

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden hours per response:	0.5

1. Name and Address of Reporting Person* <u>HARRISON DONALD C</u> (Last) (First) (Middle) <u>9250 OLD INDIAN HILL RD</u> (Street) <u>CINCINNATI OH 45243</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>AtriCure, Inc. [ATRC]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) <u>02/23/2011</u>	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

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. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			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)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/23/2011		M		3,947	A	\$0.57	202,688	D	
Common Stock	02/23/2011		M		7,368	A	\$0.57	210,056	D	
Common Stock	02/23/2011		S		11,315	D	\$10.3357 ⁽¹⁾	198,741	D	

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. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Stock Option (right to buy)	\$0.57	02/23/2011		M		3,947		03/29/2001 ⁽²⁾	03/29/2011	Common Stock	3,947	\$0	7,368	D	
Stock Option (right to buy)	\$0.57	02/23/2011		M		7,368		03/29/2001 ⁽³⁾	03/29/2011	Common Stock	7,368	\$0	0	D	

Explanation of Responses:

- Prices range from \$10.16 per share to \$10.56 per share. The reporting person undertakes to provide full pricing information if requested by the Securities and Exchange Commission, the Issuer or a security holder of the Issuer.
- Dr. Harrison was granted 3,947 stock options on March 29, 2001, exercisable cumulatively at a rate of 50% on March 29, 2001 and 50% on March 29, 2002 (one year from date of grant).
- Dr. Harrison was granted 7,368 stock options on March 29, 2001, exercisable cumulatively at a rate of 25% per annum beginning on March 29, 2001 (grant date).

/s/ Donald Harrison 02/25/2011

** Signature of Reporting Person Date

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

* 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).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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