



03-05-2003

U.S. Department of Commerce
Patent and Trademark Office
PATENT



102380489

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☒ New **2-25-03**
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☐ Correction of PTO Error
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Conveyance Type

☒ Assignment ☐ Security Agreement
☐ License ☐ Change of Name
☐ Merger ☐ Other
U.S. Government
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☐ Departmental File ☐ Secret File

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Execution Date
Month Day Year
02 11 03

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Name (line 2)

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03/05/2003 LMUeller 00000064 080219 10313082
01 FC:8021 40.00 CH

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Mail documents to be recorded with required cover sheet(s) information to:
Commissioner of Patents and Trademarks, Box Assignments, Washington, **PATENT**

REEL: 013799 FRAME: 0897

Correspondent Name and Address

Area Code and Telephone Number 617-526-6000

Name Michael J. Bevilacqua

Address (line 1) Hale and Dorr LLP

Address (line 2) 60 State Street

Address (line 3) Boston, MA 02109

Address (line 4) United States of America

Pages

Enter the total number of pages of the attached conveyance document including any attachments.

8

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

10/313,082

Patent Number(s)

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number

only if a U.S. Application Number has not been assigned.

PCT

PCT

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PCT

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Number of Properties

Enter the total number of properties involved.

1

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment:

Deposit Account

Enclosed ☐Deposit Account ☒

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number:

08-0219

Authorization to charge additional fees:

Yes ☒No ☐

Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Michael J. Bevilacqua

Name of Person Signing

Signature

Date

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**RECORDATION FORM COVER SHEET
CONTINUATION
PATENTS ONLY**

U.S. Department of Commerce
Patent and Trademark Office
PATENT

Conveying Party(ies)

☐ Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Jill C. Pipher

Execution Date
Month Day Year

02 11 03

Name (line 2)

Execution Date
Month Day Year

02 07 03

Name (line 1) Joseph H. Silverman

Name (line 2)

Execution Date
Month Day Year

02 10 03

Name (line 1) William J. Whyte

Name (line 2)

Receiving Party(ies)

☐ Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (*Designation must be a separate document from Assignment.*)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (*Designation must be a separate document from Assignment.*)

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

ASSIGNMENT

WHEREAS, we, Jeffrey Hoffstein, a citizen of the United States and residing at 3 Leicester Way, Pawtucket, Rhode Island 02860, Nicholas A. Howgrave-Graham, a citizen of the United Kingdom and residing at 30 Park Street, Arlington, Massachusetts 02474, Jill C. Pipher, a citizen of the United States and residing at 3 Leicester Way, Pawtucket, Rhode Island 02860, Joseph H. Silverman, a citizen of the United States and residing at 57 North Hill Avenue, Needham, Massachusetts 02492 and William J. Whyte, a citizen of the United States and residing at 20 Bay State Road, Somerville, Massachusetts 02144 are the inventors of a certain new and useful invention and discovery, for which we have made an application for a United States Patent entitled "DIGITAL SIGNATURE AND AUTHENTICATION METHOD AND APPARATUS" also identified as Attorney Docket Number 114033.121US1, the specification of which was filed with the United States Patent and Trademark Office on December 6, 2002 and has been assigned Serial Number 10/313,082.

WHEREAS, NTRU Cryptosystems, Incorporated, whose address is 5 Burlington Woods, Burlington, Massachusetts 01803, which, together with its successors and assigns is hereinafter called "ASSIGNEE," is desirous of acquiring the title, rights, benefits, and privileges hereinafter recited.

NOW, THEREFORE, for and in consideration of our employment by ASSIGNEE and other valuable consideration furnished by ASSIGNEE to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservations:

1. Assign, transfer, and convey to ASSIGNEE the entire right, title, and interest in and to said inventions and discoveries, said United States Patent Application, any and all other applications for Letters Patent(s) on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part, reexamination and convention applications based in whole, or in part, upon said inventions or discoveries, or upon said United States Patent Application, and any and all Letters Patent(s), reissues, and extensions of Letters Patent(s) granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon, or arise from, said inventions, said discoveries, said applications, and said Letters Patent(s);
2. Authorize ASSIGNEE to file patent applications in any or all countries on any or all of said inventions and discoveries in our names or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable, under International Conventions or otherwise;
3. Authorize and request the Commissioner of Patents and Trademarks of the United States

of America and the empowered officials of all other governments throughout the world to issue or transfer all said Letters Patent(s) to ASSIGNEE, as assignee of the entire right, title, and interest therein or otherwise as ASSIGNEE may direct;

