

IMAGE SENSING SYSTEMS INC
 Form 4
 April 29, 2010

FORM 4

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

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF 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

(Print or Type Responses)

1. Name and Address of Reporting Person *
**MARXE AUSTIN W &
 GREENHOUSE DAVID M**

(Last) (First) (Middle)

C/O SPECIAL SITUATIONS
 FUNDS, 527 MADISON AVENUE,
 SUITE 2600

(Street)

NEW YORK, NY 10022

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol

**IMAGE SENSING SYSTEMS INC
 [ISNS]**

3. Date of Earliest Transaction
 (Month/Day/Year)

04/27/2010

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

___ Director ___X___ 10% Owner
 ___ Officer (give title below) ___ Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)

X Form filed by One Reporting Person
 ___ Form filed by More than One Reporting Person

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 Ownership (Instr. 4)
Common Stock	04/27/2010		P	(A) or (D) A	\$ 13.3985 (2)	1,083,520 (1)	I (1) By Limited Partnerships (1)

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

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 (9-02)

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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 Owned Following Transaction (Instr. 3 and 4)
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares

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 04/29/2010
 __Signature of Date
 Reporting Person

David M.
Greenhouse 04/29/2010
 __Signature of Date
 Reporting Person

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. Marxe (Marxe) 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 Cayman Fund, L.P. (Cayman), Special Situations Technology Fund, L.P. (Tech) and Special Situations Technology II, L.P. (Tech II), respectively. 521,168 shares of Common Stock are held by QP, 150,039 shares of Common Stock are held by Cayman, 73,741 shares of Common Stock are held by Tech and 338,572 shares of Common Stock are held by Tech II. The interest of Marxe and Greenhouse in the shares of Common Stock owned by QP, Cayman, Tech, and Tech II is limited to the extent of his pecuniary interest.
- (2) This is a weighted average price.

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.