505973185 03/18/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
ZACHARY BONIG	12/08/2016
JOSÉ ANTONIO ACUÑA-ROHTER	12/09/2016
PEARCE PECK-WALDEN	12/08/2016
JAMES BAILEY	12/07/2016
ERIC THILL	12/07/2016
DAVID LARIVIERE	12/09/2016

RECEIVING PARTY DATA

Name:	CHICAGO MERCANTILE EXCHANGE INC.	
Street Address:	dress: 20 SOUTH WACKER DRIVE	
City:	CHICAGO	
State/Country:	ILLINOIS	
Postal Code:	60606	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16822392

CORRESPONDENCE DATA

Fax Number:

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: 312-291-0860

Email: docket-us@lsk-iplaw.com, michelle.marsh@cmegroup.com

Correspondent Name: LEMPIA SUMMERFIELD KATZ LLC/CME

Address Line 1: 20 SOUTH CLARK STREET

Address Line 2: SUITE 600

Address Line 4: CHICAGO, ILLINOIS 60603

ATTORNEY DOCKET NUMBER:	004672-16020E-US
NAME OF SUBMITTER:	JAMES L. KATZ
SIGNATURE:	/James L. Katz/
DATE SIGNED:	03/18/2020

PATENT 505973185 REEL: 052152 FRAME: 0338

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ASSIGNMENT

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WHEREAS, Zachary Bonig, José Antonio Acuña-Rohter, Pearce Peck-Walden, James Bailey, Eric Thill, and David Lariviere, hereinafter called the "Assignors", have made the invention described in the United States patent application entitled DISTRIBUTED AND TRANSACTIONALLY DETERMINISTIC DATA PROCESSING ARCHITECTURE, executed by Assignors on the same date as, or on a date prior to, this Assignment;

WHEREAS, CHICAGO MERCANTILE EXCHANGE INC., a corporation organized and existing under the laws of the State of Illinois, having a place of business at 20 South Wacker Drive, Chicago, IL 60606, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

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 Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents issuing therefrom 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 the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; 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 Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention 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.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATED:	12/8/16	Zachary Bonig
DATED:		José Antonio Acuña-Rohter
DATED:	12/8//6	Pearce Peck-Walden
DATED:	12/7/16	James Bailey James Bailey
DATED:	12/7/16	Eric Thill
DATED:		David Lariviere

STATE OF LLINDIS)	
COUNTY OF COOK) ss.	
county and State aforesaid, do hereby certify me to be the same person whose name is appeared before me this day in person and ac delivered the said instrument as his/her fre purposes therein set forth.	subscribed to the foregoing instrument, knowledged that (s)he signed, sealed and ee and voluntary act for the uses and unto set my hand and Notarial Seal, this
STATE OF) ss. COUNTY OF)	
County and State aforesaid, do hereby copersonally known to me to be the same perforegoing instrument, appeared before me the (s)he signed, sealed and delivered the said in the state of the said in	erson whose name is subscribed to the is day in person and acknowledged that
for the uses and purposes therein set forth. IN WITNESS WHEREOF, I have here day of, 201	unto set my hand and Notarial Seal, this 6.
	Notary Public
My Commission Expires:	
	ge villet en liedten en der selde en welden en delle vergelden en lienen bleven bleven det en melde en selden

STATE OF LECINO 15
COUNTY OF COOK) ss.
I, JANES P. HAYBINA, a Notary Public in and for the
County and State aforesaid, do hereby certify that Pearce Peck-Walden, personally known to me to be the same person whose name is subscribed to the foregoing
instrument, appeared before me this day in person and acknowledged that (s)he signed, sealed and delivered the said instrument as his/her free and voluntary act for the uses
and purposes therein set forth. No WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this
day of <u>HCWM64</u> , 2016.
OFFICIAL SEAL JANET P HABINA Notary Public - State of Illinois When the state of Illinois of of Illino
My Commission Expires Sep 26, 2017 Notary Public Notary Public
My Commission Expires: $9/2v/17$
STATE OF ILLINOIS)
;
COUNTY OF COOK) ss.
I, JAMET P. HABINA, a Notary Public in and for the
County and State aforesaid, do hereby certify that James Bailey, personally known to me to be the same person whose name is subscribed to the foregoing instrument,
appeared before me this day in person and acknowledged that (s)he signed, sealed and
delivered the said instrument as his/her free and voluntary act for the uses and
purposes therein set forth. IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this
IN WITNESS WHEREOF, I have hereunto set my hand and Notarial Seal, this day of
Sout O Helein
My Commission Expires: 9/24/20/1
My Commission Expires: 4/20/20/1
OFFICIAL SEAL
JANET P HABINA Notary Public - State of Illinois My Commission Expires Sep 26, 2017

