

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5910381

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ROBERT PARK	02/02/2012
BRADLEY KATSUYAMA	02/02/2012
RICHARD STEINER	02/02/2012
DANIEL AISEN	01/31/2012
ALLEN ZHANG	01/30/2012
JOHN SCHWALL	01/27/2012
THOMAS L. POPEJOY	02/10/2012
RECEIVING PARTY DATA	
Name:	ROYAL BANK OF CANADA
Street Address:	1 PLACE VILLE MARIE
Internal Address:	4TH FLOOR, EAST WING
City:	MONTREAL
State/Country:	CANADA
Postal Code:	H3C 3A9
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16042323
CORRESPONDENCE DATA	
Fax Number:	(416)216-3930
<i>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.</i>	
Phone:	514-847-4243
Email:	RHONA.GUBATON@NORTONROSEFULBRIGHT.COM
Correspondent Name:	NORTON ROSE FULBRIGHT CANADA LLP
Address Line 1:	1 PLACE VILLE MARIE
Address Line 2:	SUITE 2500
Address Line 4:	MONTREAL, CANADA H3B 1R1
ATTORNEY DOCKET NUMBER:	05007268-36US-4
NAME OF SUBMITTER:	DAVID NG
SIGNATURE:	/David Ng/

PATENT

DATE SIGNED:	01/14/2020
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Total Attachments: 9

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Assignment - Worldwide

ASSIGNMENT (Worldwide)

WHEREAS,

- (1) ROBERT PARK of New York, New York, U.S.A.,
- (2) BRADLEY KATSUYAMA of New York, New York, U.S.A.,
- (3) RICHARD STEINER of Wyckoff, New Jersey, U.S.A.,
- (4) DANIEL AISEN of New York, New York, U.S.A.,
- (5) ALLEN ZHANG of Princeton, New Jersey, U.S.A.,
- (6) JOHN SCHWALL, of New York, New York, U.S.A.
- (7) POPEJOY, Thomas L., of New York, New York, U.S.A.

hereinafter referred to, separately and collectively, as "ASSIGNORS", and whose full post office address is c/o Royal Bank of Canada, 4th Floor, East Wing, 1 Place Ville Marie, Montreal, Quebec, H3C 3A9, Canada, have made an invention relating to and entitled:

**SYNCHRONIZED PROCESSING OF DATA BY
NETWORKED COMPUTING RESOURCES**

hereinafter referred to as the Invention, which Invention is described in one or more applications for Letters Patent identified as:

Country: United States

Patent/Application Number: 61/285375

Filed: December 10, 2009

and

Country: United States

Patent/Application Number: 12/796,139

Filed: June 8, 2010

and

Country: Canada

Patent/Application Number: 2,707,196

Filed: June 8, 2010

and

International Application No. PCT/CA2010/000872

Filed: 8 June 2010

and

Country: United States

Patent/Application Number: 13/281,486

Filed: October 26, 2011

hereinafter referred to as the Applications;

AND WHEREAS, ROYAL BANK OF CANADA, a Canadian Chartered Bank hereinafter referred to as Assignee, whose full post office address is 4th Floor, East Wing, 1 Place Ville Marie, Montreal, Quebec H3C 3A9, Canada, desires among other things to acquire Assignors' entire right, title, interest and benefit for Canada and all other countries and jurisdictions in and to the Invention and Applications;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors hereby confirm that as of at least September 30, 2009, they have sold, assigned, transferred and set over to Assignee and, for greater certainty, do hereby sell, assign, transfer and set over to Assignee, and to Assignee's successors, assigns, nominees or other legal representatives, their entire right, title, interest, property and benefit in and for United States, Canada and all other countries and jurisdictions in and to the Invention, together with their entire right, title, interest, property and benefit in and to the Applications, and any applications corresponding thereto in any country or jurisdiction, including any and all corresponding applications whether in the form of divisions, continuations, re-examinations, re-issues, extensions and national phases thereof, any and all Letters Patent and Registrations that may issue, be granted or result therefrom for the Invention, and any and all rights of priority resulting from the filing of the above-identified applications, the said corresponding applications and any previously filed applications in respect of the Invention under international conventions, treaties or otherwise, the same to be held and enjoyed as fully and exclusively as the same would have been held and enjoyed by Assignors had this sale, assignment, transfer and setting over not been made;

AND ASSIGNORS, on behalf of themselves and their heirs, executors and administrators, do hereby covenant and agree to do all such lawful acts and things and to execute and deliver without further consideration such further lawful assignments, instruments, assurances, applications and other documents as may reasonably be required by said Assignee, or by its successors, assigns, nominees, or other legal representatives, to obtain each said Letters Patent and Registrations of the United States and all other countries and jurisdictions for the Invention and vest or secure the same in Assignee, and in Assignee's successors, assigns, nominees or other legal representatives.

AND ASSIGNORS do hereby authorize any official whose duty it is to grant patents or registrations, to grant each said Letters Patent and Registration for the Invention to the Assignee, and to Assignee's successors, assigns, nominees or other legal representatives.

