PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5101705

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BRANDON SLOANE	08/07/2018
MICHAEL THOMAS MALARKEY	08/08/2018
JOHN BRIAN COSTELLO	08/16/2018
BRIAN DIEDERICH	08/07/2018

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:	16107386

CORRESPONDENCE DATA

Fax Number: (704)339-5800

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: 7043311000

Email: barbarabrown@mvalaw.com

Correspondent Name: MOORE & 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 PK, NORTH CAROLINA 27709

ATTORNEY DOCKET NUMBER:	8577US1.014033.3282
NAME OF SUBMITTER:	ANUP SHRINIVASAN
SIGNATURE:	/Anup Shrinivasan/
DATE SIGNED: 08/21/2018	
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT 505054950 REEL: 046652 FRAME: 0490

Total Attachments: 8

source=8577US1-3282-Combined Declaration-Assignments#page1.tif source=8577US1-3282-Combined Declaration-Assignments#page2.tif source=8577US1-3282-Combined Declaration-Assignments#page3.tif source=8577US1-3282-Combined Declaration-Assignments#page4.tif source=8577US1-3282-Combined Declaration-Assignments#page5.tif source=8577US1-3282-Combined Declaration-Assignments#page6.tif source=8577US1-3282-Combined Declaration-Assignments#page7.tif source=8577US1-3282-Combined Declaration-Assignments#page8.tif

PATENT REEL: 046652 FRAME: 0491

PMN: 8577US1

Title of Invention	EXPOSURE BASED SECURE ACCESS SYSTEM
As the below	named inventor, I hereby declare that:
This declaration is directed to:	M The attached 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 fine or tof not more than five (5) years, or both.
	ASSIGNMENT
California (Cit was filed on e below, hereb	Brandon Sloane ("Assignor"), a citizen of the United States of America (Country), residing in Santa Barbara, cy, State/Province) have invented the above invention. If the following lines are blank, the above application even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor y authorize the attorneys for Bank of America to insert the filing date and application number below after they and prior to filing the recordation.
	U.S. Application No. <u>16,107,386</u> filed <u>August 21, 2018</u> .
Delaware, an title and inter	ANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of d having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, rest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:
payment for said Assignor representative countries for countries in it entitled under Letters Patent continuation secrets, configuration authorize and Patent on said right, title and agree that I was successors, a will execute testify in any	FORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I , by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal ves, the full and exclusive right, title and interest for the territory of the United States of America and all eign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign ts own name and to claim any priority rights for such foreign applications to which such applications are er international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and it granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, in-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade idential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby d request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters id inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire id interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its issigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, regal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for e, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

Firm No.: 014033-003282 PMN: 8577US1

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 published available.

LEGAL NAME OF INVENTOR	
Inventor: BRANDON SLOANE	Date: 8/7/18
Signature: Mr. Signature	

PMN: 8577US1

Title of Invention	EXPOSURE BASED SECURE ACCESS SYSTEM		
As the below	named inventor, I hereby declare that:		
This declarati	This declaration		
	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 fine or tof not more than five (5) years, or both.		
**************************************	ASSIGNMENT		
Waxhaw, Nor above applica assignment, I	Michael Thomas Malarkey ("Assignor"), a citizen of the United States of America (Country), residing in th Carolina (City, State/Province) have invented the above invention. If the following lines are blank, the ation 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 application w after they become known and prior to filing the recordation.		
	U.S. Application No. 16,107,386 filed August 21, 2018 .		
Delaware, an title and inte	ANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of d having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, rest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the sof America, and in any and all countries foreign thereto:		
payment for said Assignor representative countries in it entitled under Letters Pater continuation secrets, confauthorize an Patent on saight, title an agree that I is successors, a will execute testify in any	FORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I , by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal ves, the full and exclusive right, title and interest for the territory of the United States of America and all eign thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign ts own name and to claim any priority rights for such foreign applications to which such applications are enternational conventions, treaties, or otherwise), in and to said inventions and in and to all applications and it granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, in-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade idential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby defended the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters id inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire di interest. I represent and warrant that I have full right to agree to, execute, and deliver this assignment. I will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its issigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, legal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for e, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all		

