506902266 10/01/2021

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL MATOVSKY	02/25/2019
RAVI SINGH	02/20/2019
ALEXANDER SHERKIN	02/20/2019

RECEIVING PARTY DATA

Name:	DARK MATTER L.L.C.	
Street Address:	#16B, LEVEL 16, EMIRATES TOWERS	
City:	DUBAI	
State/Country:	UNITED ARAB EMIRATES	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17485080

CORRESPONDENCE DATA

Fax Number: (408)971-4660

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (408) 971-2573

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

Address Line 4: SAN JOSE, CALIFORNIA 95112

ATTORNEY DOCKET NUMBER:	DARKP014A
NAME OF SUBMITTER:	JAMIE L. ROSSI
SIGNATURE:	/JAMIE ROSSI/
DATE SIGNED:	10/01/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

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PATENT REEL: 057688 FRAME: 0516 506902266

COMBINED DECLARATION (37 C.F.R. 1.63) AND ASSIGNMENT FOR UTILITY APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention: <u>SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR PERFORMING HARDWARE BACKED SYMMETRIC OPERATIONS FOR PASSWORD BASED AUTHENTICATION</u>

As a below no	imed and unders	igned inventor, i	hereby declare that:			
This declarati	on is directed to	the attached appl	ication, or (if follow:	ing box is checked):		
[] United	l States applicat	on or PCT intern	ational application n	umber	, filed on	
The above-ide	ntified applicati	on was made or a	uthorized to be made	e by me.		
I believe that	I am the original	inventor or an or	riginal joint inventor	of a claimed invention	on in the application.	
Thereby state	that I have revie	wed and understa	and the contems of th	e above-identified ap	pplication, including the cla	irns.
I acknowledge CFR § 1.56.	the duty to disc	lose information	which is material to	the patentability of t	his application in accordance	e with Title 37.
Whereas, I the application an	undersigned in d further identif	ventor have invenied by the Attorne	nted certain new and ey Docket Number p	useful improvement rovided above in the	s as set forth in the above-id header of this document.	entified patent
For good and	valuable conside	eration, the receip	or and sufficiency of	which is hereby ackn	owledged, I the undersigned	d inventor hereby:
Level 16, Emi interest in any	rates Towers, D and all improve	ubai, UNITED A ments and invent	RAB EMIRATES, (hereinafter referred t plication(s) based up	pany having a place of busing as "ASSIGNEE"), the enterm and Patent(s) (including	ire right, title and
2) Authorize division(s), co	and request the nitinuation(s), so	Commissioner of the Commissioner of Commission	f Patents to issue any issue(s) thereof to the	and all Letters Pate ASSIGNEE.	nts resulting from said appli	cation or any
necessary in c	onnection with i	he prosecution of	and, entirely at the / f said application, as tent of patents result	well as any derivativ	se, perform any acts which a re and applications thereof, a stions.	re reasonably foreign
 Agree the and other lega assigns. 	it the terms, covi I representative,	nants and conditi and shall be bind	ions of this assignme ling upon the invent	mt shall imure to the l m(s), as well as the ir	benefit of the Assignee, its : iventor's heirs, legal repress	accessors, assigns antatives and
5) Warrant a with this assig	and represent the	it I have not enter	ed, and will not ente	into any assignmen	t. contract, or understanding	that conflicts
I hereby acknowing imprisonment	owledge that any of not more that	/ willful false state n five (5) years, o	ement made in this d ir both.	eclaration is punisha	uble under 18 U.S.C. 1001 b	y fine or
Signed on the	date indicated b	eside my signatur	re:			
Legal Na	ne of Inventor:	Michael Mator	vsky	······································		
Signature:	Much	ael Ar			Date: <u>Гевща ц</u>	· 25) 2019

COMBINED DECLARATION (37 C.F.R. 1.63) AND ASSIGNMENT FOR UTILITY APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention: <u>SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR PERFORMING HARDWARE BACKED SYMMETRIC OPERATIONS FOR PASSWORD BASED AUTHENTICATION</u>

As a below named and undersigned inventor, I hereby declare that:
This declaration is directed to the attached application, or (if following box is checked):
[] 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 state that I have reviewed and understand the contents of the above-identified application, including the claims.
I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, CFR § 1.56.
Whereas, I the undersigned inventor have invented certain new and useful improvements as set forth in the above identified patent application and further identified by the Attorney Docket Number provided above in the header of this document.
For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged. I the undersigned inventor hereby
 Sell, assign and transfer to <u>Dark Matter L.L.C.</u>, an Emirian Limited Liability Company having a place of business at #16B, Level 16, Emirates Towers, Dubai, UNITED ARAB EMIRATES, (hereinafter referred to as "ASSIGNEE"), the entire right, title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIONEE.
3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assign and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
5) Warrant and represent that I have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.
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.
Signed on the date indicated beside my signature.
Legal Name of Inventor: Ravi Singh
Signature: 12 - Date: Feb 20, 2019

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PATENT REEL: 057688 FRAME: 0518

COMBINED DECLARATION (37 C.F.R. 1.63) AND ASSIGNMENT FOR UTILITY APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

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This declaration is directed to the attached application, or (if following box is checked):
United States application or PCT international application number, filed on
The above-identified application was made or authorized to be made by mc.
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims.
I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, CFR § 1.56.
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1) Sell, assign and transfer to <u>Dark Matter L.L.C.</u> , an Emirian Limited Liability Company having a place of business at #16B, Level 16, Emirates Towers, Dubai, UNITED ARAB EMIRATES, (hereinafter referred to as "ASSIGNEE"), the entire right, title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
 Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIGNEE.
3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
S) Warrant and represent that I have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.
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.
Signed on the date indicated beside my signature.
Legal Name of Inventor: Alexander Sherkin
Signature:

Page 1 of 1

RECORDED: 10/01/2021

PATENT REEL: 057688 FRAME: 0519