IMAGE SENSING SYSTEMS INC

Form SC 13D/A

May 10, 2010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 13D
Under the Securities Exchange Act of 1934
(Amendment No. _4_)

Image Sensing Systems, Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

45244C104

(CUSIP Number)

with a copy to:

Austin W. Marxe Allen B. Levithan, Esq.

527 Madison Avenue, Suite 2600 Lowenstein Sandler PC New York, New York 10022 65 Livingston Avenue

Roseland, New Jersey 07068

(973) 597-2424

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

April 30, 2010

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of section 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. ?

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See section 240.13d-7 for other parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be ?filed? for the purpose of Section 18 of the Securities Exchange Act of 1934 (?Act?) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

Cusip No. 45244C104

1. Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only):

Austin W. Marxe and David M. Greenhouse

- 2. Check the Appropriate Box if a Member of a Group (See Instructions):
- (a) [] Not Applicable
- (b) []
- 3. SEC Use Only
- 4. Source of Funds (See Instructions): 00
- 5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e):

Not Applicable

6. Citizenship or Place of Organization: United States

Number of 7. Sole Voting Power: 0*
Shares Beneficially 8. Shared Voting Power: 1,083,520*
Owned by
Each Reporting 9. Sole Dispositive Power: 0*

Person With 10. Shared Dispositive Power: 1,083,520*

- 11. Aggregate Amount Beneficially Owned by Each Reporting Person: 1,083,520 $\!\!^\star$
 - 12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions): Not Applicable
 - 13. Percent of Class Represented by Amount in Row (11): 27.1% *
 - 14. Type of Reporting Person (See Instructions): IA, IN
- * This is a joint filing by Austin W. Marxe (?Marxe?) and David M. Greenhouse (?Greenhouse?). Marxe and Greenhouse share sole voting and investment power over 150,039 shares of Common Stock owned by Special Situations Cayman Fund, L.P., 0 shares of Common Stock owned by Special Situations Fund III, L.P., 521,168 shares of Common Stock owned by Special Situations Fund III QP, L.P., 73,741 shares of Common Stock owned by Special Situations Technology Fund, L.P. and 338,572 shares of Common Stock owned by Special Situations Technology Fund II, L.P.

See Items 2 and 5 of this Schedule 13D for additional information.

Item 1. Security and Issuer.

This schedule related to the common stock and warrants of Image Sensing Systems, Inc. (the ?Issuer?). The Issuer?s principal executive officers are located at 500 Spruce Tree Centre, 1600 University Ave. W. St., Paul, MN 55104

Item 2. Identity and Background.

The persons filing this report are Austin W. Marxe (?Marxe?) and David M. Greenhouse (?Greenhouse?), who are the controlling principals of AWM Investment Company, Inc. (?AWM?), the general partner of and investment adviser to Special Situations Cayman Fund, L.P. (?Cayman?). AWM also serves as the general partner of MGP Advisers Limited Partnership (?MGP?), the general partner of and investment adviser to Special Situations Fund III, L.P. (?SSF3?) and the general partner of Special Situations Fund III QP, L.P. (?SSFQP?). Marxe and Greenhouse are also members of SST Advisers, L.L.C. (?SSTA?), the general partner of Special Situations Technology Fund, L.P. (?Tech?) and Special Situations Technology Fund II, L.P. (?Tech II?). AWM serves as the investment adviser to SSFQP, Tech and Tech II. (SSF, SSFQP, Cayman, Tech and Tech II will hereafter be referred to as, the ?Funds?). The principal business

of each Fund is to invest in equity and equity-related securities and other securities of any kind or nature.

The principal office and business address of the Reporting Persons, is 527 Madison Avenue, Suite 2600, New York NY 10022.

Mr. Marxe and Mr. Greenhouse have never been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors), nor have either of them been a party to any civil proceeding commenced before a judicial or administrative body of competent jurisdiction as a result of which he was or is now subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws. Mr. Marxe and Mr. Greenhouse are citizens of the United States.

Item 4. Purpose of Transaction.

The securities referred to in this Schedule have been acquired by each of the Funds for investment purposes and not with the purpose or effect of changing or influencing control of the Issuer. Each Fund acquired the securities in the ordinary course of business and is holding the securities for the benefit of its investors.

Item 5. Interest in Securities of the Issuer.

Cayman owns 150,039 shares of Common Stock or 3.8% of the shares outstanding, SSF3 owns 0 shares of Common Stock or 0.0% of the shares outstanding, SSFQP owns 521,168 shares of Common Stock or 13.0% of the shares outstanding, Tech owns 73,741 shares of Common Stock or 1.8% of the outstanding shares and Tech II owns 338,572 shares of common stock or 8.5% of the outstanding shares. Messrs. Marxe and Greenhouse share the power to vote and direct the disposition of all shares of Common Stock owned by each of the Funds. Messrs. Marxe and Greenhouse are deemed to beneficially own a total of 1,083,520 shares of Common Stock or 27.1% of the outstanding shares.

The following table reflects the acquisitions by each of the Funds during the sixty days preceding the date of the event that requires the filing of this statement, each of which were effected in ordinary broker transactions:

No other transactions occurred within the last sixty days.

A. Special Situations Cayman Fund, L.P.

Date Quantity Average Price

(Purchases)

During April 2010 21,754 \$12.3

Date

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Quantity
Average Price
(Sales)
B. Special Situations Technology Fund, L.P.
Date
Quantity
Average Price
(Purchases)
During April 2010
10,692
$12.3
Date
Quantity
Average Price
(Sales)
C. Special Situations Technology Fund II, L.P.
Date
Quantity
Average Price
(Purchases)
During April 2010
49,090
$12.3
Date
Quantity
Average Price
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(Sales)

D. Special Situations Fund III QP, L.P.

Date Quantity Average Price

(Purchases)

During April 2010 75,564 \$12.3

Date

Quantity

Average Price

(Sales)

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

No contracts, arrangements, understandings or similar relationships exist with respect to the securities of the Company between Messrs. Marxe and Greenhouse and any other individual or entity.

Item 7. Material to be Filed as Exhibits.

Joint Filing Agreement.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: May 7, 2010

 $/\text{s/_Austin W. Marxe}$ Austin W. Marxe

 $/s/_David\ M.$ Greenhouse David M. Greenhouse

Attention: Intentional misstatements or omissions of fact constitute Federal criminal violations (See 18 U.S.C. 1001).

JOINT FILING AGREEMENT

Austin W. Marxe and David M. Greenhouse hereby agree that the Schedule 13D to which this agreement is attached is filed on behalf of each of them.

 $/s/_{\tt Austin~W.~Marxe}$ Austin W. Marxe

/s/_David M. Greenhouse David M. Greenhouse

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