

# FORM 4

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

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

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

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

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

(Print or Type Responses)

1. Name and Address of Reporting Person MARXE AUSTIN W & GREENHOUSE DAVID M		2. Issuer Name and Ticker or Trading Symbol AMTECH SYSTEMS INC [ASYS]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner <input type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below)	
(Last) (First) (Middle) C/O SPECIAL SITUATIONS FUNDS, 527 MADISON AVENUE, SUITE 2600		3. Date of Earliest Transaction (Month/Day/Year) 01/04/2010			
(Street) NEW YORK, NY 10022		4. If Amendment, Date Original Filed(Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person	
(City) (State) (Zip)		<b>Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned</b>			

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	01/04/2010		S		9,248 <u>(1)</u>	D	\$ 11.4952	1,046,735 <u>(1)</u>	I <u>(1)</u>	By Limited Partnerships <u>(1)</u>

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

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**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 Underlying Securities (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 of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
						Date Exercisable	Expiration Date					
				Code	V	(A)	(D)					

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
MARXE AUSTIN W & GREENHOUSE DAVID M C/O SPECIAL SITUATIONS FUNDS 527 MADISON AVENUE, SUITE 2600 NEW YORK, NY 10022		X		

## Signatures

Austin W. Marxe		01/06/2010
<small>**Signature of Reporting Person</small>		Date

David M. Greenhouse	01/06/2010
	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).

(1) This is a joint filing by Austin W. Marx (Marx) and David M. Greenhouse (Greenhouse). They share voting and investment control over all securities owned by Special Situations Fund III QP, L.P. (QP), Special Situations Technology Fund, L.P. (Tech) and Special Situations Technology Fund II, L.P. (Tech II), respectively. 723,735 shares of Common Stock are held by QP, 41,673 shares of Common Stock are held by Tech and 300,379 shares of Common Stock are held by Tech II. The interest of Marx and Greenhouse in the shares of Common Stock owned by QP, Tech and Tech II is limited to the extent of his pecuniary interest.

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

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