

# PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT												
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT												
<b>CONVEYING PARTY DATA</b>													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ibrahim M. Elfadel</td> <td>09/25/2009</td> </tr> <tr> <td>Lewis William Dewey III</td> <td>09/25/2009</td> </tr> <tr> <td>Tarek A. El-Moselhy</td> <td>09/25/2009</td> </tr> <tr> <td>David J. Widiger</td> <td>09/24/2009</td> </tr> <tr> <td>Patrick M. Williams</td> <td>09/30/2009</td> </tr> </tbody> </table>		Name	Execution Date	Ibrahim M. Elfadel	09/25/2009	Lewis William Dewey III	09/25/2009	Tarek A. El-Moselhy	09/25/2009	David J. Widiger	09/24/2009	Patrick M. Williams	09/30/2009
Name	Execution Date												
Ibrahim M. Elfadel	09/25/2009												
Lewis William Dewey III	09/25/2009												
Tarek A. El-Moselhy	09/25/2009												
David J. Widiger	09/24/2009												
Patrick M. Williams	09/30/2009												
<b>RECEIVING PARTY DATA</b>													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><b>Name:</b></td> <td>International Business Machines Corporation</td> </tr> <tr> <td><b>Street Address:</b></td> <td>New Orchard Road</td> </tr> <tr> <td><b>City:</b></td> <td>Armonk</td> </tr> <tr> <td><b>State/Country:</b></td> <td>NEW YORK</td> </tr> <tr> <td><b>Postal Code:</b></td> <td>10504</td> </tr> </table>		<b>Name:</b>	International Business Machines Corporation	<b>Street Address:</b>	New Orchard Road	<b>City:</b>	Armonk	<b>State/Country:</b>	NEW YORK	<b>Postal Code:</b>	10504		
<b>Name:</b>	International Business Machines Corporation												
<b>Street Address:</b>	New Orchard Road												
<b>City:</b>	Armonk												
<b>State/Country:</b>	NEW YORK												
<b>Postal Code:</b>	10504												
<b>PROPERTY NUMBERS Total: 1</b>													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12570418</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12570418								
Property Type	Number												
Application Number:	12570418												
<b>CORRESPONDENCE DATA</b>													
<p>Fax Number: (845)892-6363  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 845-894-3363        Email: EFIPLAW@US.IBM.COM        Correspondent Name: INTERNATIONAL BUSINESS MACHINES CORPORAT        Address Line 1: BLDG. 321-482        Address Line 2: 2070 ROUTE 52        Address Line 4: HOPEWELL JUNCTION, NEW YORK 12533</p>													
<b>ATTORNEY DOCKET NUMBER:</b>	FIS920090137US1												
<b>NAME OF SUBMITTER:</b>	H. Daniel Schnurmann												

CH \$40.00 12570418

**500977104**

**PATENT**  
**REEL: 023309 FRAME: 0572**

**Total Attachments: 24**

source=FIS920090137US1\_signedassign#page1.tif  
source=FIS920090137US1\_signedassign#page2.tif  
source=FIS920090137US1\_signedassign#page3.tif  
source=FIS920090137US1\_signedassign#page4.tif  
source=FIS920090137US1\_signedassign#page5.tif  
source=FIS920090137US1\_signedassign#page6.tif  
source=FIS920090137US1\_signedassign#page7.tif  
source=FIS920090137US1\_signedassign#page8.tif  
source=FIS920090137US1\_signedassign#page9.tif  
source=FIS920090137US1\_signedassign#page10.tif  
source=FIS920090137US1\_signedassign#page11.tif  
source=FIS920090137US1\_signedassign#page12.tif  
source=FIS920090137US1\_signedassign#page13.tif  
source=FIS920090137US1\_signedassign#page14.tif  
source=FIS920090137US1\_signedassign#page15.tif  
source=FIS920090137US1\_signedassign#page16.tif  
source=FIS920090137US1\_signedassign#page17.tif  
source=FIS920090137US1\_signedassign#page18.tif  
source=FIS920090137US1\_signedassign#page19.tif  
source=FIS920090137US1\_signedassign#page20.tif  
source=FIS920090137US1\_signedassign#page21.tif  
source=FIS920090137US1\_signedassign#page22.tif  
source=FIS920090137US1\_signedassign#page23.tif  
source=FIS920090137US1\_signedassign#page24.tif

IBM DOCKET NUMBER: FTS920090137US1

ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: METHOD FOR DETERMINING THE CAPACITANCE GRADIENTS IN VLSI CHIP LAYOUTS USING A SHAPE PROCESSING ENGINE

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: \_\_\_\_\_ (insert series code and serial number here if/when available)

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned Inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned Inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned Inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

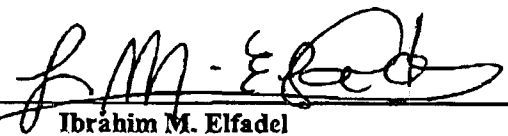
Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial Number) 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, and any disputes will be resolved in a New York state court or federal court sited in New York.

