506985915 11/18/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7032754

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
AKBAR ANSARI	02/21/2019
THOMAS FAY	02/21/2019
ADNAN ALI LONE	02/21/2019

RECEIVING PARTY DATA

Name:	NASDAQ, INC.
Street Address:	151 W. 42ND STREET
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10036

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17530207

CORRESPONDENCE DATA

Fax Number: (703)816-4100

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: 703-816-4000

Email: PTOMAIL@nixonvan.com NIXON & VANDERHYE, PC Correspondent Name:

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Address Line 4: ARLINGTON, VIRGINIA 22203

ATTORNEY DOCKET NUMBER:	AC-4010-0605	
NAME OF SUBMITTER:	ADAM CHAPIN	
SIGNATURE:	/Adam Chapin/	
DATE SIGNED:	SIGNED: 11/18/2021	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 3

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> **PATENT REEL: 058156 FRAME: 0448** 506985915

Attorney Docker Number AC-4010-0472 First Named Inventor ANSARI, Akbar INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR USING AN APPLICATION DATA SHEET (37 CFR 1.76) OR				
First Named Inventor ANSARI, Akbar INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR USING AN APPLICATION DATA SHEET (37 CFR 1.76) Declaration Submitted With Initial Filing				
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Declaration Submitted With Initial Filing				
Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required)				
SYSTEMS AND METHODS OF DIGITAL CONTENT CERTIFICATION AND VERIFICATION USING CRYPTOGRAPHY AND BLOCKCHAIN				
(Title of the Invention)				
As a below named inventor, I hereby declare that:				
This declaration is directed to: the attached application, or in United States Application Number 16/251,570 filed 01/18/2019, or PCT International application number filed on				
The above-identified application was made or authorized to be made by me.				
I believe 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.				
WHEREAS, the undersigned (hereinefter ASSIGNOR), has made an invention in the Application identified above.				
WHEREAS, Nasdaq, Inc. (hereinafter ASSIGNEE), an entity, having an office and place of business at One Liberty Plaza, 165 Broadway, New York, New York United States 10006, is desirous of acquiring an interest therein;				
NOW, THEREFORE, in consideration of Ten Dellars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby cells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE's attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only				
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention;				
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and				
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of fille thereto in ASSIGNEE.				
AGREED and executed as noted below:				
LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname)				
Allina				
Inventor's Signature:				
Misher / 4/12 2/21/2019				
Winessed by: Name: Spyressykomer Thypgeratan				

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56. PATENT

Date:

Signature of witness

2019

REEL: 058156 FRAME: 0449

Doc code: Oath Document Description: Oath or declaration filed Attorney Docket Number AC-4010-0472 First Named Inventor ANSARI, Akbar INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) **USING AN APPLICATION DATA SHEET (37 CFR 1.76) Declaration Submitted With Initial Filing** OR \boxtimes Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required) SYSTEMS AND METHODS OF DIGITAL CONTENT CERTIFICATION AND VERIFICATION USING CRYPTOGRAPHY AND BLOCKCHAIN (Title of the Invention) As a below named inventor, I hereby declare that: This declaration is directed to: the attached application, or United States Application Number 16/251,570 filed 01/18/2019, or PCT International application number filed on The above-identified application was made or authorized to be made by me. I believe 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. WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. WHEREAS, Nasdag, Inc. (hereinafter ASSIGNEE), an entity, having an office and place of business at One Liberty Plaza, 165 Broadway, New York, New York United States 10006, is desirous of acquiring an interest therein; NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred: and ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by

ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.

AGREED and executed as noted below:

Legal Name of Additional Joint Inventor, if any:	
Legal Name of Additional Joint Inventor, if any: (E.g., Given Name (first and middle (if any)) and Family Name or Surnar	ne)
Thomas	FAY
Inventor's Signature: / /	Date: , ,
1 (ma) 45-	2/21/19
Witnessed by: Richard De Marinis	
Signature of witness: A Much	Date: 2/21/19

Bac cade: Oath Document Description: Oath or declaration filed Declaration Submitted With Initial Filing OR

Attorney Docket Number AC-4010-0472 First Named Inventor ANSARI, Akbar INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1,63) USING AN APPLICATION DATA SHEET (37 CFR 1.76) Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required) SYSTEMS AND METHODS OF DIGITAL CONTENT CERTIFICATION AND VERIFICATION USING CRYPTOGRAPHY AND BLOCKCHAIN (Title of the invention) As a below named inventor, I hereby declare that: This declaration is directed to: The attached application, or United States Application Number 16/251,570 filed 01/18/2019, or PCT International application number filed on The above identified application was made or authorized to be made by me. I believe I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful felise statement made in this declaration is punishable under 18 U.S.C. 1001 by line or imprisonment of not more than five (5) years, or both. WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. WHEREAS, Nasdag, Inc. (hereinafter ASSIGNEE), an entity, having an office and place of business at One Liberty Plaza, 165 Broadway, New York, New York United States 10006, is destrous of acquiring an interest therein; NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Leiters Palent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S afformeys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of fille thereto in ASSIGNEE. AGREED and executed as noted below: Legal Name of Additional Joint Inventor, if any: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Adnan. LONE Inventor's Signature: Date: Witnessed by:

Name Signature of witness: Date: 1201 9

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

REEL: 058156 FRAME: 0451 RECORDED: 11/18/2021