EARTHLINK INC

Filed by

RENAISSANCE TECHNOLOGIES LLC

FORM SC 13G

(Statement of Ownership)

Filed 02/13/09

Address	1375 PEACHTREE STREET SUITE 400 ATLANTA, GA 30309
Telephone	4048150770
CIK	0001102541
Symbol	ELNK
Fiscal Year	12/31

http://www.edgar-online.com
© Copyright 2009, EDGAR Online, Inc. All Rights Reserved.
Distribution and use of this document restricted under EDGAR Online, Inc. Terms of Use.

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

SCHEDULE 13G

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

EARTHLINK, INC.

(Name of Issuer)

common stock, $.01 par value per share

(Title of Class of Securities)

270321102

(CUSIP Number)

June 20, 2008

(Date of Event Which Requires Filing of this Statement)

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

[X] 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).

---

(1) NAMES OF REPORTING PERSONS.
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only).

Renaissance Technologies LLC 26-0385758

(2) CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS):
(a) [_]
(b) [_]

(3) SEC USE ONLY

(4) CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

(5) SOLE VOTING POWER

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	7,901,700
	(6) SHARED VOTING POWER 0
	(7) SOLE DISPOSITIVE POWER 7,901,700
	(8) SHARED DISPOSITIVE POWER 0

(9) AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,901,700

(10) CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

[_]

(11) PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.29%

(12) TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IA

(1) NAMES OF REPORTING PERSONS.
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).

James H. Simons

(2) CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)
(a) [_]
(b) [_]

(3) SEC USE ONLY

(4) CITIZENSHIP OR PLACE OF ORGANIZATION

United States

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	(5) SOLE VOTING POWER 7,901,700
	(6) SHARED VOTING POWER 0
	(7) SOLE DISPOSITIVE POWER 7,901,700
	(8) SHARED DISPOSITIVE POWER 0

(9) AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,901,700

(10) CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

[_]

(11) PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.29 %

---

(12) TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)
IN

Item 1.

(a) Name of Issuer

EARTHLINK, INC.

(b) Address of Issuer's Principal Executive Offices.

1375 Peachtree St., Atlanta, Georgia 30309

Item 2.

(a) Name of Person Filing:

This Schedule 13G is being filed by Renaissance Technologies LLC ("RTC") and James H. Simons ("Simons").

(b) Address of Principal Business Office or, if none, Residence.

The principal business address of the reporting persons is:

800 Third Avenue
New York, New York 10022

(c) Citizenship.

Dr. Simons is a United States citizen and
RTC is a Delaware limited liability company.

(d) Title of Class of Securities.

common stock, $.01 par value per share

(e) CUSIP Number.

270321102

Item 3. If this statement is filed pursuant to Rule 13d-1(b) or 13-d-2(b) or (c),check whether the person filing is a:

(a) [_] Broker or dealer registered under section 15 of the Act.
(b) [_] Bank as defined in section 3(a)(6) of the Act.
(c) [_] Insurance Company as defined in section 3(a)(19) of the Act.
(d) [_] Investment Company registered under section 8 of the Investment Company Act.
(e) [x] Investment Adviser in accordance with Sec.240.13d-1(b)(1)(ii)(E).
(f) [_] Employee Benefit Plan or Endowment Fund in accordance with Sec. 240.13d-1(b)(1)(ii)(F).
(g) [_] Parent holding company, in accordance with Sec.240.13d-1(b)(1)(ii)(G).
(h) [_] A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act.
(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.
(j) [_] Group, in accordance with Sec.240.13d-1(b)(1)(ii)(J).

Item 4. Ownership.

(a) Amount beneficially owned.

RTC: 7,901,700 shares
Simons: 7,901,700 shares, comprising the shares beneficially owned by RTC, because of Dr. Simons' position as control person of RTC.

(b) Percent of Class.

RTC: 7.29 %

Simons: 7.29 %

(c) Number of shares as to which the person has:

(i) sole power to vote or to direct the vote:

RTC: 7,901,700
Simons: 7,901,700

(ii) Shared power to vote or to direct the vote: 0

(iii) sole power to dispose or to direct the disposition of:

RTC: 7,901,700
Simons: 7,901,700

(iv) Shared power to dispose or to direct the disposition of:

RTC: 0
Simons: 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: [_]

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

Certain funds and accounts managed by RTC have the right to receive dividends and proceeds from the sale of the securities which are the subject of this report.
RIEF Trading LLC holds of record more than 5% of such securities.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.

Not applicable

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

Not applicable

Item 9. Notice of Dissolution of a Group.

Not applicable

Item 10. Certification

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 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.

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: February 12, 2009

James H. Simons

Renaissance Technologies LLC

By: Mark Silber

Executive Vice President

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

==========

EXHIBIT 99.1

AGREEMENT REGARDING JOINT FILING

UNDER RULE 13D-1(K) OF THE EXCHANGE ACT

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, each of the undersigned agrees to the filing on behalf of each of a Statement on Schedule 13G, and all amendments thereto, with respect to the shares of common stock, $.01 par value per share of EARTHLINK, INC..

Date: February 12, 2009

James H. Simons

Renaissance Technologies LLC

By: Mark Silber
Executive Vice President