

FORM PTO-1595
1-31-92

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office
Docket No. ROC920050095US1

RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Assistant Commissioner for Patents. Please record the attached original documents or copy thereof.

<p>1. Name of conveying party(ies): (1) Louis Lu-Chen Hsu (2) Jack Allan Mandelman (3) William Robert Tonti</p> <p>Additional names of conveying party(ies) attached? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no</p> <hr/> <p>3. Nature of Conveyance</p> <p><input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____</p> <p>Execution Date: (1) June 3, 2005 (2) June 9, 2005 (3) June 6, 2005</p>	<p>2. Name and address of receiving party(ies):</p> <p>Name: <u>International Business Machines Corporation</u></p> <p>Internal Address: _____ _____</p> <p>Street Address: <u>New Orchard Road</u> City <u>Armonk</u> State <u>New York</u> Zip <u>10504</u></p> <p>Additional name(s) & address(es) attached? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no</p>
--	--

4. Application number(s) or patent number(s):
TITLE: HYBRID ORIENTED SUBSTRATES AND CRYSTAL IMPRINTING METHODS FOR FORMING SUCH HYBRID ORIENTED SUBSTRATES

If this document is being filed together with a new application, the execution date of the application is _____.

<p>A. Patent Application No(s).</p> <p>Docket No. ROC920050095US1 Serial No. 11/154,906</p>	<p>B. Patent No(s).</p>
---	-------------------------

Additional numbers attached? Yes No

<p>5. Name and address of party to whom correspondence concerning document should be mailed:</p> <p>James R. Nock IBM Corporation - Dept. 917 3605 Highway 52 North Rochester, MN 55901</p>	<p>6. Total number of applications and patents involved: <u>1</u></p> <p>7. Total fee (37 CFR 3.41): <u>\$ 40.00</u></p> <p><input type="checkbox"/> Enclosed</p> <p><input checked="" type="checkbox"/> Authorized to be charged to deposit account <input checked="" type="checkbox"/> Total fee due <input checked="" type="checkbox"/> Any deficiencies in the enclosed fees</p> <p>8. Deposit account number: <u>09-0465</u></p> <p>(Attach duplicate copy of this page if paying by deposit account)</p>
---	--

DO NOT USE THIS SPACE

9. 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.

James R. Nock, Reg. No. 42,937 James R. Nock July 19, 2005
Name of Person Signing Signature Date

Total number of pages comprising cover sheet: 1

CH \$40.00 090465 11154906

ASSIGNMENT

WHEREAS, we, Louis Lu-Chen Hsu, residing at Seven Crosby Court, Fishkill, New York 12524, Jack Allan Mandelman, residing at 11 Claremont Drive, Flat Rock, North Carolina 28731, and William Robert Tonti, residing at Four Bluestem Road, Essex Junction, Vermont 05452, made certain new and useful inventions and improvements for which we executed an application for Letters Patent of the United States on June 3, 2005, June 9, 2005, and June 6, 2005, respectively, which is entitled HYBRID ORIENTED SUBSTRATES AND CRYSTAL IMPRINTING METHODS FOR FORMING SUCH HYBRID ORIENTED SUBSTRATES.

AND WHEREAS, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation organized and existing under and by virtue of the laws of the State of New York, and having an office and place of business at New Orchard Road, Armonk, New York 10504 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

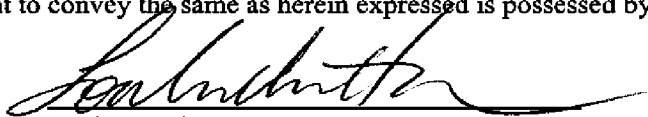
NOW THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

6-3-2005

Date



Louis Lu-Chen Hsu

9 JUNE 2005
Date

Jack Allan Mandelman
Jack Allan Mandelman

6/6/2005
Date

William Robert Tonti
William Robert Tonti