

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

Rhythms NetConnections, Inc.

(Name of Issuer)

Common Shares

(Title of Class of Securities)

762430205

(CUSIP Number)

August 1, 2001

(Date of Event which Requires Filing of this Statement)

John Seethoff
Deputy General Counsel, Finance and Operations
One Microsoft Way
Redmond, Washington 98052-6399
(425) 882-8080

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

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 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. 762430205

1 NAMES OF REPORTING PERSON S.S., OR
I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Microsoft Corporation 91-1144442

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
State of Washington

5 SOLE VOTING POWER
NUMBER OF 5
SHARES 5,197,691*

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY 6
EACH -0-

7 SOLE DISPOSITIVE POWER
REPORTING PERSON 7
5,197,691*

8 SHARED DISPOSITIVE POWER
WITH: 8
-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
5,197,691*

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)
6.5%

12 TYPE OF REPORTING PERSON
CO

*Includes a warrant to purchase a total of 720,000 shares of Common Stock.

Item 1.

- (a) Name of Issuer: Rhythms NetConnections, Inc.
- (b) Address of principal executive offices of the Issuer:
9100 East Mineral Circle
Englewood, CO 80112

Item 2.

- (a) Name of Person Filing: Microsoft Corporation, a Washington corporation
- (b) Address of Principal Business Office: One Microsoft Way, Redmond, Washington 98052
Attention: Deputy General Counsel, Finance and Operations
- (c) Citizenship: State of Washington.
- (d) Title of Class of Securities: Common Shares
- (e) CUSIP Number: 762430205

Item 3. Not Applicable.

Item 4. Ownership

(a) Amount beneficially owned: 5,197,691 shares of Common Stock, which includes a warrant to purchase a total of 720,000 shares of Common Stock.

(b) Percent of class: 6.5%

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

(i) Sole power to vote or to direct the vote: 5,197,691

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

(iii) Sole power to dispose or to direct the disposition of:
5,197,691

(iv) Shared power to dispose or to direct the disposition of: 0

Item 5. Ownership of Five Percent or Less of a Class: Not Applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person:
Not Applicable.

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 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.

August 2, 2001

MICROSOFT CORPORATION

By /s/ William H. Neukom

William H. Neukom
Executive Vice President and Secretary