

Medidata Solutions, Inc.
Form SC 13G
February 14, 2011

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

SCHEDULE 13G

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

Medidata Solutions, Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

58471A105

(CUSIP Number)

December 31, 2010

(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).

CUSIP No. 58471A105

Item 1.

- (a) Name of Issuer
Medidata Solutions, Inc.
- (b) Address of Issuer's Principal Executive Offices
79 Fifth Avenue, 8th Floor
New York, NY 10003

Item 2.

- (a) Name of Person Filing
1. Fred Alger Management, Inc.*

2. Alger Associates, Incorporated
- (b) Address of Principal Business Office or, if none, Residence
111 Fifth Avenue, New York, NY 10003
- (c) Citizenship
New York
- (d) Title of Class of Securities
Common Stock
- (e) CUSIP Number
36238G102

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:**
- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
 - (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
 - (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
 - (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
 - (e) An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
 - (f) An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
 - (g) A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
 - (h) A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
 - (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
 - (j) A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J);
 - (k) Group, in accordance with § 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution: _____

* By virtue of the Alger family's ownership of a controlling interest in Alger Associates, which indirectly owns Fred Alger Management, Inc., ownership of the shares may be imputed to the Alger Family.

CUSIP No. 58471A105

Item 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned:
 - 1,746,979
- (b) Percent of class:
 - 7.34%
- (c) Number of shares as to which the person has:
 - (i) Sole power to vote or to direct the vote
 - 1,746,979
 - (ii) Shared power to vote or to direct the vote
 - 0-
 - (iii) Sole power to dispose or to direct the disposition of
 - 1,746,979
 - (iv) Shared power to dispose or to direct the disposition of
 - 0-

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

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following o.

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

(a) The following certification shall be included if the statement is filed pursuant to s240.13d-1(b):

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and 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.

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.

FRED ALGER MANAGEMENT, INC.

By: /s/ Hal Liebes
Executive Vice President
February 14, 2011

ALGER ASSOCIATES, INC.

By: /s/ Hal Liebes
Director
February 14, 2011

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative other than an executive officer or general partner of the filing person, evidence of the representative's authority to sign on behalf of such person shall be filed with the statement, provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See s240.13d-7 for other parties for whom copies are to be sent.

ATTENTION. INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACT CONSTITUTE FEDERAL CRIMINAL VIOLATIONS (SEE 18 U.S.C. 1001).