### 505591298 07/26/2019

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5638098

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
RAJEEV KUMAR GANDHI	12/05/2016
ROBERT KYLE MILLER	11/24/2016
PAUL MON-WAH CHAN	02/08/2017
JOHN JONG SUK LEE	01/16/2017
RAKESH THOMAS JETHWA	02/08/2017

### **RECEIVING PARTY DATA**

Name:	THE TORONTO-DOMINION BANK
Street Address:	66 WELLINGTON STREET WEST, TD TOWER, 12TH FLOOR
City:	TORONTO, ONTARIO
State/Country:	CANADA
Postal Code:	M5K 1A2

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

Property Type	Number
Application Number:	15290528

### **CORRESPONDENCE DATA**

**Fax Number:** (202)776-7801

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Correspondent Name: DUANE MORRIS LLP - DC

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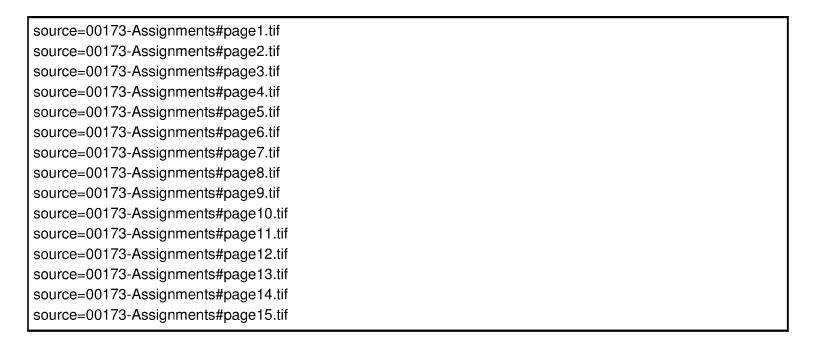
Address Line 4: WASHINGTON, D.C. 20004-2166

ATTORNEY DOCKET NUMBER:	G4144-00173
NAME OF SUBMITTER:	JAMES A. COOKE, III
SIGNATURE:	/James A. Cooke, III/
<b>DATE SIGNED:</b> 07/26/2019	

**Total Attachments: 15** 

PATENT REEL: 049869 FRAME: 0223

505591298



Insert Name(s) of

Rajeev Kumar GANDHI

Inventor(s) Robert Kyle MILLER

Paul Mon-Wah CHAN

John Jong Suk LEE

Rakesh Thomas JETHWA

In consideration for good and valuable considerations, the receipt of which is acknowledged by each of the undersigned, the undersigned agree to assign, and hereby do assign, transfer and set over to

Insert name of Assignee	The Toronto-Dominion Bank
Insert address of Assignee	66 Wellington Street West
	TD Tower, 12 <sup>th</sup> Floor
	Toronto, Ontario, M5K 1A2
	Canada

and its successors, legal representatives and assigns (hereinafter designated as the Assignee) the entire right, title and interest in the invention disclosed and/or claimed in the United States application identified below, as well as all applications for patent and any Letters Patent which may be granted therefore in the United States of America, Canada, and throughout the world, and in and to any and all divisions, continuations, continuations-in-part of said applications, or reissues or extensions of said patents or Letters Patent, and all rights under the International Convention for the Protection of Industrial Property:

Insert Identification of Improved Computing Device and Method

Application for the Temporal Arrangement of Data

Docket Number, or Foreign Docket No. G4144-00173

Application Number

Alternative identification Application Number: 15/290,528

for filed applications

Filed: October 11, 2016

The undersigned further agree to cooperate with the Assignee in every way possible and to do all affirmative acts, and to execute all papers which counsel for Assignee shall advise are necessary and/or desirable without charge to Assignee in connection with said applications including, without limitation, the execution of separate assignments or Oaths/Declarations in connection with such applications, claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to said Assignee, as Assignee of the entire interest, and hereby covenants that they have full right to convey the entire interest herein assigned, and that they have not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant to Mark C. Comtois, Reg. No. 46,285; D. Joseph English, Reg. No. 42,514; Patrick D. McPherson, Reg. No. 46,255, Patrick C. Muldoon, Reg. No. 47,343, and James A. Cooke, III, Reg. No. 69,338; and all others associated with Customer No. 39,290, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date Dec 5/2016 Signatu	re of Inventor Rajeev Kumar GHANDI GANDHI
Witnessed by: Name of Witness:	
Signature of Witness	Date

Date	Signature of Inventor
Date	Robert Kyle MILLER
Witnessed by:	
Name of Witness:	
Signature of Witness	Date
Date	Signature of InventorPaul Mon-Wah CHAN
Witnessed by:	
Name of Witness:	•
Signature of Witness	Date
Date	Signature of Inventor John Jong Suk LEE
Witnessed by:	
Name of Witness:	
Signature of Witness	Date
Date	Signature of Inventor Rakesh Thomas JETHWA
Witnessed by:	
Name of Witness:	
Signature of Witness	Date

