### PATENT ASSIGNMENT

**SUBMISSION TYPE:** NEW ASSIGNMENT  
**NATURE OF CONVEYANCE:** ASSIGNMENT

### CONVEYING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Execution Date</th>
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<tbody>
<tr>
<td>GIOVANNI CHERUBINI</td>
<td>02/22/2010</td>
</tr>
<tr>
<td>ROBERT A HUTCHINS</td>
<td>02/15/2010</td>
</tr>
<tr>
<td>JENS JELITTO</td>
<td>02/19/2010</td>
</tr>
<tr>
<td>MARK A LANTZ</td>
<td>02/19/2010</td>
</tr>
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### RECEIVING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>INTERNATIONAL BUSINESS MACHINES CORPORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address</td>
<td>NEW ORCHARD ROAD</td>
</tr>
<tr>
<td>City</td>
<td>ARMONK</td>
</tr>
<tr>
<td>State/Country</td>
<td>NEW YORK</td>
</tr>
<tr>
<td>Postal Code</td>
<td>10504</td>
</tr>
</tbody>
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**PROPERTY NUMBERS Total: 1**

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<tr>
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<tr>
<td>Application Number</td>
<td>12712039</td>
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</table>

### CORRESPONDENCE DATA

- **Fax Number:** (520)760-6651  
- **Correspondence will be sent via US Mail when the fax attempt is unsuccessful.**  
- **Phone:** 5207606629  
- **Email:** JH HOLCOMBE@COX.NET  
- **Correspondent Name:** IBM CORPORATION  
- **Address Line 1:** 9000 S. RITA ROAD  
- **Address Line 2:** IP LAW (90A/9032)  
- **Address Line 4:** TUCSON, ARIZONA 85744

**ATTORNEY DOCKET NUMBER:** TUC920090106US1  
**NAME OF SUBMITTER:** JOHN H. HOLCOMBE

Total Attachments: 12
US Department of Commerce
Patent & Trademark Office

RECORDATION FORM COVER SHEET
PATENTS ONLY

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

1. Name of conveying party(ies):
   Giovanni Cherubini
   Robert A. Hutchins
   Jens Jelitto
   Mark A. Lantz

2. Name and address of receiving party(ies):
   Name: International Business Machines Corporation
   Street Address: New Orchard Road
   City: Armonk State: NY ZIP: 10504

Additional name(s) of conveying party(ies) attached Yes XX No
Additional name(s) & address(es) attached? Yes XX No

3. Nature of conveyance:
   XX Assignment Execution Date: 02/22/2010; 02/15/2010; 02/19/2010; 02/19/2010

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

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

A. Patent Application No.(s)
   12/712,039

Additional numbers attached? Yes XX No

5. Name and address of party to whom correspondence concerning document should be mailed:
   Name: Jennifer M. Anda
   Address: IBM Corporation
   Intellectual Property Law
   9000 S. Rita Road(90A/9032)
   Tucson, Arizona 85744

6. Total Number of applications and patents involved: One

7. Total fee (37 CFR 3.41)......... $ 40.00
   Enclosed
   XX Authorized to be charged to deposit account
   (Duplicate Copy Attached)

8. Deposit Account Number: 09-0449

   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.

   John H. Holcombe Date Mar. 12, 2018

Total number of pages including cover sheet, attachments, and document: /-12-/
TO THE HONORABLE COMMISSIONER FOR PATENTS: PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

1. Name of conveying party(ies):
   GIOVANNI CHERUBINI
   ROBERT A. HUTCHINS
   JENS JELITTO
   MARK A. LANTZ

2. Name and address of receiving party(ies):
   Name: International Business Machines Corporation
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   City: Armonk
   State: NY
   ZIP: 10504

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   B. Patent No.(s)
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   John H. Holcombe
   Date Mar. 12, 2016

   Total number of pages including cover sheet, attachments, and document: /-12-/
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: SYNCHRONIZATION OF SYMMETRIC TIMING BASED SERVO BURSTS

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: 12/712,039 (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.

[Inventor Signature Pages Follow]
Executed by Inventor 1 of 4

Signature: __________________________ Date: ______________________

GIOVANNI CHERUBINI
Executed by Inventor 3 of 4

Signature: ___________________________ Date: ___________________________

JENS JELITTO
ASSIGNMENT

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

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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.

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[Inventor Signature Pages Follow]

Page 1 of 5
Signature: Giovanni Cherubini  Date: 2/2/2010
GIOVANNI CHERUBINI
Executed by Inventor 2 of 4

Signature: ________________________________ Date: ____________________

ROBERT A. HUTCHINS
Signature: [Signature]  Date: 19.2.2010
Signature: __________________________ Date: 19 Feb 2010
MARK A. LANTZ