Page 1 of 6

Assignment Form final 081908.doc

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 1 of 5

Signature:  Date: 09/25/09  
Ibrahim M. Elfadel

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 2 of 5

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
William L. Dewey, III

Assignment Form final 081908.doc

Page 3 of 6

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 3 of 5

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Tarek A. El-Moselhy

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 4 of 5

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
David J. Widiger

Page 5 of 6

Assignment Form final 081908.doc

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 5 of 5

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Alwood P. Williams, III



**ASSIGNMENT**

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: METHOD FOR DETERMINING THE CAPACITANCE GRADIENTS IN VLSI  
CHIP LAYOUTS USING A SHAPE PROCESSING ENGINE

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: \_\_\_\_\_ (insert series code and serial number here if/when available)

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned Inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned Inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned Inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial Number) 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, and any disputes will be resolved in a New York state court or federal court sited in New York.

IBM DOCKET NUMBER: FIS920090137US1

**Executed by Inventor 1 of 5**

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Ibrahim M. Elfadel**

Executed by Inventor 2 of 5

---

Signature: Lewis William Dewey III Date: 9/25/2009  
~~William L. Dewey, III~~  
Lewis William IWD

IBM DOCKET NUMBER: FIS920090137US1

**Executed by Inventor 3 of 5**

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Tarek A. El-Moselhy**

IBM DOCKET NUMBER: FIS920090137US1

**Executed by Inventor 4 of 5**

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**David J. Widiger**

Executed by Inventor 5 of 5

Signature: Patrick M. Williams Date: 9/30/09  
~~Alwood P. Williams, III~~

Patrick M. Williams  
(Pmw)

**ASSIGNMENT**

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: METHOD FOR DETERMINING THE CAPACITANCE GRADIENTS IN VLSI  
CHIP LAYOUTS USING A SHAPE PROCESSING ENGINE

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: \_\_\_\_\_ (insert series code and serial number here if/when available)

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned Inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned Inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned Inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial Number) 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, and any disputes will be resolved in a New York state court or federal court sited in New York.

IBM DOCKET NUMBER: **FIS920090137US1**

**Executed by Inventor 1 of 5**

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Ibrahim M. Elfadel**



IBM DOCKET NUMBER: FIS920090137US1

**Executed by Inventor 2 of 5**

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**William L. Dewey, III**

Executed by Inventor 3 of 5

---

Signature: T. Moselhy Date: 09/25/09  
Tarek A. El-Moselhy

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 4 of 5

---

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

David J. Widiger

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 5 of 5

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Alwood P. Williams, III

IBM DOCKET NUMBER: FIS920090137US1

ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: METHOD FOR DETERMINING THE CAPACITANCE GRADIENTS IN VLSI CHIP LAYOUTS USING A SHAPE PROCESSING ENGINE

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: \_\_\_\_\_ (insert series code and serial number here if/when available)

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned Inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned Inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned Inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial Number) 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, and any disputes will be resolved in a New York state court or federal court sited in New York.

Page 1 of 6

Assignment Form final 081908.doc

SEP 24 '09 14:58

PATENT  
USAUSLKW PAGE: 03  
REEL: 023309 FRAME: 0592

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 1 of 5

Signature: Ibrahim M. Elfadel Date: \_\_\_\_\_

Page 2 of 6

Assignment Form final 081908.doc

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 2 of 5

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

**William L. Dewey, III**

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

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 3 of 5

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

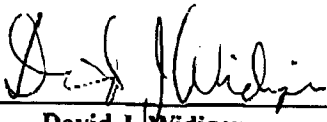
**Tarek A. El-Moselhy**

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



IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 4 of 5

Signature:  Date: 9-24-2009  
David J. Widiger

IBM DOCKET NUMBER: FIS920090137US1

Executed by Inventor 5 of 5

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

**Alwood P. Williams, III**

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

Page 6 of 6

Assignment form final 081908.doc