# 506124473 06/25/2020

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6171198

| SUBMISSION TYPE:  |          | NEW ASSIGNMENT  |                  |
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| NATURE OF CONVEYAN  |          |   |                  |
| CONVEYING PARTY DA  |          |   |                  |
|   |          | Name  | Execution Date   |
| MIN LI  |          |   | 06/21/2018       |
| JOHN A. BIVENS  |          |   | 07/16/2018       |
| RUCHI MAHINDRU  |          |   | 07/16/2018       |
| VALENTINA SALAPURA  |          |   | 07/16/2018       |
| EUGEN SCHENFELD   |          |   | 06/25/2020       |
| RECEIVING PARTY DA  | ΤΔ       |   |                  |
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| State/Country:  | NEW Y    | ORK   |                  |
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|   | Total: 1 |   |                  |
| Property Type   |          | Number  |                  |
| Application Number:   |          | 16141863  |                  |
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| <i>using a fax number, if p</i><br>Phone:<br>Email:<br>Correspondent Name:<br>Address Line 1:   | provideo | <b>I; if that is unsuccessful, it will be s</b><br>4803930734<br>docketing@gs-iplaw.com<br>GRIFFITHS & SEATON PLLC (IBM)<br>4660 SLATER ROAD  |                  |
| using a fax number, if p<br>Phone:<br>Email:<br>Correspondent Name:<br>Address Line 1:<br>Address Line 4:   | provideo | I; if that is unsuccessful, it will be s<br>4803930734<br>docketing@gs-iplaw.com<br>GRIFFITHS & SEATON PLLC (IBM)<br>4660 SLATER ROAD<br>ST. PAUL, MINNESOTA 55122  |                  |
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| using a fax number, if p<br>Phone:<br>Email:<br>Correspondent Name:<br>Address Line 1:<br>Address Line 4:   | provideo | I; if that is unsuccessful, it will be s<br>4803930734<br>docketing@gs-iplaw.com<br>GRIFFITHS & SEATON PLLC (IBM)<br>4660 SLATER ROAD<br>ST. PAUL, MINNESOTA 55122<br>P201706209US01 (1039)<br>JOHN A. GRIFFITHS<br>/JOHN A. GRIFFITHS/ | ent via US Mail. |

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### DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

#### Title of Invention: DYNAMIC MEMORY-BASED COMMUNICATION IN DISAGGREGATED DATACENTERS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

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;

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> PATENT REEL: 053036 FRAME: 0202

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 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.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: Min LI

Mont 6/21/2018 Signature: Date:

(2) Legal Name of Inventor: John A. BIVENS

| Signature: | Date: |
|------------|-------|

(3) Legal Name of Inventor: Ruchi MAHINDRU

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

(4) Legal Name of Inventor: Valentina SALAPURA

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

[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]

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 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.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: Min LI

Signature: Date: (2) Legal Name of Inventor: John A. BIVENS Signature: Date: (3) Legal Name of Inventor: Ruchi MAHINDRU

07/161 Date: Signature:

(4) Legal Name of Inventor: Valentina SALAPURA

\_Date:\_\_H in Signature:

[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]

PATENT REEL: 053036 FRAME: 0204 (5) Legal Name of Inventor: Eugen SCHENFELD

| Signature: | Date. |  |
|------------|-------|--|
| Signature. | Date  |  |

[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]