4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications, or patents, or any license to use the same, or to make, use, or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to ASSIGNEE without encumbrance;

5. Bind our heirs, legal representatives, and assigns, as well as ourselves, to do, upon ASSIGNEE's request and at ASSIGNEE's expense, but without additional consideration to either us or them, all acts reasonably serving to assure that said inventions and discoveries, said patent applications, and said Letters Patent(s) shall be held and enjoyed by ASSIGNEE as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives, and assigns if this Assignment had not been made; and particularly to execute and deliver to ASSIGNEE all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by ASSIGNEE; and to communicate to ASSIGNEE all facts known to us relating to said inventions and discoveries or the history thereof, and to testify as to the same in any court or proceeding; and to furnish ASSIGNEE any and all documents, photographs, models, samples, and other physical exhibits in our control or in the control of our heirs, legal representatives, or assigns which may be useful for establishing the facts of our conceptions, disclosures, and reduction to practice of said inventions and discoveries.

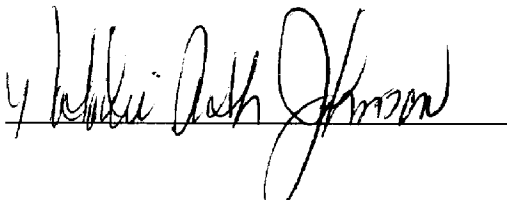
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 11 day of

Feb/2003 (Month/Year).


Jeffrey Hoffstein


On this 11 day of February 2003 (Month/Year), before me personally came the above-named Jeffrey Hoffstein to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of his own free will for the use and purposes therein set forth.

WITNESS:


William Keith Johnson

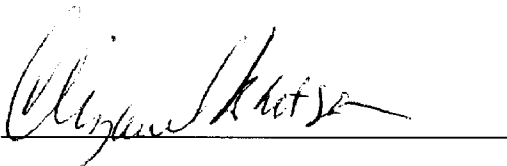
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 5th day of

February 2003 (Month/Year).

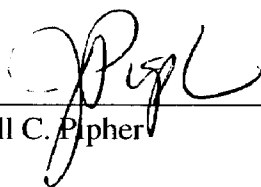

Nicholas A. Howgrave-Graham

On this 5th day of February 2003 (Month/Year), before me personally came the above-named Nicholas A. Howgrave-Graham to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of his own free will for the use and purposes therein set forth.

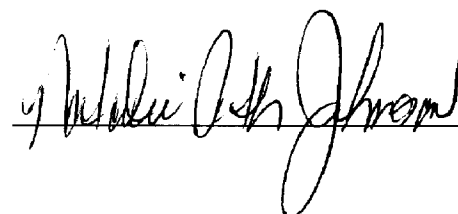
WITNESS:


William Keith Johnson

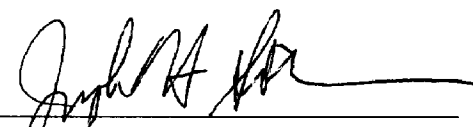
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 11th day of Feb 2003 (Month/Year).


Jill C. Pipher

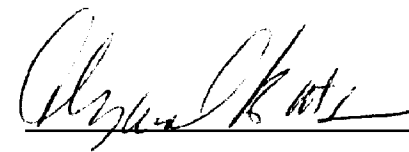
On this 11 day of February 2003 (Month/Year), before me personally came the above-named Jill C. Pipher to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of his own free will for the use and purposes therein set forth.

WITNESS: 

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 7 day of February 2003 (Month/Year).


Joseph H. Silverman

On this 7th day of February 2003 (Month/Year), before me personally came the above-named Joseph H. Silverman to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of his own free will for the use and purposes therein set forth.

WITNESS: 

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this 10 day of

February 2003 (Month/Year).

William J. Whyte
William J. Whyte

On this 10 day of February (Month/Year), before me personally came the above-named William J. Whyte to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of his own free will for the use and purposes therein set forth.

WITNESS: Cheryl R. Rite