

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

| SUBMISSION TYPE:                                                                                                                                                                                                                                                                                              | NEW ASSIGNMENT                             |               |                |                     |            |              |            |                   |            |                |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------|----------------|---------------------|------------|--------------|------------|-------------------|------------|----------------|------------|
| NATURE OF CONVEYANCE:                                                                                                                                                                                                                                                                                         | ASSIGNMENT                                 |               |                |                     |            |              |            |                   |            |                |            |
| CONVEYING PARTY DATA                                                                                                                                                                                                                                                                                          |                                            |               |                |                     |            |              |            |                   |            |                |            |
| <table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Joy Cheng</td><td>01/11/2008</td></tr><tr><td>Ho-Cheol Kim</td><td>01/11/2008</td></tr><tr><td>Daniel P. Sanders</td><td>01/11/2008</td></tr><tr><td>Linda Sundberg</td><td>01/11/2008</td></tr></tbody></table> |                                            | Name          | Execution Date | Joy Cheng           | 01/11/2008 | Ho-Cheol Kim | 01/11/2008 | Daniel P. Sanders | 01/11/2008 | Linda Sundberg | 01/11/2008 |
| Name                                                                                                                                                                                                                                                                                                          | Execution Date                             |               |                |                     |            |              |            |                   |            |                |            |
| Joy Cheng                                                                                                                                                                                                                                                                                                     | 01/11/2008                                 |               |                |                     |            |              |            |                   |            |                |            |
| Ho-Cheol Kim                                                                                                                                                                                                                                                                                                  | 01/11/2008                                 |               |                |                     |            |              |            |                   |            |                |            |
| Daniel P. Sanders                                                                                                                                                                                                                                                                                             | 01/11/2008                                 |               |                |                     |            |              |            |                   |            |                |            |
| Linda Sundberg                                                                                                                                                                                                                                                                                                | 01/11/2008                                 |               |                |                     |            |              |            |                   |            |                |            |
| RECEIVING PARTY DATA                                                                                                                                                                                                                                                                                          |                                            |               |                |                     |            |              |            |                   |            |                |            |
| Name:                                                                                                                                                                                                                                                                                                         | Internatinal Business Machines Corporation |               |                |                     |            |              |            |                   |            |                |            |
| Street Address:                                                                                                                                                                                                                                                                                               | New Orchard Road                           |               |                |                     |            |              |            |                   |            |                |            |
| City:                                                                                                                                                                                                                                                                                                         | Armonk                                     |               |                |                     |            |              |            |                   |            |                |            |
| State/Country:                                                                                                                                                                                                                                                                                                | NEW YORK                                   |               |                |                     |            |              |            |                   |            |                |            |
| Postal Code:                                                                                                                                                                                                                                                                                                  | 10504                                      |               |                |                     |            |              |            |                   |            |                |            |
| PROPERTY NUMBERS Total: 1                                                                                                                                                                                                                                                                                     |                                            |               |                |                     |            |              |            |                   |            |                |            |
| <table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>12060516</td></tr></tbody></table>                                                                                                                                                  |                                            | Property Type | Number         | Application Number: | 12060516   |              |            |                   |            |                |            |
| Property Type                                                                                                                                                                                                                                                                                                 | Number                                     |               |                |                     |            |              |            |                   |            |                |            |
| Application Number:                                                                                                                                                                                                                                                                                           | 12060516                                   |               |                |                     |            |              |            |                   |            |                |            |
| CORRESPONDENCE DATA                                                                                                                                                                                                                                                                                           |                                            |               |                |                     |            |              |            |                   |            |                |            |
| Fax Number:                                                                                                                                                                                                                                                                                                   | (404)607-9981                              |               |                |                     |            |              |            |                   |            |                |            |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>                                                                                                                                                                                                                          |                                            |               |                |                     |            |              |            |                   |            |                |            |
| Phone:                                                                                                                                                                                                                                                                                                        | 404-607-9991                               |               |                |                     |            |              |            |                   |            |                |            |
| Email:                                                                                                                                                                                                                                                                                                        | nmarkovic@cantorcolburn.com                |               |                |                     |            |              |            |                   |            |                |            |
| Correspondent Name:                                                                                                                                                                                                                                                                                           | Michelle L. Henderson                      |               |                |                     |            |              |            |                   |            |                |            |
| Address Line 1:                                                                                                                                                                                                                                                                                               | 20 Church Street                           |               |                |                     |            |              |            |                   |            |                |            |
| Address Line 2:                                                                                                                                                                                                                                                                                               | 22nd Floor                                 |               |                |                     |            |              |            |                   |            |                |            |
| Address Line 4:                                                                                                                                                                                                                                                                                               | Hartford, CONNECTICUT 06103                |               |                |                     |            |              |            |                   |            |                |            |
| ATTORNEY DOCKET NUMBER:                                                                                                                                                                                                                                                                                       | I63-0012-C                                 |               |                |                     |            |              |            |                   |            |                |            |
| NAME OF SUBMITTER:                                                                                                                                                                                                                                                                                            | Michelle L. Henderson                      |               |                |                     |            |              |            |                   |            |                |            |
| Total Attachments: 1                                                                                                                                                                                                                                                                                          |                                            |               |                |                     |            |              |            |                   |            |                |            |

CH \$40.00 12060516

500503311

PATENT  
REEL: 020742 FRAME: 0026



ASSIGNMENT

Docket No. ARC920070061US1

Whereas, we

INVENTOR  
AND CITY

(1) Joy Cheng  
County of Santa Clara  
and (2) Ho-Cheol Kim  
County of Santa Clara  
and (3) Daniel P. Sanders  
County of Santa Clara  
and (4) Linda Sundberg  
County of Santa Clara

of San Jose,  
and State of CA 95120,  
of San Jose,  
and State of CA 95120,  
of San Jose,  
and State of CA 95136,  
of Los Gatos,  
and State of CA 95032,

have invented certain improvements in

TITLE

Method of Controlling Orientation of Domains in Block Copolymer Films

DATES THAT  
INVENTORS  
SIGNED THE  
DECLARATION

and executed, respectively, a United States patent application therefor on

(1) Jan 11th, 2008, (2) Jan. 11, 2008,  
(3) Jan 11<sup>th</sup>, 2008, (4) Jan 11, 2008.

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and in all foreign countries, and all rights of priority resulting from the filing of said United States application, and we request the Commissioner of Patents to issue any Letters Patent granted upon the inventions set forth in said application to IBM, its successors and assigns; and we hereby agree that IBM may apply for foreign Letters Patent on said invention and we will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by IBM.

Signed and sealed

Joy Cheng  
Joy Cheng

on Jan 11th, 2008

Ho-Cheol Kim  
Ho-Cheol Kim

on Jan. 11, 2008

Daniel P. Sanders  
Daniel P. Sanders

on Jan. 11, 2008

Linda Sundberg  
Linda Sundberg

on Jan 11, 2008

PATENT

RECORDED: 04/02/2008

REEL: 020742 FRAME: 0028