### 503634202 01/05/2016

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3680832

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
DAVINDAR S. GILL	01/09/2014
THERESE H. WILLIS	01/20/2014
LEKHA ANANTHAKRISHNAN	01/09/2014
EILEEN D. BRIDGES	01/08/2014
FRANCIS G. FARRO II	01/08/2014

### **RECEIVING PARTY DATA**

Name:	BANK OF AMERICA CORPORATION
Street Address:	MAILCODE: NC1-027-20-05
Internal Address:	214 NORTH TRYON STREET
City:	CHARLOTTE
State/Country:	NORTH CAROLINA
Postal Code:	28255

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

Property Type	Number
Application Number:	14987845

### **CORRESPONDENCE DATA**

**Fax Number:** (214)661-4559

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:** 214.953.6500

Email:ptomail1@bakerbotts.comCorrespondent Name:BAKER BOTTS L.L.P.Address Line 1:2001 ROSS AVENUE

Address Line 2: SUITE 600

Address Line 4: DALLAS, TEXAS 75201-2980

ATTORNEY DOCKET NUMBER:	015444.1100
NAME OF SUBMITTER:	JUDY BAGGETT
SIGNATURE:	/judy baggett/
DATE SIGNED:	01/05/2016

PATENT 503634202 REEL: 037408 FRAME: 0122

Total Attachments: 10
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Firm No.: 015444.0924 PMN: 5974US1

### COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	SYSTEM AND METHOD FOR CROSS-CHANNEL AUTHENTICATION
As the below	named inventor, I hereby declare that:
This declarati	\   The attached application, or
	United States application or PCT international application number
The above-ide	entified 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.
•	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by comment of not more than five (5) years, or both.

#### **ASSIGNMENT**

WHEREAS, I, <u>Davindar S. Gill</u> ("Assignor"), a citizen of <u>United States</u> (Country), residing in <u>Long Grove, Illinois</u> (City, State/Province) have invented the above invention. If the following lines are blank, the above application was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and application number below after they become known and prior to filing the recordation.

U.S. Application No. 14/987,845 filed <u>January 5, 20</u>16

WHEREAS, BANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of Delaware, and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the United States of America, and in any and all countries foreign thereto:

NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

PMN: 5974US1

### **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.

LEGAL NAME OF INVENTOR

Inventor: Davindar S. Gill

Date: January 9, 2014

Signature: Davindar S Gill

PMN: 5974US1

# COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	SYSTEM AND METHOD FOR CROSS-CHANNEL AUTHENTICATION
As the below	named Inventor, I hereby declare that:
This declaration is directed to:	[V] The arracised application of
	United States application or PCT international application number
The above-ide	entified 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.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by conment of not more than five (5) years, or both.
, , , , , , , , , , , , , , , , , , , ,	ASSIGNMENT
Florida (City, application w assignment, I,	Therese H. Willis ("Assignor"), a citizen of <u>United States of America</u> (Country), residing in <u>Apopka.</u> State/Province) have invented the above invention. If the following lines are blank, the above las filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and imber below after they become known and prior to filing the recordation.
	U.S. Application No. 14/987,845 filed January 5, 2016
of Delaware, a entire right, ti	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent ed in the United States of America, and in any and all countries foreign thereto:
salary or payma acknowledged assigns and leg of America and Letters Patent which such as inventions and reissues, reexa trademarks with useful to make official whose of Assignee, or its but at the experience of the control of the c	ORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including pent for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby. I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, gal representatives, the full and exclusive right, title and interest for the territory of the United States diall countries foreign thereto, and throughout the world and in space, (including the right to apply for in foreign countries in its own name and to claim any priority rights for such foreign applications to opplications are entitled under international conventions, treaties, or otherwise), in and to said in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, in and to all applications and Letters Patent granted therefor, and in and to all copyrights, the their associated goodwill, trade secrets, confidential information, and compilations, necessary or e.g., use, or self the inventions. I hereby authorize and request the Commissioner of Patents, and any duty it is to issue patents, to Issue all Letters Patent on said Inventions or resulting therefrom to said a successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that it to agree to, execute, and deliver this assignment. I agree that I will without further consideration, ense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all or me regarding said inventions whenever requested, and that I will execute all non-provisional, saue, reexamination, continuation and continuation-in-part applications, testify in any legal gn all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

Active 14838461

[Page 1 of 2]

PMN: 5974US1

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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.

