

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5665995

|   |   |
|---|---|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                              |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                                  |
| <b>CONVEYING PARTY DATA</b>   |   |
| <b>Name</b>   | <b>Execution Date</b>                       |
| BALAN SUBRAMANIAN   | 12/27/2002                                  |
| CHRISTIAN LEE HUNT  | 04/16/2019                                  |
| DENILSON NASTACIO   | 04/18/2019                                  |
| ROGER MICHAEL MELI  | 04/14/2019                                  |
| <b>RECEIVING PARTY DATA</b>   |   |
| <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>  |   |
| <b>Property Type</b>  | <b>Number</b>                               |
| <b>Application Number:</b>  | 16539246                                    |
| <b>CORRESPONDENCE DATA</b>  |   |
| <b>Fax Number:</b>  | (845)592-6092                               |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |   |
| <b>Phone:</b>   | 607-429-5281                                |
| <b>Email:</b>   | fdciplaw@us.ibm.com                         |
| <b>Correspondent Name:</b>  | IBM CORP - FISHKILL DRAFTING CENTER         |
| <b>Address Line 1:</b>  | 1701 NORTH STREET                           |
| <b>Address Line 2:</b>  | B/40-3                                      |
| <b>Address Line 4:</b>  | ENDICOTT, NEW YORK 13760                    |
| <b>ATTORNEY DOCKET NUMBER:</b>  | RSW920090116US04                            |
| <b>NAME OF SUBMITTER:</b>   | NICOLE KUNIK                                |
| <b>SIGNATURE:</b>   | /Nicole Kunik/                              |
| <b>DATE SIGNED:</b>   | 08/13/2019                                  |
| This document serves as an Oath/Declaration (37 CFR 1.63).  |   |
| <b>Total Attachments: 8</b>   |   |

source=Balan Subramanian Confidentiality Agreement\_Redacted-1#page1.tif  
source=Balan Subramanian Confidentiality Agreement\_Redacted-1#page2.tif  
source=RSW920090116US3\_Assign-Dec-1#page1.tif  
source=RSW920090116US3\_Assign-Dec-1#page2.tif  
source=RSW920090116US3\_Assign-Dec-1#page3.tif  
source=RSW920090116US3\_Assign-Dec-1#page4.tif  
source=RSW920090116US3\_Assign-Dec-1#page5.tif  
source=RSW920090116US3\_Assign-Dec-1#page6.tif

12/27/02  
902624 12/27/02

In consideration of my employment or my continued employment by International Business Machines Corporation or one of its subsidiaries or affiliates (collectively, "IBM"), which I acknowledge is employment at will, and the payment to me of a salary or other compensation during my employment, I agree as follows:

1. I will not, without IBM's prior written permission, disclose to anyone outside of IBM or use in other than IBM's business, either during or after my employment, any confidential information or material of IBM, or any information or material received in confidence from third parties, such as suppliers or customers, by IBM. If I leave the employ of IBM, I will return to IBM all property in my possession belonging to IBM or received from any third party by IBM, whether or not containing confidential information, including, but not limited to, diskettes and other storage media, drawings, notebooks, reports, and other documents.

Confidential information or material of IBM is any information or material: (a) generated or collected by or utilized in the operations of IBM, received from any third party, or suggested by or resulting from any task assigned to me or work performed by me for or on behalf of IBM, and (b) which has not been made available generally to the public, whether or not expressed in a document or other medium and whether or not marked "IBM Confidential" or with any similar legend of IBM or any third party. Confidential information or material may include, but is not limited to, information and material related to past, present and future development, manufacturing activities, or personnel matters; marketing and business plans; technical specifications, drawings, and designs; prototypes; computer programs; and databases.