Insert Name(s) of

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Insert Identification of <u>Improved Computing Device and Method</u>

Application <u>for the Temporal Arrangement of Data</u>

Docket Number, or Foreign Docket No. G4144-00173

Docket Number, or Foreign Docket No. <u>G4144-00173</u>

Application Number

Alternative identification Application Number: 15/290,528

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	Signature of Inventor	Rajeev Kumar GHANDI
Witnessed by:		2
Name of Witness:		
Signature of Witness	Date _	

2

Date_NDV-24-2016.	Signature of Inventor	Delet Kelo MILLED
Date NVV	Digitatia of my office	Robert Kyle MILLER
Witnessed by:  Name of Witness: NICOLEANARCZ  Signature of Witness (Company)	Date	Nov. 24. 2016
Date	Signature of Inventor	Paul Mon-Wah CHAN
Witnessed by:		
Name of Witness:		
Signature of Witness	Date _	
Date	Signature of Inventor	John Jong Suk LEE
Witnessed by:		
Name of Witness:		
Signature of Witness	Date _	
Date	Signature of Invento	r Rakesh Thomas JETHWA
Witnessed by:		
Name of Witness:		
Signature of Witness	Date	

Insert Name(s) of

Rajeev Kumar GANDHI

Inventor(s)

Robert Kyle MILLER

Paul Mon-Wah CHAN

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Insert Identification of Improved Computing Device and Method

Application for the Temporal Arrangement of Data

Docket Number, or Foreign Docket No. G4144-00173

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for filed	applications
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Date	Signature of Inventor	Rajeev Kumar GHANDI
Witnessed by: Name of Witness:		
Signature of Witness	Date _	

2

Dete	Signature of Inventor
Date	Robert Kyle MILLER
Witnessed by: Name of Witness:	
Signature of Witness	Date
Date	Signature of Inventor
Witnessed by:	
Name of Witness: 50hn 5 Cel	FEB 0 8 2017
Name of Witness: 50 h 15 Well Signature of Witness	Date
Date	Signature of Inventor John Jong Suk LEE
Witnessed by:	
Name of Witness:	
Signature of Witness	Date
Date	Signature of Inventor Rakesh Thomas JETHWA
Witnessed by:	
Name of Witness:	
Signature of Witness	Date

Insert Name(s) of

Alternative identification

Rajeev Kumar GANDHI

Inventor(s)

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Rakesh Thomas JETHWA

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Improved Computing Device and Method Insert Identification of for the Temporal Arrangement of Data Application Docket No. G4144-00173 Docket Number, or Foreign Application Number Application Number: 15/290,528

for filed a	pplications
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Date	Signature of Inventor	Rajeev Kumar GHANDI
Witnessed by: Name of Witness:		
Signature of Witness	Date _	

2

Date	Signature of Inventor _	
Date	F	Robert Kyle MILLER
Witnessed by:		
Name of Witness:		
Signature of Witness	Date	
Date	Signature of Inventor	Paul Mon-Wah CHAN
Witnessed by:		•
Name of Witness:		
Signature of Witness	Date	
DateJAN 1 6 2017	Signature of Inventor	John Jong Suk LEE
Witnessed by: Name of Witness: Nicole Awar	<u> </u>	
Witnessed by: Name of Witness:  Signature of Witness	Date_	JAN 1 6 2017
Date	Signature of Inventor	Rakesh Thomas JETHWA
Witnessed by:	•	
Name of Witness:		
Signature of Witness	Date _	

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Application <u>for the Temporal Arrangement of Data</u>

Docket Number, or Foreign Docket No. G4144-00173

Jocket Number, or Foreign Docket No. Giffinger

Application Number

Alternative identification Application Number: <u>15/290,528</u>

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D-4-	Signature of Inventor		
Date		Rajeev Kumar GHANDI	
Witnessed by:			
Name of Witness:			
Signature of Witness	Date _		

2

Date	Signature of Inventor	
	Ū	Robert Kyle MILLER
Witnessed by:		
Name of Witness:		
Signature of Witness	Date _	
Date	Signature of Inventor	•
-	-	Paul Mon-Wah CHAN
Witnessed by:		
Name of Witness:		·
Signature of Witness	Date _	
Date	Signature of Inventor	
		John Jong Suk LEE
Witnessed by:		
Name of Witness:		
Signature of Witness	· Date _	
FEB 0 8 2017 Date0 8 2017	Signature of Inventor	
		Rakesh Thomas JETHWA
Witnessed by: Name of Witness:  Name of Witness:  Witness	02	
Signature of Witness	Date _	FEB 0 8 2017

3