### 506937781 10/22/2021

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6984619

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the FOURTH INVENTOR'S NAME AND EXECUTION DATE previously recorded on Reel 048170 Frame 0089. Assignor(s) hereby confirms the INVENTOR'S NAME CHANGE FROM KARRTHIK K G TO KARRTHIK KALAGA GOPALAKRISHNAN EXECUTION DATE CHANGE FROM 12/18/2018 TO 10/12/2021.

#### **CONVEYING PARTY DATA**

Name	Execution Date
RAVINDRA SURE	12/18/2018
SANJIV KUMAR	12/18/2018
SHASHIKANT BANERJEE	12/18/2018
KARRTHIK KALAGA GOPALAKRISHNAN	10/12/2021

#### **RECEIVING PARTY DATA**

Name:	INTERNATIONAL BUSINESS MACHINES CORPORATION
Street Address:	NEW ORCHARD ROAD
City:	ARMONK
State/Country:	NEW YORK
Postal Code:	10504

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16224655

#### **CORRESPONDENCE DATA**

**Fax Number:** (408)971-4660

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.

**Phone:** 4089712573

Email: alma@zilkakotab.com
Correspondent Name: ZILKA-KOTAB, PC
Address Line 1: 1155 N. 1ST ST
Address Line 2: SUITE 105

Address Line 4: SAN JOSE, CALIFORNIA 95112

ATTORNEY DOCKET NUMBER: P201701169US01/TUC1P486

NAME OF SUBMITTER: DOMINIC M. KOTAB

SIGNATURE: //Dominic M. Kotab/

DATE SIGNED: 10/22/2021

PATENT 506937781 REEL: 057891 FRAME: 0099

This document serves as an Oath/Declaration (37 CFR 1.63).

#### **Total Attachments: 9**

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PATENT REEL: 057891 FRAME: 0100

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
RAVINDRA SURE	12/18/2018
	12/18/2018
	12/18/2018
KARRTHIK K G	12/18/2018

#### RECEIVING PARTY DATA

· il il	NTERNATIONAL BUSINESS MACHINES CORPORATION
Street Address: N	NEW ORCHARD ROAD
City: A	ARMONK
State/Country: N	NEW YORK
Postal Code: 10	0504

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	16224655	

## CORRESPONDENCE DATA

 Fax Number:
 (408)971-4660

 Phone:
 (408) 971-2573

 Email:
 alma@zilkakotab.com

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.

Correspondent Name:ZILKA-KOTAB, PCAddress Line 1:1155 N. 1ST ST.Address Line 2:SUITE 105

Address Line 4: SAN JOSE, CALIFORNIA 95112

ATTORNEY DOCKET NUMBER:	P201701169US01/TUC1P486
NAME OF SUBMITTER:	DOMINIC M. KOTAB
Signature:	/Dominic M. Kotab/
Date:	01/29/2019

PATENT REEL: 057891 FRAME: 01/23/2019, 2:08 PM

This document serves as an Oath/Declaration (37 CFR 1.63). **Total Attachments: 5**  $source = TUC1P486 - P201701169US01\_TUC1P486\_Executed Assign DecForm\_12-18-2018\#page1.tif$  $source = TUC1P486 - P201701169US01\_TUC1P486\_Executed Assign DecForm\_12-18-2018\#page 2.tif$ source=TUC1P486 - P201701169US01\_TUC1P486\_ExecutedAssignDecForm\_12-18-2018#page3.tif source=TUC1P486 - P201701169US01\_TUC1P486\_ExecutedAssignDecForm\_12-18-2018#page4.tif source=TUC1P486 - P201701169US01\_TUC1P486\_ExecutedAssignDecForm\_12-18-2018#page5.tif RECEIPT INFORMATION

**EPAS ID:** PAT5349044 **Receipt Date:** 01/29/2019

**PATENT** 

REEL: 057891 FRAME: 01,02,019, 2:08 PM

IBM DOCKET NUMBER: P201701169US01

# 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: Reducing failback performance duration in data replication systems

As a below named and undersigned inventor, I hereby declare that:
This declaration is directed to the application that was provided to me electronically on or about 2021-10-11.
[ ] 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.

