504889437 04/27/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4936178

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
VENKATA CHANDRA SEKAR RAO	04/24/2018
ABHISHEK GUPTA	04/24/2018
RASHMI SUDHAKAR	04/25/2018
SHAM A R	04/24/2018
PETER SHIPMAN	04/26/2018
SUMIT GUPTA	04/24/2018
VELMURUGAN R	04/24/2018

RECEIVING PARTY DATA

Name:	EMC IP HOLDING COMPANY LLC	
Street Address:	176 SOUTH STREET	
City:	HOPKINTON	
State/Country:	MASSACHUSETTS	
Postal Code:	01748	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15964760

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 110344.01

NAME OF SUBMITTER: MICHAEL J. COOPER

SIGNATURE: /Michael J. Cooper/

DATE SIGNED: 04/27/2018

504889437 PATENT REEL: 045656 FRAME: 0443

Total Attachments: 8 source=4414-952_ASM#page1.tif source=4414-952_ASM#page3.tif source=4414-952_ASM#page4.tif source=4414-952_ASM#page5.tif source=4414-952_ASM#page6.tif source=4414-952_ASM#page7.tif source=4414-952_ASM#page8.tif

PATENT REEL: 045656 FRAME: 0444

PATENT/Joint Assignment Attorney Docket No.: 110344.01

ASSIGNMENT

WHEREAS, we, Venkata Chandra Sekar Rao, Abhishek Gupta, Rashmi Sudhakar, Sham A R, Peter Shipman, Sumit Gupta, and Velmurugan R, have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled PROACTIVELY PREDICTING LARGE ORDERS AND PROVIDING FULFILLMENT SUPPORT RELATED THERETO, the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
Surveyed .	was filed on as U.S. Application No;
termonal termonal	was patented under U.S. Patent Noon

WHEREAS, EMC IP Holding Company LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the State of Delaware and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein:

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including

PATENT REEL: 045656 FRAME: 0445 the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

24 4 2018	will
Date	Venkata Chandra Sekar Rao
On this day of, 20	_, before me personally came Venkata Chandra Sekar ual who executed the foregoing instrument, and
Witness 1: 24 April 2018 Date	Kalpana Razdan
Date	Signature
Witness 2:	KIRTI KHADE Name Viciniarale:
24 April 2018 Date	Signature

24/04/2018 Date	Ahhishek Gupta
On this day of, 20 known to be the individual who executed the of the same.	, before me personally came Abhishek Gupta, to me he foregoing instrument, and acknowledged execution
Witness 1:	Kalpana Raxdan Namo
25 April 2018 Date	Signature
Witness 2:	KIRTI KNAGE Name
25 April 2018 Date	Likikuade. Signature

Date	Rashmi Sudhakar
On this day of, 20, b known to be the individual who executed the of the same.	efore me personally came Rashmi Sudhakar, to me e foregoing instrument, and acknowledged execution
Witness 1: 25 April 2018 Date	Kalbana Razdan Name Signature
Witness 2: 25 April 2013 Date	KIRTI KMADE Name Leini levade Signature

Giving $\mathcal{B}(p)$ also of $\mathcal{M}(k)$ in [k], there we personally case Strom A.B. corresponds to the limit of the half ideal where constraint by the property instrument and acknowledged execution at the table.

W

On this 24 day of $A_{r,1}$ known to be the individual who of the same.	, 2014, before me personally came Peter Shipman, to me executed the foregoing instrument, and acknowledged execution
Witness 1:	Brian Burke Name
4/26/18 Date	Brian Burle Signature
Witness 2: 4/26/18	Struck Napolihand Name Muth
Date	Signature

Date

24.04.18 Date	Sumit Gupta
	before me personally came Sumit Gupta, to me he foregoing instrument, and acknowledged execution
Witness 1: 24 April 2018 Date	Kalpana Razdan Name Signature
Witness 2: 24 Ap 26 2019 Date	Name Withhards Signature

4/24/2018	Rudry-
Date	Velmurugan R
On this <u>94</u> day of <u>APPU</u> known to be the individual who of the same.	, 201 before me personally came Velmurugan R, to me executed the foregoing instrument, and acknowledged executi
Witness 1:	VISHWANATURIN Name
24 04 2017 Date	Signature
Wilness 2:	ZETSON LUKOCE Name
24/01/2018	Du .