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|--|---|--------------------------------|--|--------------------------|
| SUE  | STITUTE STATEMENT IN I<br>OR DESIGN PATENT APP      |                                |  |                          |
| Title of<br>Invention  | DYNAMIC MEMORY-BA                                   |                                | ΓΙΟΝ                                   |                          |
| This stateme   | ent is directed to:                                 |                                |  |                          |
| The att  | ached application,                                  |                                |  |                          |
| OR   |   |                                |  |                          |
| United   | States application or PCT international             | application number             | filed on _                             |                          |
| LEGAL NA   | ME of inventor to whom this su                      | bstitute statement appli       | ies:                                   |                          |
| ( <i>E.g.</i> , Given<br>Eugen So  | Name (first and middle (if any)) and F<br>chenfeld  | amily Name or Surname)         |  |                          |
|  | except for a deceased or legally incapa             |                                |  |                          |
| South<br><sub>City</sub>   | Brunswick   | NJ<br>State                    | US<br>Country                          |                          |
|  | ss (except for a deceased or legally incapa         |                                |  |                          |
| 28 Esse  | x Drive   |                                |  |                          |
| South<br><sub>City</sub>   | Brunswick   | NJ<br>State                    | 08852<br><sub>Zip</sub>                | US<br><sub>Country</sub> |
| l believe the<br>in the ap   | above-named inventor or joint invento<br>plication. | or to be the original inventor | or an original joint inventor          | of a claimed invention   |
| The above-   | dentified application was made or auth              | orized to be made by me.       |  |                          |
| I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or<br>imprisonment of not more than five (5) years, or both. |   |                                |  |                          |
| Relationsh   | ip to the inventor to whom this substitu            | ite statement applies:         |  |                          |
|  | egal Representative (for deceased or l              | egally incapacitated invento   | r only),                               |                          |
| <b>A</b>   | ssignee,  |                                |  |                          |
| Person to whom the inventor is under an obligation to assign,  |   |                                |  |                          |
| Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or  |   |                                |  |                          |
|  | bint Inventor.                                      |                                |  |                          |

#### [Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| SUBSTITUTE STATEMENT   |  |                         |                           |  |
|--|--|-------------------------|---------------------------|--|
| Circumstances permitting execution of this substitute statement:   |  |                         |                           |  |
| Inventor is deceased,  | Inventor is deceased,  |                         |                           |  |
| Inventor is under legal incapacity,  |  |                         |                           |  |
| Inventor cannot be found or reached after diligent effort, or  |  |                         |                           |  |
| Inventor has refused to execute the oath or declaration under 37 CFR 1.63.   |  |                         |                           |  |
| If there are joint inventors, please check the appr  | If there are joint inventors, please check the appropriate box below:  |                         |                           |  |
| An application data sheet under 37 CFR or is currently submitted.  | An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been or is currently submitted.  |                         |                           |  |
| OR   |  |                         |                           |  |
| Statement Supplemental Sheet (PTO/AI   | An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b). |                         |                           |  |
|  | WARNING:   |                         |                           |  |
| Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. |  |                         |                           |  |
| PERSON EXECUTING THIS SUBSTITUTE STATE   | EMENT:   |                         |                           |  |
| Timothy M. Farrell, Reg. No. 37,3<br>Name:   | 321  |                         | Date (Optional):          |  |
| Signature: Julity r. Junil   | Signature: John A. Tomell  |                         |                           |  |
| APPLICANT NĂME AND TITLE OF PERSON EXE   |  |                         |                           |  |
|  | If the applicant is a juristic entity, list the applicant name and the title of the signer:  |                         |                           |  |
| Applicant Name:  | INTERNATIONAL BUSINESS MACHINES CORPORATION  |                         |                           |  |
|  |  |                         |                           |  |
| This Substitute Statement: The signer, whose title is supplied above, is authorized to act on behalf of the applicant.   |  |                         |                           |  |
| Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent):  |  |                         |                           |  |
| Alpine   | UT<br>State  | US<br>Country           |                           |  |
| City Country<br>Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)<br>357 N. Main Street   |  |                         |                           |  |
| Alpine<br><sup>City</sup> sta  | UT   | 84004<br><sub>Zip</sub> | US<br>Country             |  |
| Note: Use an additional PTO/AIA/02 form for each after diligent effort, or has refused to execute the o  | inventor who is deceased, le   |                         | annot be found or reached |  |

[Page 2 of 2]

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

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- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
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