> PATENT REEL: 057891 FRAME: 0103

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: Ravindra R Sure
Signature:
Date:
(2) Legal Name of Inventor: Sanjiv Kumar
Signature:
Date:
(3) Legal Name of Inventor: Shashikant Banerjee
Signature: E-SIGNED by /Karrthik Kalaga Gopalakrishnan/
Date: 2021-10-12

(4) Legal Name of Inventor: Karrthik Kalaga Gopalakrishnan

PATENT REEL: 057891 FRAME: 0104

## 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: REDUCING FAILBACK PERFORMANCE DURATION IN DATA REPLICATION SYSTEMS

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

1 United Sta	tes application	or PCT int	arnotional e	malication	n mumber		
filed on	ics approantor	TOLL CT RE	Cinational i	фисано	i manoci		
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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, 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

Page 1 of 2

## IBM DOCKET NUMBER: TUC1P486/P201701169U801

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 an 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.

Legal Name of Inventor:	Ravindra Sure	
Signature: S	Mary_	Date: 12/18/2018
Legal Name of Inventor:	Sanjiv Kumar	
Signature:		Date:
Legal Name of Inventor:	Shashikant Banerjee	
Signature:		Date:
Legal Name of Inventor:	Karnhik K G	
Signature		Date:
	Signature:  Legal Name of Inventor:  Signature:  Legal Name of Inventor:  Signature:	Legal Name of Inventor: Sanjiv Kumar  Signature:  Legal Name of Inventor: Shashikant Banerjee  Signature:  Legal Name of Inventor: Karrthik K G

#### IBM DOCKET NUMBER: TUCEP486/P201701169US01

estated parents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

Lacknowledge my prior and ongoing obligations to self, assign, and transfer my right; under this Assignment to the ASSIGNEE and an unaware of any reason why I may not have the full and measurable edition of the self, 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 steel in New York.

Usereby acknowledge that any writtel talse statement made in this declaration is punishable under 10 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

(	Legal Name of Inventor Ray	indra Sure
	Signature:	Date:
(2)	Legal Name of inventor: San	jiy Kumar
	Signifunci Laurille	Date: <u>18-12-2618</u>
(3)	Legal Name of Inventor: Sha	shikant Banerjee
	Signature:	Date:
(4)	Legal Name of Investor - Kar	rthik K G
	Signature	Date

## IBM DOCKET NUMBER: TUC1P486/P201701169US01

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.

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(1)	Legal Name of Inventor: Ravindra Sure	\$
	Signature:	Date;
(2)	Legal Name of Inventor: Sanjiv Kumar	•
	Signature:	
(3)	Legal Name of Inventor: Shashikant Banerjee	
	Signature: Sold Tuyer	Date: 18-12-2018
(4)	Legal Name of Inventor: Karrthik K G	· · · · · · · · · · · · · · · · · · ·
	Signature:	_ Date:

## IBM DOCKET NUMBER: TUC1P486/P201701169US01

related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

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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.

113	Legai Name	or inventor:	Ravindra Su	re Vertier	g visit i visi		er v î		
	Signature:				rum grituu selu. 	Date:	Jas8a 1 - 151		
4 48 17						a in Nasa-Afrika Yanus K			
(2)	Legal Name	of Inventor:	Sanjiv Kuma	ur .			er er er gen		
	Signature:	1. E. S.	and the second s			Date:		40 	5
(3)		of Inventor:	Shashikant E	anerjee				a di	-62
	Signature:	सन्दर्भ - स्टब्स्ट सून				Date:	en e	1	
		er en er er er Grenne far far Frank far							
(4)	Legal Name	of Inventor:	Karrthik K C				er er		
	Signature:		المن المحمد			Date:	18 12	2015	8