503862367 06/08/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3909016

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KATHERINE DINTENFASS	05/19/2016
ALICIA C. JONES-MCFADDEN	05/19/2016
MATTHEW HSIEH	05/09/2016
VICTORIA L. DRAVNEEK	05/19/2016
CAMERON D. WADLEY	05/23/2016
JASON CHRISTIAN KARMELEK	05/31/2016
ANDREW SAAR	06/07/2016
AMBER J. QUITADAMO	06/02/2016

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15176458

CORRESPONDENCE DATA

Fax Number: (704)331-1159

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: 704-331-2359

Email: barbarabrown@mvalaw.com

Correspondent Name: MOORE AND VAN ALLEN PLLC FOR BOFA
Address Line 1: 3015 CARRINGTON MILL BOULEVARD, STE 400

Address Line 2: POST OFFICE BOX 13706

Address Line 4: RESEARCH TRIANGLE PA, NORTH CAROLINA 27709

ATTORNEY DOCKET NUMBER:	7199US1.014033.2818
NAME OF SUBMITTER:	ANUP SHRINIVASAN

PAIENI

503862367 REEL: 038846 FRAME: 0618

SIGNATURE:	/ANUP SHRINIVASAN/
DATE SIGNED:	06/08/2016
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 16	
source=014033-002818_CombinedDeclarationAssignments#page1.tif	
source=014033-002818_CombinedDeclarationAssignments#page2.tif	
source=014033-002818_CombinedDec	larationAssignments#page3.tif

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PATENT REEL: 038846 FRAME: 0619

PMN: 7199US1

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	FOR TRACKING RESOURCE ALLOCATION/USAGE	
As the below named inventor, I hereby declare that:			
This declarat	t⊘J.	The attached application, or	
		United States application or PCT international application number	
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 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.			
ASSIGNMENT			
WHEREAS, I,	Katherin	e Dintenfass ("Assignor"), a citizen of The United States of America (Country), residing in	

WHEREAS, I, Katherine Dintenfass ("Assignor"), a citizen of The United States of America (Country), residing in Lincoln, Rhode Island (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. 15/176,458 , filed 06-08-2016

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, reviews, 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: 7199US1

WARNING:

purposes are not retained in the application life and therefore	C CITC TIOT POSITETY COUNTRY TO
LEGAL NAME OF INVENTOR	
Inventor: KATHERINE DINTENFASS	Date: May 19 2016
Signature:	interfects
A CONTRACT OF THE PROPERTY OF	

PMN: 7199US1

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	SYST	EM F	OR TRACKING RESOURCE ALLOCATION/USAGE
As the below	name	ed inv	entor, I hereby declare that:
This declarat		\boxtimes	The attached application, or
			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 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.			
ASSIGNMENT			
			transfer of America (Country), reciding in

WHEREAS, I, Alicia C. Jones-McFadden ("Assignor"), a citizen of The United States of America (Country), residing in Fort Mill, South Carolina (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. <u>15/176,458</u>, filed <u>June 8, 2016</u>.

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, reviews, 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.

[Page 1 of 2]

PMN: 7199US1

WARNING:

purposes are not retained in the application life and therefore a	ne not publicly available.
LEGAL NAME OF INVENTOR	
Inventor: ALICIA C. JONES-MCFADDEN	Date: 5-19-2016
Signature:	

PMN: 7199US1

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 FOR TRACKING RESOURCE ALLOCATION/USAGE			
As the below	named inventor, I hereby declare that:			
This declarat	C			
	United States application or PCT international application number			
The above-io	dentified application was made or authorized to be made by me.			
I believe tha	t I am the original inventor or an original joint inventor of a claimed invention in the application.			
 hereby ack	nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by isonment of not more than five (5) years, or both.			
	ASSIGNMENT			
WHEREAS, I, Matthew Hsieh ("Assignor"), a citizen of The United States of America (Country), residing in Charlotte, North Carolina (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. <u>15/176,458</u> filed <u>June 8, 2016</u> .			
of Delaware	BANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State e, 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 anted in the United States of America, and in any and all countries foreign thereto:			
salary or pa acknowledg	REFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including syment for the making of inventions, or employee benefits, the recelpt and sufficiency of which is hereby ged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns expresentatives, the full and exclusive right, title and interest for the territory of the United States of all countries foreign thereto, and throughout the world and in space, (including the right to apply for it is all countries foreign the right to apply for its countries.			

