Applied undertakes no obligation to update any forward-looking statements.

Excerpts of Fiscal Q2 Earnings Call of Applied held on May 24, 2011

George Davis - *Applied Materials Inc. — EVP, CFO*

. . . On the regulatory front, the Varian transaction will require reviews in the US as well as China, Taiwan, Israel, Germany and Korea. Most of the jurisdictions have an initial review or waiting period of approximately 30 days. The transaction must also be approved by Varian stockholders. . .

[...]

Krish Sankar - *BofA Merrill Lynch — Analyst*

. . . Then just to follow up, just trying to get a sense of what your customers are telling you and what is the feedback post your Varian acquisition announcement?

Mike Splinter - *Applied Materials Inc. — Chairman, President, CEO*

Sure. Overall, as you can imagine, we've talked to pretty much every customer that would be affected. Overall, the feedback has been quite positive. They see, as the industry matures and as their segments have consolidated, that the equipment segment needs some consolidation as well. So I would say, on the whole, quite positive.