2. During my employment with IBM and for one year following the termination of my employment for any reason, I will not directly or indirectly: a) hire, solicit or make an offer to any employee of IBM to be employed or perform services outside of IBM; or b) solicit for competitive business purposes any customer of IBM with which I have been involved as part of my job responsibilities during the last year of my employment with IBM. I acknowledge that IBM would suffer irreparable harm if I fail to comply with the foregoing.
3. I will not disclose to IBM, use in its business, or cause it to use, any information or material which is confidential to any third party unless authorized by IBM. In addition, I will not incorporate into any product used and/or sold by IBM, any copyrighted materials of any third party, unless authorized by IBM.
4. I will comply, and do all things necessary for IBM to comply, (a) with the laws and regulations of all governments under which IBM does business, (b) with provisions of contracts between any such government or its contractors and IBM that relate to intellectual property or to the safeguarding of information, and (c) with all of the IBM Business Conduct Guidelines as amended from time to time.
5. I hereby assign to IBM my entire right, title, and interest in any idea, concept, technique, invention, design (whether the design is ornamental or otherwise), computer programs and related documentation, other works of authorship, mask works, and the like (all hereinafter called "Developments"), hereafter made, conceived, written, or otherwise created solely or jointly by me, whether or not such Developments are patentable, subject to copyright protection or susceptible to any other form of protection which: (a) relate to the actual or anticipated business or research or development of IBM or its subsidiaries or (b) are suggested by or result from any task assigned to me or work performed by me for or on behalf of IBM or its subsidiaries.

In the case of any "other works of authorship", such assignment shall be limited to those works of authorship which meet both conditions (a) and (b) above.

*California Notice: For Developments subject to California law, notwithstanding anything above to the contrary, I understand that this assignment does not apply to a Development which qualifies fully under the provisions of Section 2870 of the California Labor Code.*

The above provisions concerning assignment of Developments apply to Developments created while I am employed by IBM in an executive, managerial, professional, product or technical planning, technical, research, programming, or engineering capacity (including development, product, manufacturing, systems, applied science, and field engineering).

Excluded are any Developments that I cannot assign to IBM because of prior agreement with \_\_\_\_\_

which is effective until \_\_\_\_\_ (Give name and date or write "none").

I acknowledge that the copyright and any other intellectual property right in designs, computer programs and related documentation, and other works of authorship, created within the scope of my employment, belong to IBM by operation of law.

6. In connection with any of the Developments assigned by Paragraph 5: (a) I will promptly disclose them in writing to the IBM Intellectual Property Law Department; and (b) I will, on IBM's request, promptly execute a specific assignment of title to IBM or its designee, and do anything else reasonably necessary to enable IBM or such designee to secure a patent, copyright or other form of protection therefor in the United States and in other countries. In addition, I agree to promptly notify the IBM Intellectual Property Law Department in writing of any patent or patent application in which I am an inventor but which is not assigned by Paragraph 5 and which discloses or claims any Development made, conceived, or written while I am employed by IBM.
7. IBM and its licensees, successors, or assigns (direct or indirect) are not required to designate me as an author of any Development which is subject to Paragraph 5, when it is distributed, publicly or otherwise, or to secure my permission to change or otherwise alter its integrity. I hereby waive and release, to the extent permitted by law, all rights in and to such designation and any rights I may have concerning modifications of such Developments.

I understand that any rights, waivers, releases, and assignments herein granted and made by me are freely assignable by IBM and are for the benefit of IBM and its subsidiaries, licensees, successors, and assigns.

8. I have identified all Developments not assigned by Paragraph 5 in which I have any right, title, or interest, and which were previously made or conceived solely or jointly by me, or written wholly or in part by me, but neither published nor filed in any patent office.

If I do not have any to identify, I have written "none" on this line:

9. The term "subsidiaries", as used in this Agreement, includes any entity owned or controlled, directly or indirectly, by International Business Machines Corporation.
10. The term "employment at will", as used in this Agreement, means the employment at the mutual consent of both me and IBM. Accordingly, either IBM or I can terminate the employment relationship at will, at any time, with or without cause or advance notice.

ZM04-3087-14 01.01

PERSONNEL COPY

11. This Agreement supersedes all previous oral or written communications, representations, understandings, undertakings, or agreements relating to the subject matter hereof. Any waiver of a term in this Agreement and any amendment to this Agreement may only be made in a writing signed by the Senior Vice President of Human Resources for International Business Machines Corporation and myself.
12. This Agreement shall be governed by the laws of the State of New York, as if it had been executed and fully performed within such state. If any provision of this Agreement is unenforceable at law, the remainder shall remain in effect.
13. I recognize that any violation of my obligations described herein can result in disciplinary action, including dismissal from IBM, and any other appropriate relief for IBM including money damages, equitable relief and attorneys fees.

