Murphy Michael R Form 4 November 12, 2010

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB APPROVAL OMB

Number:

3235-0287

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January 31, 2005

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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)

See Instruction

	Address of Repor	_	2. Issuer Name and Ticker or Trading Symbol	5. Relationship of Reporting Person(s) to Issuer			
(Last) (First) (Middle)			AtriCure, Inc. [ATRC] 3. Date of Earliest Transaction	(Check all applicable)			
(Eust)	(Trist)	(Wildaic)	(Month/Day/Year)	DirectorX 10% Owner			
191 N. WACKER DRIVE SUITE 1685,			11/10/2010	Officer (give title Other (specify below)			
	(Street)		4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check			
CHICAGO), IL 60606		Filed(Month/Day/Year)	Applicable Line) Form filed by One Reporting Person _X_ Form filed by More than One Reporting Person			
(City)	(State)	(Zip)	Table I - Non-Derivative Securities A	acquired, Disposed of, or Beneficially Owne			
1 Title of	2 Transaction I	Date 2A Dee	med 3 4 Securities Acquired	5 Amount of 6 7 Nature			

(City)	(State)	(Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially 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)	4. Securities Acquired on(A) or Disposed of (D) (Instr. 3, 4 and 5) (A) or Amount (D) Price		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	11/10/2010		P	8,560 (1)	A	\$ 8.0927 (2)	1,411,447	I	By Discovery Equity Partners, L.P. (1)		
Common Stock	11/10/2010		P	1,440 (3)	A	\$ 8.0927 (2)	241,106	I	By Pleiades Investment Partners - D, L.P (3)		
Common Stock	11/11/2010		P	2,868 (1)	A	\$ 8.05	1,414,315	I	By Discovery Equity		

								Partners, L.P. (1)
Common Stock	11/11/2010	P	482 (3)	A	\$ 8.05	241,588	I	By Pleiades Investment Partners - D, L.P (3)
Common Stock	11/12/2010	P	5,537 (1)	A	\$ 8.0353 (4)	1,419,851	I	By Discovery Equity Partners, L.P. (1)
Common Stock	11/12/2010	P	931 (3)	A	\$ 8.0353 (4)	242,520	I	By Pleiades Investment Partners - D, L.P (3)
Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.								

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9. Nu Deriv Secur Bene Own Follo Repo Trans (Instr

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

1. Title of	2.	3. Transaction Date	3A. Deemed	4.	5.	Date Exer	cisable and	7. Tit	le and	8. Price of
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transa	ctionNumbe	r Expiration D	Date	Amo	unt of	Derivative
Security	or Exercise		any	Code	of	(Month/Day	/Year)	Unde	rlying	Security
(Instr. 3)	Price of		(Month/Day/Year)	(Instr.	8) Derivat	ive		Secur	rities	(Instr. 5)
	Derivative				Securiti	es		(Instr	. 3 and 4)	
	Security				Acquire	ed				
	·				(A) or					
					Dispose	ed				
					of (D)					
					(Instr. 3					
					4, and 5	5)				
					, i					
									Amount	
						Date	Expiration		or	
						Exercisable	Date	Title	Number	
						Lacreisable	Duic		of	
				Code	V (A) (I	0)			Shares	

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					

Reporting Owners 2

X

Murphy Michael R

C/O DISCOVERY GROUP I, LLC
191 N. WACKER DRIVE SUITE 1685

CHICAGO, IL 60606

Donoghue Daniel J

C/O DISCOVERY GROUP I, LLC 191 N. WACKER DRIVE SUITE 1685

CHICAGO, IL 60606

Signatures

Micahel R. Murphy, Managing
Director

11/12/2010

**Signature of Reporting Person

Date

Daniel J. Donoghue

11/12/2010

**Signature of Reporting Person

Date

Michael R. Murphy

11/12/2010

**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, 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 \$8.06 to \$8.10. 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."
- 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 \$8.00 to \$8.05. 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.

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