SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

SONUS NETWORKS, INC. (EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE

(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)

04-3387074

(I.R.S. EMPLOYER IDENTIFICATION NO.)

5 CARLISLE ROAD, WESTFORD, MASSACHUSETTS (Address of Principal Executive Offices)

01886 (Zip Code)

SONUS NETWORKS, INC. AMENDED AND RESTATED 1997 STOCK INCENTIVE PLAN (FULL TITLE OF THE PLAN)

(FOLL TITLE OF THE FLAN

HASSAN M. AHMED
President and Chief Executive Officer
Sonus Networks, Inc.
5 Carlisle Road
Westford, MA 01886
(NAME AND ADDRESS OF AGENT FOR SERVICE)

(978) 692-8999 (TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

Copy to:
DAVID L. ENGEL, ESQ.
JOHAN V. BRIGHAM, ESQ.
BINGHAM DANA LLP
150 Federal Street
Boston, Massachusetts 02110
(617) 951-8000

CALCULATION OF REGISTRATION FEE

Proposed Proposed Maximum Maximum Title Of Maximum Amount Offering
To Be Price Per
Registered Share Securities Aggregate Amount Of To Be Offering Registration Registered Price Fee Common Stock, \$0.001 par value per share, issuable under 1997 Stock Incentive Plan 10,862,349 862,349 (1) \$320,276,407.61

(1) The proposed maximum offering price has been estimated pursuant to Rule 457(h) solely for the purpose of calculating the registration fee. It is not known how many of these shares will be purchased or at what price. A portion of the shares are issuable upon exercise of options with fixed exercise prices ranging from \$0.07 to \$22.25. Pursuant to Rule 457(h)(1), the aggregate offering price and the fee have been computed upon the basis of the price at which the options may be exercised. The shares representing unissued options do not have a fixed exercise price. The proposed maximum offering price per share for such shares has been calculated pursuant to Rule 457(h) as \$39.03, which is the average of the high and low prices of the Registrant's Common Stock as listed on Nasdaq on January 29, 2001.

Pursuant to Rule 429 promulgated under the Securities Act of 1933, as amended, the Prospectus relating to this Registration Statement is a combined Prospectus that relates also to the Registration Statement on Form S-8 (File No. 333-32206) previously filed by the Registrant on August 9, 2000, which registered an aggregate of 14,542,860 shares of Common Stock, as adjusted for a 3-for-1 stock split. A filing fee in the amount of \$50,001.00 was previously paid with respect to such shares.

EXPLANATORY NOTE

On August 9, 2000, we filed a Registration Statement on Form S-8 (File No. 333-32206) (referred to in this document as, the "First Registration Statement") to register under the Securities Act of 1933, as amended, an aggregate of 12,388,152 shares of common stock, par value \$0.001 per share (the "Common Stock"), issuable by us under our Amended and Restated 1997 Stock Incentive Plan and 2,154,708 shares of Common Stock issuable by us under our 2000 Employee Stock Purchase Plan. At the close of business on October 6, 2000, we split our Common Stock 3-for-1 by means of a stock dividend of two shares of Common Stock for each outstanding share of Common Stock to all of our stockholders of record as of the close of business on September 29, 2000. All share and per share amounts reported in this Registration Statement with respect to time periods and events that took place prior to the stock dividend retroactively reflect our October 6, 2000 stock dividend.

This Registration Statement on Form S-8 has been prepared and filed pursuant to and in accordance with the requirements of General Instruction E to Form S-8 for the purpose of effecting the registration under the Securities Act of an additional aggregate of 10,862,349 shares of our Common Stock issuable upon the exercise of stock options granted, or to be granted, under the 1997 Stock Incentive Plan at any time or from time to time after the date hereof under the Plan. Pursuant to General Instruction E to Form S-8, the Registrant hereby incorporates herein by reference the contents of the First Registration Statement.

We also hereby incorporated by reference into this Registration Statement the following documents filed with the Securities and Exchange Commission:

PERIOD

The description of our Common Stock, \$0.001 par value per share, contained in our Registration Statement on Form 8-A pursuant to Section 12(g) of the Securities Exchange Act

of the Securities Exchange Act..... Filed April 5, 2000

Quarters ended, June 30, 2000 and

Quarterly Reports on Form 10-Q..... September 30, 2000

Filed October 13, 2000 and

Current Reports on Form 8-K..... November 17, 2000

Prospectus filed pursuant to Rule

424(b)(1) (file No. 333-52682)..... Filed January 12, 2001

In addition, all documents filed pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequent to the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities registered hereby have been sold or which deregisters all of such securities then remaining unsold shall be incorporated by reference into this Registration Statement as of the filing date of each.

You may request a copy of these filings at no cost (other than exhibits unless those exhibits are specifically incorporated by reference herein) by writing or telephoning us at the following address:

Sonus Networks, Inc.
5 Carlisle Road
Westford, MA 01886
Attention: Stephen J. Nill,
Vice President of Finance and
Administration and Chief Financial Officer
Tel.: (978) 692-8999

ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL.

As of January 15, 2001, six attorneys at Bingham Dana LLP, outside corporate counsel for the Registrant, owned, in the aggregate, 161,781 shares of Sonus Common Stock.