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.

[Page 1 of 2]

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, reviews, 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

PMN: 7199US1

WARNING:

purposes are not retained in the application file and	therefore are not publicly available.	
LEGAL NAME OF INVENTOR		
Inventor: MATTHEW HSIEH	Date: 5/9/16	
Signature: Mattan		

PMN: 7199US1

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 FOR TRACKING RESOURCE ALLOCATION/USAGE	
	As the below named inventor, I hereby declare that:		
This declaration The attached application, or is directed to:			
		United States application or PCT international application number	
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 hereby ack	nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by sonment of not more than five (5) years, or both.	
	Title of Ampri	ASSIGNMENT	
WHEREAS, I, Victoria L. Dravneek ("Assignor"), a citizen of The United States of America (Country), residing in Charlotte, North Carolina (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. <u>15/176,458</u> , filed <u>June 8, 2016</u> .	
	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:		
	salary or pa acknowledg and legal re America an Letters Pate	EFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including yment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby ged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns presentatives, the full and exclusive right, title and interest for the territory of the United States of d all countries foreign thereto, and throughout the world and in space, (including the right to apply for ent 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 inventions to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues,	

[Page 1 of 2]

reexaminations, reviews, 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.: 014033-002818 PMN: 7199US1

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: VICTORIA L. DRAVNEEK

Date: 5/19/11/2____

Signature:

[Page 2 of 2]

PMN: 7199U\$1

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

	Invention SY	STEM FOR TRACKING RESOURCE ALLOCATION/USAGE		
•	As the below nar	As the below named inventor, I hereby declare that:		
	This declaration The attached application, or is directed to:			
		☐ United States application or PCT international application number		
	The above-ident	The above-identified application was made or authorized to be made by me.		
l	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.			
	hereby acknow fine or imprison	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.		
	,	ASSIGNMENT		
WHEREAS, I, Cameron D. Wadley ("Assignor"), a citizen of The United States of America (Country), residing in Waxhaw, North Carolina (City, State/Province) have invented the above invention. If the following lines are blank, th 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. <u>15/176,458</u> , filed <u>June 8, 2016</u> .			
	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:			
	salary or payme acknowledged.	ORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including ent 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, assigns sentatives, the full and exclusive right, title and interest for the territory of the United States of		

[Page 1 of 2]

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, reviews, 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.

PATENT REEL: 038846 FRAME: 0628 BankofAmerica-WestRK 5/24/2016 8:28:46 AM PAGE 9/011 888-294-5658

Firm No.: 014033-002818 PMN: 7199US1

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.

purposes are not retained in the application file and therefore are not publicly available.		
LEGAL NAME OF INVENTOR		
Inventor: CAMERON D. WADLEY	Date; 5/23/16	
Signature: C.W.		

[Page 2 of 2]