STATE OF /LLINO15	
STATE OF /LLINOIS) ss.	
I, JAVET D. HABINA County and State aforesaid, do hereby certify that Er	a Notary Public in and for the
be the same person whose name is subscribed to the	ie foregoing instrument, appeared
before me this day in person and acknowledged that the said instrument as his/her free and voluntary act	
set forth.	
The lin WITNESS WHEREOF, I have hereunto se day of <u>DタCEM おん</u> , 2016.	t my hand and Notarial Seal, this
OFFICIAL SEAL SAN	40 Klalen
Notary Public - State of Illinois Notary	Public
My Commission Expires Sep 26, 2017 My Commission Expires.	
STATE OF)	
) ss.	
,	
I,	, a Notary Public in and for the
me to be the same person whose name is subscr	ibed to the foregoing instrument,
appeared before me this day in person and acknowled delivered the said instrument as his/her free and	lged that (s)he signed, sealed and
purposes therein set forth.	
IN WITNESS WHEREOF, I have hereunto se day of . 2016.	t my hand and Notarial Seal, this
, , , , , , , , , , , , , , , , , , , ,	
Notary	Public
My Commission Expires:	

<u>ASSIGNMENT</u>

WHEREAS, Zachary Bonig, José Antonio Acuña-Rohter, Pearce Peck-Walden, James Bailey, Eric Thill, and David Lariviere, hereinafter called the "Assignors", have made the invention described in the United States patent application entitled DISTRIBUTED AND TRANSACTIONALLY DETERMINISTIC DATA PROCESSING ARCHITECTURE, executed by Assignors on the same date as, or on a date prior to, this Assignment;

WHEREAS, CHICAGO MERCANTILE EXCHANGE INC., a corporation organized and existing under the laws of the State of Illinois, having a place of business at 20 South Wacker Drive, Chicago, IL 60606, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

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 Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents issuing therefrom 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 the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; 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 Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention 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.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATED:		
		Zachary Bonig
DATED:	12/9/2016	Docusigned by: よんしこ José®Afiltonio Acuña-Rohter
Surf V rates have bard		Jose Antonio Acuna-Rontei
DATED:		Pearce Peck-Walden
DATED:		 James Bailey
		James Dalley
DATED:		Eric Thill
DATED:	12/9/2016	Docusigned by:

STATE OF)) SS.
COUNTY OF)
me to be the same person wappeared before me this day in delivered the said instrument purposes therein set forth.	, a Notary Public in and for the hereby certify that Zachary Bonig, personally known to hose name is subscribed to the foregoing instrument, person and acknowledged that (s)he signed, sealed and as his/her free and voluntary act for the uses and F, I have hereunto set my hand and Notarial Seal, this, 2016.
	Notary Public
My Commission Expires:	
STATE OF)) ss.)
personally known to me to be foregoing instrument, appeared (s) he signed, sealed and deliver for the uses and purposes them.	F, I have hereunto set my hand and Notarial Seal, this
	Notary Public
My Commission Expires:	

STATE OF)
COUNTY OF) ss.)
known to me to be the same instrument, appeared before me sealed and delivered the said in and purposes therein set forth.	, a Notary Public in and for the o hereby certify that Pearce Peck-Walden, personally person whose name is subscribed to the foregoing this day in person and acknowledged that (s)he signed, estrument as his/her free and voluntary act for the uses [7, I have hereunto set my hand and Notarial Seal, this, 2016.
	Notary Public
My Commission Expires:	
STATE OF COUNTY OF)) ss.)
me to be the same person what appeared before me this day in delivered the said instrument purposes therein set forth.	, a Notary Public in and for the hereby certify that James Bailey, personally known to nose name is subscribed to the foregoing instrument, person and acknowledged that (s)he signed, sealed and as his/her free and voluntary act for the uses and
	Notary Public
My Commission Expires:	

RECORDED: 03/18/2020

STATE OF) ss.
COUNTY OF)
I,
Notary Public
My Commission Expires:
STATE OF)) ss. COUNTY OF)
I,
Notary Public
My Commission Expires: