PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5384438

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CTC TRADING GROUP, LLC	06/05/2015

RECEIVING PARTY DATA

Name:	CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED	
Street Address:	400 S. LASALLE STREET	
City:	CHICAGO	
State/Country:	ILLINOIS	
Postal Code:	60605	

PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	11122748
Application Number:	11545793
Application Number:	13665413

CORRESPONDENCE DATA

Fax Number: (312)321-4299

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.

Email: usassignments@brinksgilson.com, pchiovari@brinksgilson.com

Correspondent Name: KENT E. GENIN Address Line 1: P.O. BOX 10395

Address Line 4: CHICAGO, ILLINOIS 60610

ATTORNEY DOCKET NUMBER:	11927-44; 98 AND 238	
NAME OF SUBMITTER:	KENT E. GENIN	
SIGNATURE:	/Kent E. Genin/	
DATE SIGNED:	02/20/2019	

Total Attachments: 3

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PATENT 505337657 REEL: 048387 FRAME: 0032

PATENT ASSIGNMENT

WHEREAS, CTC Trading Group, L.L.C., a limited liability company/organization, organized and existing under the laws of the State of Illinois, having a place of business at 440 S. LaSalle Street, 4th Floor, Chicago, Il 60657, hereinafter called the "Assignor", is the assignee of record of a part interest, by virtue of an assignment from one or more inventors, of the following inventions, patents and patent applications:

- United States Patent Application No. 11/122,748 (now U.S. Pat. No. 8,326,715), filed May 5, 2005 and entitled METHOD OF CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET,
- United States Patent Application No. <u>13/665,381</u>, filed October 31, 2012 and entitled METHOD OF CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET.
- United States Patent Application No. 11/545,793 (now U.S. Pat. No. 8,326,716), filed October 10, 2006 and entitled METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET, and
- United States Patent Application No. <u>13/665,413</u>, filed October 31, 2012 and entitled METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET.

WHEREAS, Chicago Board Options Exchange, Incorporated, a corporation, organized and existing under the laws of the State of Delaware, having a place of business at 400 S. LaSalle Street, Chicago, Il 60605, hereinafter called the "Assignee", desires to acquire the entire right, title and interest of CTC Trading Group, L.L.C.'s part interest in and to the inventions, patents and patent applications identified above, and all patents which may be obtained for said inventions, as set forth below;

I:\Legal\Legal - Ops\IP Matters\Patent\Patent Assignment (Exhibit II to Patent Rights Purchase Agreement) - 6-5-15

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignor from the Assignee is hereby acknowledged, the Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the inventions, patents and the patent applications identified above, and any patents that may issue for said inventions in the United States; together with the entire right, title and interest in and to said inventions, and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; together with all income, royalties, damages or payments due or payable, including, without limitation, all claims for damages by reason of past, present or future infringement or other unauthorized use of said inventions, patents and patent applications, with the right to sue for and collect the same for Assignee's own use and enjoyment; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignor hereby covenants and agrees, for both the Assignor and the Assignor's legal representatives, that the Assignor will assist the Assignee in the prosecution of the patent applications identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the inventions identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignor will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

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IN TEST	TMONY WHERE	EOF, the Assignor has executed this agreement.
DATED:	June 5, 2015	Eric Chen, Chief Executive Officer
		CTC Trading Group, L.L.C.
STATE OF	ILLINOIS)	
COUNTY OF	COOK)).
State aforesaid, whose name is sacknowledged t	do hereby certify to bus cribed to the fo	hat Eric Chern, personally known to me to be the same person bregoing instrument, appeared before me this day in person and ed and delivered the said instrument as his free and voluntary in set forth.
I 5 th day of June,		EREOF, I have hereunto set my hand and Notarial Seal, this
OFFIC Notary Public My Comp	E JACKSON IAL SEAL State of illinois ission Expires per 06, 2017	Nccole Jackson Notary Public

My Commission Expires: November 6, 2017

RECORDED: 02/20/2019