PMN: 7199US1

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 FOR TRACKING RESOURCE ALLOCATION/USAGE	
As the below	w named inventor, I hereby declare that:	
This declarat	to:	
	United States application or PCT international application number	
	identified application was made or authorized to be made by me.	
	nat I am the original inventor or an original joint inventor of a claimed invention in the application.	. .
I hereby ack	cknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 prisonment of not more than five (5) years, or both.	ру
	ASSIGNMENT	
Mendon, M above appli	, I, Jason Christian Karmelek ("Assignor"), a citizen of The United States of America (Country), residing Massachusetts (City, State/Province) have invented the above invention. If the following lines are blan dication was filed on even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this at, I, an assignor below, hereby authorize the attorneys for Bank of America to insert the filing date and number below after they become known and prior to filing the recordation.	
	U.S. Application No. <u>15/176,458</u> filed <u>June 8, 2016</u> .	
of Delawar entire right therefor gr	s, BANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the Sare, and having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the ht, title and interest in and to the aforesaid inventions and in and to all applications and Letters Patent granted in the United States of America, and in any and all countries foreign thereto:	
salary or packnowled and legal r America at Letters Patwhich such and in and reexaminat rademark useful to rofficial whasignee, have full r the expenknown to	EREFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including payment for the making of inventions, or employee benefits, the receipt and sufficiency of which is here adged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, as representatives, the full and exclusive right, title and interest for the territory of the United States of and all countries foreign thereto, and throughout the world and in space, (including the right to apply for atent in foreign countries in its own name and to claim any priority rights for such foreign applications are entitled under international conventions, treaties, or otherwise), in and to said inventions are entitled under international conventions, treaties, or otherwise), in and to said inventions, reviews, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights with their associated goodwill, trade secrets, confidential information, and compilations, necessary make, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any whose duty it is to issue patents, to issue all Letters Patent on said inventions or resulting therefrom to say the successors and assigns, as assignee of the entire right, title and interest. I represent and warrant of the successors are communicate to said Assignee, or its successors, assigns, or nominees, any and all fact on the regarding said inventions whenever requested, and that I will execute all non-provisional, division reexamination, continuation and continuation-in-part applications, testify in any legal proceedings, signapers, make all rightful oaths, and generally do everything reasonable for said Assignee, its successors, applications in all countries.	assigns for to to to to ts, or y said t that ! i, but a ts hal, hall

PMN: 7199US1

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: JASON CHRISTIAN KARMELEK

Date: 5/3//6

Signature: Ipa Quil

PMN: 7199US1

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 FOR TRACKING RESOURCE ALLOCATION/USAGE
As the below	named inventor, I hereby declare that:
This declarat	Na tite attached abbuggarant a
	United States application or PCT international application number
The above-io	dentified 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 hereby acknowledge that any willful false statement made in this declaration is punishable under 18 fine or imprisonment of not more than five (5) years, or both.	
Inte of intpr	ASSIGNMENT
WHEREAS, I, Andrew Saar ("Assignor"), a citizen of The United States of America (Country), residing in Sandy Springs, Georgia (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. <u>15/176,458</u> filed <u>June 8, 2016</u> .
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, THEF salary or pa acknowled and legal re America an Letters Pate which such and in and reexamina	REFORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including syment for the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby ged, I said Assignor, by these presents do sell, assign and transfer unto said Assignee, its successors, assigns expresentatives, the full and exclusive right, title and interest for the territory of the United States of all countries foreign thereto, and throughout the world and in space, (including the right to apply for ent 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 inventions to all applications and Letters Patent granted therefor, and all non-provisionals, divisionals, reissues, tions, reviews, continuations, continuation-in-parts and extensions thereof, and in and to all copyrights, is with their associated goodwill, trade secrets, confidential information, and compliations, necessary or take, use, or sell the inventions. I hereby authorize and request the Commissioner of Patents, and any

assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all countries.

[Page 1 of 2]

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,

PMN: 7199US1

WARNING:

purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR	
Inventor: ANDREW SAAR Signature:	Date: 75UNZ016

PMN: 7199US1

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 FOR TRACKING RESOURCE ALLOCATION/USAGE
As the below named inventor, I hereby declare that:	
This declarati	M The attached application, or
	United States application or PCT international application number
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 hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 fine or imprisonment of not more than five (5) years, or both.	
•	ASSIGNMENT
WHEREAS, I, Amber J. Quitadamo ("Assignor"), a citizen of The United States of America (Country), residing in Woodstock, Georgia (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. <u>15/176,458</u> , filed <u>June 8, 2016</u> .

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, reviews, 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: 7199US1

WARNING:

purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR	
Inventor: AMBER J. QUITADAMO	Date:June 2, 2016
Signature:	