

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

**SCHEDULE 13G**

**Under the Securities Exchange Act of 1934  
(Amendment No.    )\***

**INFUSYSTEM HOLDINGS, INC.**

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(Name of Issuer)

**Common Stock, par value \$0.0001 per share**

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(Title of Class of Securities)

**45685K102**

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(CUSIP Number)

**February 7, 2009**

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(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

\*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 the disclosures provided in a prior cover page.

The information required in 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).

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CUSIP No. 45685K102

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1. Names of Reporting Persons  
Steven Tannenbaum

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2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

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(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization  
United States

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	5.	Sole Voting Power 1,056,557 shares of Common Stock
Number of Shares Beneficially Owned by Each Reporting Person With	6.	Shared Voting Power 0
	7.	Sole Dispositive Power 1,056,557 shares of Common Stock
	8.	Shared Dispositive Power 0
	9.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,056,557 shares of Common Stock
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row (9) 6.1%	
12.	Type of Reporting Person (See Instructions) IN, HC	

CUSIP No. 45685K102

1.	Names of Reporting Persons Greenwood Investments, Inc.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions)	
	(a)	<input type="checkbox"/>
	(b)	<input type="checkbox"/>
3.	SEC Use Only	
4.	Citizenship or Place of Organization Delaware	
	5.	Sole Voting Power 1,056,557 shares of Common Stock
Number of Shares Beneficially	6.	Shared Voting Power 0

Owned by  
Each  
Reporting  
Person With

7. Sole Dispositive Power  
1,056,557 shares of Common Stock

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8. Shared Dispositive Power  
0

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9. Aggregate Amount Beneficially Owned by Each Reporting Person  
1,056,557 shares of Common Stock

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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11. Percent of Class Represented by Amount in Row (9)  
6.1%

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12. Type of Reporting Person (See Instructions)  
CO, IA

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CUSIP No. 45685K102

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1. Names of Reporting Persons  
Greenwood Investors Limited Partnership

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2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

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(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization  
Massachusetts

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5. Sole Voting Power  
512,988 shares of Common Stock

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Number of  
Shares  
Beneficially  
Owned by  
Each  
Reporting  
Person With

6. Shared Voting Power  
0

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7. Sole Dispositive Power  
512,988 shares of Common Stock

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8. Shared Dispositive Power  
0

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9. Aggregate Amount Beneficially Owned by Each Reporting Person  
512,988 shares of Common Stock

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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11. Percent of Class Represented by Amount in Row (9)  
3.0%

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12. Type of Reporting Person (See Instructions)  
PN

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CUSIP No. 45685K102

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1. Names of Reporting Persons  
Greenwood Capital Limited Partnership

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2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

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(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization  
Massachusetts

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5. Sole Voting Power  
543,569 shares of Common Stock

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Number of  
Shares  
Beneficially  
Owned by  
Each  
Reporting  
Person With

6. Shared Voting Power  
0

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7. Sole Dispositive Power  
543,569 shares of Common Stock

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8. Shared Dispositive Power  
0

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9. Aggregate Amount Beneficially Owned by Each Reporting Person  
543,569 shares of Common Stock

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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11. Percent of Class Represented by Amount in Row (9)  
3.1%

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12. Type of Reporting Person (See Instructions)  
PN

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**Item 1.**

(a) **Name of Issuer:**

InfuSystem Holdings, Inc. (the "Issuer").

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(b) **Address of the Issuer's Principal Executive Offices:**

1551 East Lincoln Avenue, Suite 200, Madison Heights, Michigan 48071.

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**Item 2.**

(a) **Name of Person Filing:**

This joint statement on Schedule 13G is being filed by Steven Tannenbaum, Greenwood Investments, Inc., Greenwood Capital Limited Partnership and Greenwood Investors Limited Partnership, who are collectively referred to as the "Reporting Persons." Mr. Tannenbaum is the President of Greenwood Investments, Inc. (the "General Partner"), which is the sole general partner of each of Greenwood Capital Limited Partnership ("Capital") and Greenwood Investors Limited Partnership ("Investors"). The Reporting Persons have entered into a Joint Filing Agreement, dated as of the date hereof, a copy of which is filed with this Schedule 13G as Exhibit 1 (which is incorporated herein by reference), pursuant to which the Reporting Persons have agreed to file this statement jointly in accordance with the provisions of Rule 13d-1(k) under the Act.

