

10-17-2003

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To the Honorable Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Marie Angelopoulos Ratnam Sooriyakumaran  
Wu-Song Huang  
Arpan P. Mahorwila  
Wayne Moreau  
Dirk Pheiffer

10-6-03

Additional names(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party(ies):

Name: International Business Machines Corporation

Internal Address: \_\_\_\_\_

Street Address: New Orchard Road

City: Armonk

State: NY

ZIP: 10504

## 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: 10/2/03, 10/1/03, 10/2/03, 10/3/03, 10/2/03, 10/1/03

Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: 10/2/03, 10/1/03

## A. Patent Application No. (s)

## B. Patent No. (s)

EXPRESS MAIL (3) EP108662385US  
 I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING  
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 APPLICANT AND/OR ATTORNEY REQUESTS THE DATE OF  
 DEPOSIT AS THE FILE DATE.

DATE OF DEPOSIT: 10/6/03

BY SIGNATURE &amp; DATE:

Karen Cing-Mars

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Margaret A. Pepper

Internal Address: Dept. 18G Bldg. 300/482

10/16/2003 5800PER 00000202 49945A 10679782

01 FC:0021

40.00 BA

Street Address: 2070 Route 52

City: Hopewell Junction

State: NY

ZIP: 12533

## 6. Total number of applications and patents involved: 1

## 7. Total fee (37 CFR 3.41):.....\$ 40.00

☐ Enclosed - Any excess or insufficiency should be credited or debited to deposit account☒ Authorized to be charged to deposit account

## 8. Deposit account number:

09-0458 (FI-344 )

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## 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.

Margaret A. Pepper

Name of Person Signing

Signature

10/6/03

Date

Total number of pages including cover sheet, attachments, and document: 5

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PATENT  
REEL: 014590 FRAME: 0157

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For and in consideration of good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor acknowledges his/her prior and ongoing obligation to sell, assign, and transfer, and agrees to sell, assign, and transfer the entire world wide right, title and interest for the United States and all foreign countries, in and to any and all inventions and improvements conceived during and within the scope of his/her employment, and further acknowledges that he/she has sold, assigned, and transferred, and hereby sells, assigns, and transfers, unto:

**INTERNATIONAL BUSINESS MACHINES CORPORATION ("IBM"),  
Armonk, New York 10504**

a corporation of New York, and IBM desires to acquire all right, title, and interest, in and to the certain inventions (identified below), applications, and any United States and foreign patents to be obtained therefor relating to:

Title of Invention for **SILICON-CONTAINING COMPOSITIONS FOR SPIN-ON ARC/HARDMASK MATERIALS**

United States Patent

as set forth in United States Patent Application executed by each undersigned inventor on the date indicated by each inventor signature below, and further identified by **Attorney Docket Number FIS920030196US1**;

(select one): ☒ executed concurrently herewith

for and to said United States Patent Application including any and all divisions or continuations thereof and in and to any and all Letters Patent of the United States and foreign patents and all rights of priority to be obtained therefor which may issue on any such application or for said invention therein disclosed, including any and all reissues or extensions thereof, to be held and enjoyed by, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made;

Each undersigned inventor hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to IBM, its successors and assigns, in accordance herewith;

Each undersigned inventor warrants and covenants that he/she has the full and unencumbered right to sell and assign the interests hereby sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith;

Each undersigned inventor further covenants and agrees that he/she, upon the request and at the expense of the IBM, will execute and deliver any papers, make all rightful oaths, testify in any legal proceeding relating to said inventions and improvements, communicate to the IBM all facts known to the undersigned relating to such inventions and improvements and the history thereof; and perform all other lawful acts deemed necessary or desirable by IBM, and its legal representatives, to secure, maintain, and enforce patent protection for such inventions and improvements and for vesting title to such inventions and improvements in the IBM, and in particular to perfect title to said above-identified certain inventions, and applications including divisions and continuations thereof, and any and all Letters Patent which may be granted therefor or thereon, including reissues, extensions, or counterparts;

Each undersigned inventor hereby grants the IBM and the firm of the power to insert in this Assignment any further identification which may be necessary or desirable for recordation of this Assignment.

This assignment is governed by the substantive laws of the state of New York.

PATENT  
DOCKET NO. FIS920030196US1

## PATENT ASSIGNMENT FORM

Executed by Inventor 1 of 6

Signature: \_\_\_\_\_

Marie Angelopoulos

Date: \_\_\_\_\_

10/02/03

Executed by Inventor 2 of 6

Signature: \_\_\_\_\_

Wu-Song Huang

Date: \_\_\_\_\_

Executed by Inventor 3 of 6

Signature: \_\_\_\_\_

Arpan P. Mahorowila

Date: \_\_\_\_\_

10.02.03

Executed by Inventor 4 of 6

Signature: \_\_\_\_\_

Wayne Moreau

Date: \_\_\_\_\_

Executed by Inventor 5 of 6

Signature: \_\_\_\_\_

Dirk Pfeiffer

Date: \_\_\_\_\_

10/21/03

Executed by Inventor 6 of 6

Signature: \_\_\_\_\_

Ratnam Sooriyakumaran

Date: \_\_\_\_\_

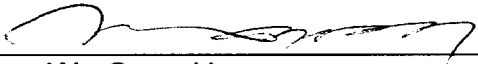
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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Marie Angelopoulos

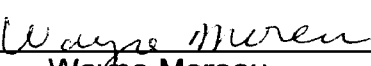
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Signature:  \_\_\_\_\_ Date: 10/01/03  
Wu-Song Huang

Executed by Inventor 3 of 6

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Arpan P. Mahorowila

Executed by Inventor 4 of 6

Signature:  \_\_\_\_\_ Date: 10/3/03  
Wayne Moreau

Executed by Inventor 5 of 6

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Dirk Pfeiffer

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ratnam Sooriyakumaran

**PATENT**  
DOCKET NO. FIS920030196US1

## PATENT ASSIGNMENT FORM

Executed by Inventor 1 of 6

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Marie Angelopoulos

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Wu-Song Huang

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Arpan P. Mahorowila

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Wayne Moreau

Executed by Inventor 5 of 6

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Dirk Pfeiffer

Executed by Inventor 6 of 6

Signature: Ratnam Soofiyakumaran Date: 10/1/03  
Ratnam Soofiyakumaran