ITEM 8. EXHIBITS.

The following exhibits are filed as part of this Registration Statement:

EXHIBIT NO.

DESCRIPTION OF DOCUMENTS

- 4.1* Fourth Amended and Restated Certificate of Incorporation of the Registrant, incorporated by reference to Exhibit No. 3.1 to the Registrant's Registration Statement on Form S-1 (file No. 333-32206), filed on May 22, 2000.
- 4.2* Amended and Restated By-Laws of the Registrant, incorporated by reference to Exhibit No. 3.2 to the Registrant's Registration Statement on Form S-1 (file No. 333-32206), filed on May 22, 2000.
- 4.3* Amended and Restated 1997 Stock Incentive Plan, incorporated by reference to Exhibit No. 10.2 to the Registrant's Registration Statement on Form S-1 (file No. 333-32206), filed on May 22, 2000.
- 4.4* 2000 Employee Stock Purchase Plan, as amended, incorporated by reference to Exhibit No. 10.3 to the Registrant's Registration Statement on Form S-1 (file No. 333-32206), filed on May 22, 2000.
- 5 Opinion of Bingham Dana LLP as to the legality of the securities being registered.
- 23.1 Consent of Arthur Andersen LLP, independent public accountants.
- 23.2 Consent of Bingham Dana LLP (included in Exhibit 5).
- Power of Attorney (included on the signature page of this Registration Statement).

^{*}Previously filed with the Registrant's First Registration Statement and incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Westford, Commonwealth of Massachusetts, as of the 2nd day of February 2001.

SONUS NETWORKS, INC.

By: /s/ Hassan M. Ahmed

Hassan M. Ahmed President and Chief Executive Officer

President, Chief Executive Officer and Director (Principal

POWER OF ATTORNEY

Each person whose signature appears below hereby appoints Hassan M. Ahmed and Stephen J. Nill, and each of them severally, his true and lawful attorney-in-fact with the authority to execute in the name of each such person, and to file with the Securities and Exchange Commission, together with any exhibits thereto and other documents therewith, any and all amendments (including without limitation post-effective amendments) to this Registration Statement on Form S-8 necessary or advisable to enable the Registrant to comply with the Securities Act of 1933, as amended, and any rules, regulations, and requirements of the Securities and Exchange Commission in respect thereof, which amendments may make such other changes in the Registration Statement as the aforesaid attorney-in-fact executing the same deems appropriate.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities indicated as of the 2nd day of February 2001.

SIGNATURE TITLE

/s/ Hassan M. Ahmed

Paul J. Severino

Hassan M. Ahmed	Executive Officer)
/s/ Stephen J. Nill Stephen J. Nill	Vice President of Finance and Administration and Chief Financial Officer (Principal Financial and Accounting Officer)
/s/ Rubin Gruber Rubin Gruber	Chairman of the Board of Directors and Director
/s/ Edward T. Anderson Edward T. Anderson	Director
Paul J. Ferri	Director
	Director

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^{*}Previously filed with the Registrant's First Registration Statement and incorporated herein by reference.

BINGHAM DANA LLP 150 Federal Street Boston, MA 02110

January 29, 2001

Sonus Networks, Inc. 5 Carlisle Road Westford, MA 01886

RE: REGISTRATION STATEMENT ON FORM S-8

Ladies and Gentlemen:

We have acted as counsel for Sonus Networks, Inc., a Delaware corporation (the "COMPANY"), in connection with the preparation of the Company's Registration Statement on Form S-8 proposed to be filed with the Securities and Exchange Commission on or about January 29, 2001 (the "REGISTRATION STATEMENT").

The Registration Statement covers the registration of shares of common stock, \$0.001 par value per share, of the Company (the "SHARES"), which are issuable by the Company pursuant to its Amended and Restated 1997 Stock Incentive Plan (the "PLAN").

We have reviewed the corporate proceedings of the Company with respect to the authorization of the Plan and the issuance of the Shares thereunder. We have also examined and relied upon originals or copies of such corporate records, instruments, agreements or other documents of the Company, and certificates of officers of the Company as to certain factual matters, as we have deemed necessary or appropriate as a basis for the opinions hereinafter expressed. In our examination, we have assumed the genuineness of all signatures, the conformity to the originals of all documents reviewed by us as copies, the authenticity and completeness of all original documents reviewed by us in original or copy form and the legal competence of each individual executing any document.

This opinion is limited solely to the Delaware General Corporation Law, as applied by courts located in Delaware, the applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting those laws.

Based upon and subject to the foregoing, we are of the opinion that the Shares, when issued and delivered upon the exercise of options or awards pursuant to the Plan and against the payment of the purchase price therefor, as specified in such Plan or documents governing such awards, will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Bingham Dana LLP

BINGHAM DANA LLP

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference in this registration statement on Form S-8 of our report dated March 10, 2000 on the consolidated financial statements of Sonus Networks, Inc. included in Sonus Networks, Inc.'s Prospectus filed pursuant to Rule 424(b)(1) File No. 333-52682 dated January 12, 2001 and to all references to our Firm included in this registration statement.

/s/ ARTHUR ANDERSEN LLP

Boston, Massachusetts January 31, 2001