My Agreement, and my acknowledgment of receipt of a copy of this Agreement, are indicated by my signature below.

|  |                      |                 |                 |
|--|----------------------|-----------------|-----------------|
| <u>BALAN SUBRAMANTAN</u>                     | <u>[Signature]</u>   | <u>902624</u>   | <u>12/27/02</u> |
| Employee's Full Name (please print)          | Employee's Signature | Employee Serial | Date            |
| <u>ADITI SAKASHOUR</u>                       | <u>[Signature]</u>   | <u>12/27/02</u> | <u>12/27/02</u> |
| Employee's Manager / IBM Rep. (please print) | IBM Signature        |                 |                 |

(If you have entered "none" in Paragraph 8, do not fill in this section.)

The following are Developments not covered by Paragraph 5, in which I have any right, title, or interest, and which were previously conceived or written either wholly or in part by me, but neither published nor filed in any Patent Office:

Description of Documents (if applicable):

| Title on Document | Date on Document | Name of Witness on Document |
|-------------------|------------------|-----------------------------|
| _____             | _____            | _____                       |
| _____             | _____            | _____                       |
| _____             | _____            | _____                       |
| _____             | _____            | _____                       |
| _____             | _____            | _____                       |

Signed: \_\_\_\_\_  
Employee's Full Name

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

(It is in your interest to establish that any of the above were made, conceived, or written before your employment by IBM. You should not disclose them in detail, but identify them only by the titles and dates of documents describing them. If you wish to interest IBM in any of them, you may contact the Intellectual Property and Licensing Department at Corporate Headquarters, which will provide you with instructions for submitting them to IBM.)

ZM04-3087-14 01.01

PERSONNEL COPY

**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: INBAND DATA GATHERING WITH DYNAMIC INTERMEDIARY  
ROUTE SELECTIONS**

As a below named and undersigned inventor, I hereby declare that:

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

☐ United States application or PCT international application number \_\_\_\_\_  
filed on \_\_\_\_\_

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 C.F.R. § 1.56.

Whereas, I ("ASSIGNOR") 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 (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

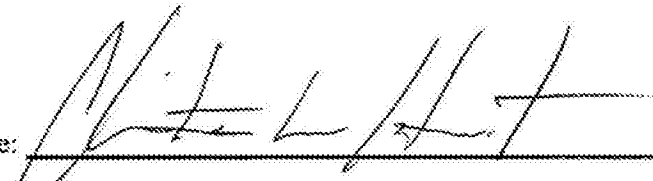
Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide 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, I hereby authorize and request 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 the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, 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 me had this Assignment not been made; and I agree 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 the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby grant the ASSIGNEE, 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.

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

(1) Legal Name of Inventor: Balan Subramanian

Signature:  \_\_\_\_\_ Date: 4/16/19

(2) Legal Name of Inventor: Christian Lee Hunt

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

(3) Legal Name of Inventor: Denilson Nastacio

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

(4) Legal Name of Inventor: Roger Michael Meli

**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: INBAND DATA GATHERING WITH DYNAMIC INTERMEDIARY ROUTE SELECTIONS**

As a below named and undersigned inventor, I hereby declare that:

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

☐ United States application or PCT international application number \_\_\_\_\_  
filed on \_\_\_\_\_

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 C.F.R. § 1.56.

Whereas, I ("ASSIGNOR") 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 (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my 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, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my 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, I hereby authorize and request 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 the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, 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 me had this Assignment not been made; and I agree 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 the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby grant the ASSIGNEE, 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.

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

(1) Legal Name of Inventor: Balan Subramanian

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

(2) Legal Name of Inventor: Christian Lee Hunt

Signature:  \_\_\_\_\_ Date: 04-18-19

(3) Legal Name of Inventor: Denilson Nastacio

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

(4) Legal Name of Inventor: Roger Michael Meli



**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: INBAND DATA GATHERING WITH DYNAMIC INTERMEDIARY ROUTE SELECTIONS**

As a below named and undersigned inventor, I hereby declare that:

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

☐ United States application or PCT international application number \_\_\_\_\_  
filed on \_\_\_\_\_

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 C.F.R. § 1.56.

Whereas, I ("ASSIGNOR") 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 (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my 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, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my 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, I hereby authorize and request 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 the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, 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 me had this Assignment not been made; and I agree 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 the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby grant the ASSIGNEE, 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.

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

(1) Legal Name of Inventor: Balan Subramanian

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

(2) Legal Name of Inventor: Christian Lee Hunt

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

(3) Legal Name of Inventor: Denilson Nastacio

Signature: R. M. Meli Date: 4/14/2019

(4) Legal Name of Inventor: Roger Michael Meli