

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT7961563

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KARIM HAMASNI	04/11/2018
STEFAN MUELLER	04/19/2018
ATILLA MURAT FIRAT	04/09/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ROYAL BANK OF CANADA
<b>Street Address:</b>	1 PLACE VILLE MARIE
<b>Internal Address:</b>	6TH FLOOR, NORTH WING
<b>City:</b>	MONTREAL, QUEBEC
<b>State/Country:</b>	CANADA
<b>Postal Code:</b>	H3C 3A9
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	18199101
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(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>	
<b>Phone:</b>	4162164808
<b>Email:</b>	dockettor@nortonrosefulbright.com , mahekk.nair@nortonrosefulbright.com
<b>Correspondent Name:</b>	NORTON ROSE FULBRIGHT CANADA LLP
<b>Address Line 1:</b>	222 BAY STREET
<b>Address Line 2:</b>	SUITE 3000
<b>Address Line 4:</b>	TORONTO, CANADA M5K 1E7
<b>ATTORNEY DOCKET NUMBER:</b>	05007268-100US-1
<b>NAME OF SUBMITTER:</b>	RUI GAO
<b>SIGNATURE:</b>	/Rui Gao/
<b>DATE SIGNED:</b>	05/18/2023
<b>Total Attachments: 6</b>	
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**ASSIGNMENT (Worldwide)**

WHEREAS,

- (1) **HAMASNI, Karim** of Toronto, Ontario, Canada;
- (2) **MUELLER, Stefan** of Singapore, Singapore; and
- (3) **FIRAT, Atila Murat** of Toronto, Ontario, Canada,

hereinafter referred to, separately and collectively, as "ASSIGNOR(S)", and whose full post office address is c/o Royal Bank of Canada, 6<sup>th</sup> Floor, North Wing, 1 Place Ville Marie, Montreal, Quebec, H3C 3A9, Canada, have made an invention relating to and entitled:

**SYSTEM AND METHOD FOR CRYPTOGRAPHIC TRANSACTIONS**

hereinafter referred to as the Invention, which Invention is described for example in the appended draft patent application, which Invention is to be filed as one or more applications for Letters Patent 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 6<sup>th</sup> Floor, North Wing, 1 Place Ville Marie, Montreal, Quebec H3C 3A9, Canada, desires among other things to acquire ASSIGNOR(S)' entire right, title, interest and benefit for United States, Canada and all other countries and jurisdictions in and to the Invention and Application;

NOW THEREFORE, in consideration of the sum of Five Dollars (\$5.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR(S) hereby confirm that 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 Application, and any previously- or subsequently-filed applications corresponding or otherwise relating 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 other non-provisional applications, 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 application, the said corresponding applications and any previously- or subsequently-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 ASSIGNOR(S) had this sale, assignment, transfer and setting over not been made;

AND ASSIGNOR(S), 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 ASSIGNOR(S) 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 ASSIGNOR(S), 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 Fulbright Canada LLP, to amend the present assignment document to insert or correct the filing date, serial number or other identifying information of the Application as may be needed to record same.

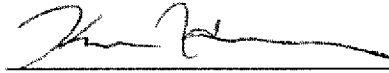
ASSIGNOR(S) UNDERSTAND AND AGREE that the attorneys and agents of the law firm of Norton Rose Fulbright Canada LLP do not personally represent ASSIGNOR(S) or ASSIGNOR(S)' legal interests, but instead represent the interests of Assignee. Since Norton Rose Fulbright Canada LLP cannot provide legal advice to ASSIGNOR(S) with respect to this Assignment, ASSIGNOR(S) 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 ASSIGNOR(S)' entire right, title, interest, property, and benefit to Assignee upon execution of this Assignment by such ASSIGNOR(S), regardless of whether any other Assignor executes this Agreement.

IN WITNESS WHEREOF, ASSIGNOR(S) have hereunto signed their names on the day and year set forth below.

DATED this 11<sup>th</sup> day of April, 2018.

**HAMASNI, Karim**

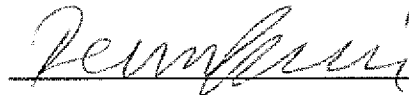


**STATEMENT OF WITNESS**

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

HAMASNI, Karim, who is personally known to me to be the person  
(name of inventor)

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



(signature of witness)

DATED this 19th day of April, 2018.

MUELLER, Stefan

S. Mueller

**STATEMENT OF WITNESS**

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

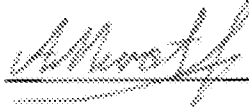
MUELLER, Stefan, who is personally known to me to be the person  
(name of inventor)

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

Josephine Chang  
(signature of witness)

DATED this 24<sup>th</sup> day of April, 2018.

FIRAT, Atilla Murat

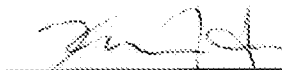


**STATEMENT OF WITNESS**

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

FIRAT, Atilla Murat, who is personally known to me to be the person  
(name of inventor)


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



(signature of witness)

DATED this 19<sup>th</sup> day of April, 2018

ROYAL BANK OF CANADA

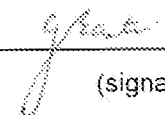
  
\_\_\_\_\_  
**Signatory name:** Panagiotis Dafniotis  
**Title:** Senior Counsel

**STATEMENT OF WITNESS**

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

PANAGIOTIS DAFNIOTIS, who is personally known to me to be the person  
(name of signatory)

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

  
\_\_\_\_\_  
(signature of witness)