AND ASSIGNORS, on behalf of themselves and their heirs, executors and administrators, do hereby authorize said Assignee, its successors, assigns, nominees or other legal representatives, including its Patent Agents, Norton Rose Canada LLP, to amend the present assignment document to

insert or correct the filing date, serial number or other identifying information of the Applications as may be needed to record same.


ASSIGNORS UNDERSTAND AND AGREE that the attorneys and agents of the law firm of Norton Rose Canada LLP do not personally represent Assignors or Assignors' legal interests, but instead represent the interests of Assignee. Since Norton Rose Canada LLP cannot provide legal advice to Assignors with respect to this Assignment, Assignors acknowledge their right to seek their own independent legal counsel.

THIS ASSIGNMENT may be executed in counterparts, all of which shall be considered one and the same agreement. This Assignment shall be effective to transfer an Assignors' entire right, title, interest, property, and benefit to Assignee upon execution of this Assignment by such Assignors, regardless of whether any other Assignor executes this Agreement.

IN WITNESS WHEREOF, Assignors have hereunto signed their names on the day and year set forth below.

DATED this 2 day of Feb, 2012.

ROBERT PARK

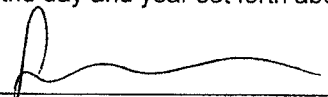
Per: 
Name: ROBERT PARK
Title: MANAGING DIRECTOR

STATEMENT OF WITNESS

I, Samantha Della, state that I was personally present and did see
(name of witness)

Robert Park, who is personally known to me to be the person (name of authorized signing officer/inventor)

named in the above assignment, duly execute the same on the day and year set forth above.


(signature of witness)

DATED this 2 day of Feb, 2012.

BRADLEY KATSUYAMA

Per: 

Name: Brad Katsuyama

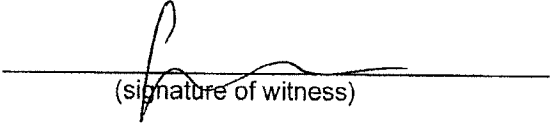
Title: MR.

STATEMENT OF WITNESS

I, Samantha Dehn, state that I was personally present and did see
(name of witness)

Bradley Katsuyama, who is personally known to me to be the (name
of authorized signing officer/inventor)

person named the above assignment, duly execute the same on the day and year set forth above.


(signature of witness)

DATED this 2 day of Feb, 2012.

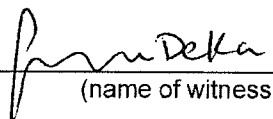
RICHARD STEINER

Per: R. Oti

Name: Richard Steiner

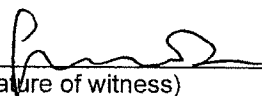
Title: Head of Market Structure Strategy

STATEMENT OF WITNESS

I, , state that I was personally present and did see
(name of witness)

Richard Steiner, who is personally known to me to be the (name of
authorized signing officer/inventor)

person named the above assignment, duly execute the same on the day and year set forth above.


(signature of witness)

DATED this 31st day of January, 2012.

DANIEL AISEN

Per: *Daniel Aisen*

Name:

Title:

STATEMENT OF WITNESS

I, Benjamin Aisen, state that I was personally present and did see
(name of witness)

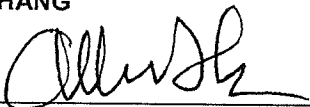
Daniel Aisen, who is personally known to me to be the (name of
authorized signing officer/inventor)

person named the above assignment, duly execute the same on the day and year set forth above.

Ben Aisen
(signature of witness)

DATED this 30 day of Jan, 2012.

ALLEN ZHANG

Per: 

Name: Allen Zhang

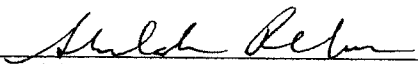
Title: Director

STATEMENT OF WITNESS

I, Shelah Reber, state that I was personally present and did see
(name of witness)

Allen Zhang, who is personally known to me to be the (name of
authorized signing officer/inventor)

person named the above assignment, duly execute the same on the day and year set forth above.


(signature of witness)

DATED this 27 day of 2012 JANUARY, 2012.

JOHN SCHWALL

Per: 

Name: John Schwall

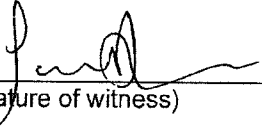
Title: MD, Head of Product Mgmt.

STATEMENT OF WITNESS

I, Samantha Della, state that I was personally present and did see
(name of witness)

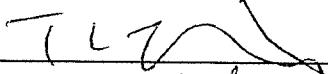
John Schwall, who is personally known to me to be the (name of
authorized signing officer/inventor)

person named the above assignment, duly execute the same on the day and year set forth above.

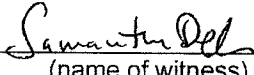

(signature of witness)

DATED this 10 day of February, 2012.

THOMAS L. POPEJOY


Per: 
Name: Thomas L. Popejoy
Title: Director

STATEMENT OF WITNESS

I, , state that I was personally present and did see
(name of witness)

Thomas L. Popejoy, who is personally known to me to be the (name of
authorized signing officer/inventor)

person named the above assignment, duly execute the same on the day and year set forth above.


(signature of witness)

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