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(b) **Address of Principal Business Office:**

The principal business office of the Reporting Persons with respect to the shares reported hereunder is 420 Boylston Street, 5<sup>th</sup> Floor, Boston, MA 02116.

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(c) **Citizenship:**

The General Partner is a Delaware corporation. Each of Capital and Investors is a Massachusetts limited partnership. Mr. Tannenbaum is a U.S. citizen.

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(d) **Title and Class of Securities:**

Common stock, \$0.0001 par value per share ("Common Stock").

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(e) **CUSIP Number:**

45685K102.

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**Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

N/A.

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**Item 4. Ownership:**

As of the date of this filing, the Reporting Persons, in the aggregate, beneficially own 1,056,557 shares of Common Stock of the Issuer, representing approximately 6.1% of such class of securities. The beneficial ownership of each Reporting Person is as follows: (i) Capital beneficially owns 543,569 shares of Common Stock representing approximately 3.1% of the class; (ii) Investors beneficially owns 519,988 shares of Common Stock representing approximately 3.0% of the class; and (iii) the General Partner, as the sole general partner of each of Capital and Investors, and Mr. Tannenbaum, as the president of the General Partner, each beneficially owns 1,056,557 shares of Common Stock of the Issuer representing approximately 6.1% of the class. The percentage of Common Stock beneficially owned by each Reporting Person is based on a total of 17,192,377 shares of Common Stock of the Issuer outstanding as of October 30, 2008 as reported in the most recent quarterly report of

the Issuer on Form 10-Q for the quarterly period ended September 30, 2008.

In addition to the shares of Common Stock reported in this Schedule 13G, Capital and Investors hold warrants to purchase an aggregate of 2,917,500 shares of the Issuer's Common Stock. The Reporting Persons believe that these warrants may not be exercised until a registration statement covering the issuance of the shares of Common Stock issuable upon such exercise has been filed with the Securities and Exchange Commission ("SEC") and declared effective, and that, because the Issuer has not yet filed such a registration statement, the warrants are not currently exercisable. As a result, the Reporting Persons believe that they would not be deemed under applicable SEC rules to beneficially own the shares of Common Stock underlying the warrants.

Each of Capital and Investors has the power to vote and dispose of the shares of Common Stock beneficially owned by such entity (as described above). The General Partner, as the sole general partner of each of Capital and Investors, has the authority to vote and dispose of all of the shares of Common Stock reported in this Schedule 13G. Mr. Tannenbaum, by virtue of his position as president of the General Partner, has the authority to vote and dispose of all of the shares of Common Stock reported in this Schedule 13G.

**Item 5. Ownership of Five Percent or Less of a Class:**

N/A.

**Item 6. Ownership of More than Five Percent on Behalf of Another Person:**

N/A.

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person:**

N/A.

**Item 8. Identification and Classification of Members of the Group:**

N/A.

**Item 9. Notice of Dissolution of Group:**

N/A.

**Item 10. Certification:**

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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**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.

STEVEN TANNENBAUM

/s/ Steven Tannenbaum

GREENWOOD INVESTMENTS, INC.

By: /s/ Steven Tannenbaum

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Steven Tannenbaum, President

GREENWOOD CAPITAL LIMITED  
PARTNERSHIP

By: Greenwood Investments, Inc.,  
General Partner

By: /s/ Steven Tannenbaum  
Steven Tannenbaum, President

GREENWOOD INVESTORS LIMITED  
PARTNERSHIP

By: Greenwood Investments, Inc.,  
General Partner

By: /s/ Steven Tannenbaum  
Steven Tannenbaum, President

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Exhibit 1

JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree, as of February 18, 2009, that only one statement containing the information required by Schedule 13G, and each amendment thereto, need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of InFuSystem Holdings, Inc., and such statement to which this Joint Filing Agreement is attached as Exhibit 1 is filed on behalf of each of the undersigned.

STEVEN TANNENBAUM

/s/ Steven Tannenbaum

GREENWOOD INVESTMENTS, INC.

By: /s/ Steven Tannenbaum  
Steven Tannenbaum, President

GREENWOOD CAPITAL LIMITED  
PARTNERSHIP

By: Greenwood Investments, Inc.,  
General Partner

By: /s/ Steven Tannenbaum  
Steven Tannenbaum, President

GREENWOOD INVESTORS LIMITED  
PARTNERSHIP

By: Greenwood Investments, Inc.,  
General Partner

By: /s/ Steven Tannenbaum  
Steven Tannenbaum, President

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