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purposes are not retained in the application file and th	nerefore are not publicly available.
LEGAL NAME OF INVENTOR	
Inventor: MICHAEL THOMAS MALARKEY	Date:Aug 8, 2018
Signature: <u>CC</u>	

PMN: 8577US1

Title of Invention	EXPOSURE BASED SECURE ACCESS SYSTEM
As the below	named inventor, I hereby declare that:
This declaration	Not the attached abblication, 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	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 fine or tof not more than five (5) years, or both.
	ASSIGNMENT
California (Cit was filed on e below, hereb	John Brian Costello ("Assignor"), a citizen of the United States of America (Country), residing in Long Beach, cy, State/Province) have invented the above invention. If the following lines are blank, the above application even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor y authorize the attorneys for Bank of America to insert the filing date and application number below after they we and prior to filing the recordation. U.S. Application No. 16,107,386 filed August 21, 2018
Delaware, an title and inte	ANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of d having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, rest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the of America, and in any and all countries foreign thereto:
payment for said Assignor representation countries for countries in it entitled under Letters Pater continuation secrets, conflauthorize an Patent on saright, title an agree that I was successors, a will execute testify in any	FORE, TO WHOM IT MAY CONCERN, be it known that, for good and valuable consideration, including salary or the making of inventions, or employee benefits, the receipt and sufficiency of which is hereby acknowledged, I by these presents do sell, assign and transfer unto said Assignee, its successors, assigns and legal lives, the full and exclusive right, title and interest for the territory of the United States of America and all leight thereto, and throughout the world and in space, (including the right to apply for Letters Patent in foreign its own name and to claim any priority rights for such foreign applications to which such applications are er international conventions, treaties, or otherwise), in and to said inventions and in and to all applications and its granted therefor, and all non-provisionals, divisionals, reissues, reexaminations, reviews, continuations, in-in-parts and extensions thereof, and in and to all copyrights, trademarks with their associated goodwill, trade idential information, and compilations, necessary or useful to make, use, or sell the inventions. I hereby directed request the Commissioner of Patents, and any official whose duty it is to issue patents, to issue all Letters id inventions or resulting therefrom to said Assignee, or its successors and assigns, as assignee of the entire will without further consideration, but at the expense of Assignee, communicate to said Assignee, or its issigns, or nominees, any and all facts known to me regarding said inventions whenever requested, and that I all non-provisional, divisional, reissue, reexamination, continuation and continuation-in-part applications, regal proceedings, sign all lawful papers, make all rightful oaths, and generally do everything reasonable for e, its successors, assigns, and nominees, to obtain and enforce proper patent protection for said inventions in all

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purposes are not retained in the application file and therefore	e are not publicly available.
LEGAL NAME OF INVENTOR	
Inventor: JOHN BRIAN COSTELLO	Date: 8/16/18
Signature: J. Brian Costello	

PMN: 8577US1

Title of Invention	EXPOSURE BASED SECURE ACCESS SYSTEM
As the below	named inventor, I hereby declare that:
This declaration is directed to:	1XI THE attached approacion (o)
	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 fine or tof not more than five (5) years, or both.
	ASSIGNMENT
California (Cit was filed on e below, hereb	Brian Diederich ("Assignor"), a citizen of the United States of America (Country), residing in Simi Valley, sy, State/Province) have invented the above invention. If the following lines are blank, the above application even date herewith, otherwise, to comply with 37 C.F.R. §3.21 for recordal of this assignment, I, an assignor y authorize the attorneys for Bank of America to insert the filing date and application number below after they and prior to filing the recordation.
,	U.S. Application No. 16,107,386 filed August 21, 2018
Delaware, an title and inte	ANK OF AMERICA CORPORATION ("Assignee"), a Corporation duly organized under the laws of the State of d having its offices and place of business at Charlotte, North Carolina, is desirous of acquiring the entire right, rest in and to the aforesaid inventions and in and to all applications and Letters Patent therefor granted in the 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 gene	

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purposes are not retained in the application me and therefore are not publicly divinible.	
LEGAL NAME OF INVENTOR	
Inventor: BRIAN DIEDERICH	Date: 08/07/2018
Signature: B. Dud	