Murphy Michael R Form 4 October 24, 2011

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

OMB

OMB APPROVAL

Number:

3235-0287

Expires:

January 31, 2005

0.5

Estimated average burden hours per

response...

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations

may continue.

See Instruction

SECURITIES Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section

30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * Discovery Group I, LLC			2. Issuer Name and Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer			
			AtriCure, Inc. [ATRC]	(Check all applicable)			
(Last)	(First)	(Middle)	3. Date of Earliest Transaction				
			(Month/Day/Year)	DirectorX 10% Owner			
191 N. WACKER DRIVE SUITE 1685,			10/20/2011	Officer (give title Other (specify below)			
	(Street)		4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check			
			Filed(Month/Day/Year)	Applicable Line) Form filed by One Reporting Person X Form filed by More than One Reporting			
CHICAGO	II 60606			_11_1 out thed by there than one reporting			

CHICAGO, IL 60606

(City)	(State)	(Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Ow							ally Owned
1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transactic Code (Instr. 8)	(A) or		5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)	
Common Stock	10/20/2011		S	32,221 (1)	D	\$ 12.0056	1,567,111	I	By Discovery Equity Partners, L.P. (1)
Common Stock	10/20/2011		S	8,762 (2)	D	\$ 12.0056 (3)	256,367	I	By Pleiades Investment Partners - D, L.P (2)
Common Stock	10/21/2011		S	200 (2)	D	\$ 12.09	256,167	I	By Pleiades Investment Partners -

							D, L.P (2)
Common Stock	10/24/2011	S	987 <u>(1)</u> D	\$ 12.1369 (4)	1,566,124	I	By Discovery Equity Partners, L.P. (1)
Common Stock	10/24/2011	S	313 (2) (4) D	\$ 12.1369	255,854	I	By Pleiades Investment Partners - D, L.P (2)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of SEC 1474 information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

(9-02)

9. Nu Deriv Secu Bene Own Follo Repo Trans (Insti

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transac Code (Instr. 8	5. tionNumber of) Derivative Securitie Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	s I	ate	7. Tit Amou Under Secur (Instr	int of rlying	8. Price of Derivative Security (Instr. 5)
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	

Deletionshins

Reporting Owners

Reporting Owner Name / Address	Relationships					
	Director	10% Owner	Officer	Other		
Discovery Group I, LLC 191 N. WACKER DRIVE SUITE 1685 CHICAGO, IL 60606		X				
Donoghue Daniel J C/O DISCOVERY GROUP I, LLC 191 N. WACKER DRIVE SUITE 1685 CHICAGO, IL 60606		X				
		X				

Reporting Owners 2 Murphy Michael R C/O DISCOVERY GROUP I, LLC 191 N. WACKER DRIVE SUITE 1685 CHICAGO, IL 60606

Signatures

Micahel R. Murphy, Managing
Member

10/24/2011

**Signature of Reporting Person Date

Daniel J. Donoghue 10/24/2011

**Signature of Reporting Person Date

Michael R. Murphy 10/24/2011

**Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- Discovery Group I, LLC is the General Partner of Discovery Equity Partners, L.P., which is a discretionary client of the reporting person, (1) that owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of its
- (1) that owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of its pecuniary interest therein.
- Discovery Group I, LLC is an investment manager for Pleiades Investment Partners D, L.P., which is a discretionary client of the reporting person, that owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of its pecuniary interest therein.
- This transaction was executed in multiple trades at prices ranging from \$12.04 to \$12.06. The price reported above reflects the weighted average purchase price. The reporting person hereby undertakes to provide upon request to the SEC staff, the issuer or a security holder of the issuer full information regarding the number of shares and prices at which the transaction was effected
- This transaction was executed in multiple trades at prices ranging from \$12.09 to \$12.17. The price reported above reflects the weighted average purchase price. The reporting person hereby undertakes to provide upon request to the SEC staff, the issuer or a security holder of the issuer full information regarding the number of shares and prices at which the transaction was effected

Remarks:

Michael R. Murphy and Daniel J. Donoghue are managing members of Discovery Group I, LLC, and each disclaims beneficial securities except to the extent of his pecuniary interest therein.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

Signatures 3