LEGAL NAME OF INVENTOR

Inventor: Therese H Willis

Signature:

Date:

Active 14838461

[Page 2 of 2]

Firm No.: 015444.0924 PMN: 5974US1

# COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	SYSTEM AND METHOD FOR CROSS-CHANNEL AUTHENTICATION
As the below	named inventor, I hereby declare that:
This declaration is directed to:	I A I THE ALTACHED ADDICATION, OF
	United States application or PCT international application number
The above-ide	entified 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.
•	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both.
	ASSIGNMENT
Charlotte, Not the above appraisassignment, I,	Lekha Ananthakrishnan ("Assignor"), a citizen of <u>United States of America</u> (Country), residing in rth Carolina (City, State/Province) have invented the above invention. If the following lines are blank, blication was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and umber below after they become known and prior to filing the recordation.
	U.S. Application No. 14/987,845 filed January 5, 2016
of Delaware, entire right, t	INK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the litle and interest in and to the aforesaid inventions and in and to all applications and Letters Patent ted in the United States of America, and in any and all countries foreign thereto:
salary or payn acknowledged	ORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including nent for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby it. I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, gal representatives, the full and exclusive right, title and interest for the territory of the United States

of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

Firm No.: 015444.0924 PMN: 5974US1

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LEGAL NAME OF INVENTOR

Inventor: Lekha Ananthakrishnan

Date: 1/9/14

Signature:

Firm No.: 015444,0924 PMN: 5974US1

## COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN

APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)	
Title of Invention	SYSTEM AND METHOD FOR CROSS-CHANNEL AUTHENTICATION
As the below	named inventor, I hereby declare that:
This declaration is directed to:	I A Little attached annication or
	United States application or PCT international application number
The above-ide	antified application was made or authorized to be made by me.
I believe that I	I am the original inventor or an original joint inventor of a claimed invention in the application.
I hereby ackno fine or impriso	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both.
	ASSIGNMENT
<u>South Carolina</u> application wa assignment, I,	Eileen D. Bridges ("Assignor"), a citizen of <u>United States of America</u> (Country), residing in <u>Fort Mill, a</u> (City, State/Province) have invented the above invention. If the following lines are blank, the above as filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and imber below after they become known and prior to filing the recordation.
	U.S. Application No. 14/987,845 filed January 5, 2016
of Delaware, a entire right, tit	NK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the tle and interest in and to the aforesaid inventions and in and to all applications and Letters Patent ed in the United States of America, and in any and all countries foreign thereto:

NOW, THEREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal representatives, the full and exclusive right, title and interest for the territory of the United States of America and all countries foreign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade secrets, confidential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I agree that I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I will execute all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

PMN: 5974USI

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LEGAL NAME OF INVENTOR

Inventor: Eileen D. Bridges

Signature

Date: 1-3-14

PMN: 5974US1

# COMBINED DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	SYSTEM AND METHOD FOR CROSS-CHANNEL AUTHENTICATION	
As the below	named inventor, I hereby declare that:	
	This declaration Is directed to:	
	United States application or PCT international application number	
The above-ide	entified 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,	
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both.	
	ASSIGNMENT	
WHEREAS, I, Francis G. Farro II ("Assignor"), a citizen of <u>United States of America</u> (Country), residing in <u>Orlando, Florida</u> (City, State/Province) have invented the above invention. If the following lines are blank, the above application was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and application number below after they become known and prior to filing the recordation.		
	U.S. Application No. 14/987,845 January 5, 2016	
of Delaware, entire right,	ANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent ited in the United States of America, and in any and all countries foreign thereto:	
salary or payl acknowledge assigns and le of America ar Letters Paten which such inventions an reissues, resultate was ful to mal official whose Assignee, or is have full right at the exfacts known divisional, reproceedings,	FORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including ment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby d, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, agal representatives, the full and exclusive right, title and interest for the territory of the United States and all countries foreign thereto, and throughout the world and in space, (including the right to apply for it in foreign countries in its own name and to claim any priority rights for such foreign applications to applications are entitled under international conventions, treaties, or otherwise), in and to said in and to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, caminations, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, with their associated goodwill, trade secrets, confidential information, and compilations, necessary or ke, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any eduty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to said its successors and assigns, as assignee of the entire right, title and interest. I represent and warrant that that on agree to, execute, and deliver this assignment. I agree that I will without further consideration, pense of Assignee, communicate to said Assignee, or its successors, assigns, or nominees, any and all to me regarding said inventions whenever requested, and that I will execute all non-provisional, assue, reexamination, continuation and continuation-in-part applications, testify in any legal sign all lawful papers, make all rightful oaths, and generally do everything reasonable for said Assignee, s, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all	

[Page 1 of 2]

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LEGAL NAME OF INVENTOR

Inventor: Francis G. Farro II

Date: Jan 8, 2014

Signature:

[Page 2 of 2]

Active 14838461

RECORDED: 01/05/2016