505177298 11/06/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5224066

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHANG FUNG YANG	11/05/2018
JASON SONGBO XU	11/05/2018

RECEIVING PARTY DATA

Name:	BLACKBERRY LIMITED
Street Address:	2200 UNIVERSITY AVENUE EAST
City:	WATERLOO
State/Country:	CANADA
Postal Code:	N2K 0A7

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16181755

CORRESPONDENCE DATA

Fax Number: (416)363-8429

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: 416 479 8647

Email: mailbox@rowandlaw.com

Correspondent Name: ROWAND LLP (BLACKBERRY)
Address Line 1: SUITE 2302, 401 BAY STREET

Address Line 2: PO BOX 56

Address Line 4: TORONTO, CANADA M5H 2Y4

ATTORNEY DOCKET NUMBER:	101-0474USP1
NAME OF SUBMITTER:	JEFFREY TRACEY
SIGNATURE:	/Jeffrey Tracey/
DATE SIGNED:	11/06/2018

Total Attachments: 4

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PATENT 505177298 REEL: 047422 FRAME: 0773

WORLDWIDE ASSIGNMENT

WHEREAS, I/WE, (hereinafter referred to as the "ASSIGNOR(S)"):

YANG, Chang Fung, 4701 Tahoe Blvd., Tahoe A, Mississauga, ON, L4W 0B5, Canada XU, Jason Songbo, 4701 Tahoe Blvd., Tahoe A, Mississauga, ON, L4W 0B5, Canada

am an/are inventor(s) of an invention entitled METHODS AND DEVICES FOR ESTABLISHING SECURE COMMUNICATION CHANNELS ("Invention") for which one or more applications for patent, design registration, utility model registration, or other form of protection, rights, or title have been or will be made in certain countries ("Applications"), as further described below:

US, Application # <u>16/181,755</u> filed November 6, 2018

AND WHEREAS, **BLACKBERRY LIMITED**, (hereinafter referred to as the "ASSIGNEE"), a company organized under the laws of the Province of Ontario, Canada, having a place of business at 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada, is desirous of acquiring the full and exclusive right, title and interest in and to said Invention, said Applications inclusive of all ancillary rights relating thereto, any and all priority rights derived from said Applications, and all patents, design registrations, utility model registrations and other forms of protection, rights and titles relating to said Invention, in any country or countries and in respect of the whole or any part or parts of or improvements to the Invention;

NOW THEREFORE, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR(S) does/do hereby confirm that ASSIGNOR(S) has/have transferred, conveyed and assigned, and by way of further assurance does/do hereby transfer. convey and assign, any and all of ASSIGNOR(S)'s respective rights, title and interest in and to: the Invention; the Applications; inclusive of any and all priority rights, including the right to claim priority, derived from the Applications; any further applications for patent, design registration, utility model registration or other forms of protection, rights or titles for the whole or any part or parts of or improvements to the Invention in any country or countries ("Further Applications") together with the right to file divisional applications, substitute applications and continuation applications of any one or more of the Applications and Further Applications ("Divisionals"); the right to obtain patents, design registrations, utility model registrations and all other forms of protection, rights and titles relating to the Invention; the right in and to any patent or reissue patent relating to the Applications, Further Applications and Divisionals ("Grants"); and the right to obtain any extensions / supplementary protection certificates ("Extensions"); together with the right to bring proceedings to recover damages and/or to obtain other remedies for acts committed in respect of one or more of the aforesaid Invention, Applications, Grants, Further Applications, Divisionals and Extensions, whether such acts are committed before or

Page 1 of 4 V7.3

after the date of this Worldwide Assignment; with the intent that the Invention, Applications, Grants, Further Applications, Divisionals and Extensions are owned and enjoyed by ASSIGNEE absolutely to the full end of the term or terms for same.

ASSIGNOR(S) does/do hereby agree, upon request, to provide assistance and to execute any and all further documents, at the expense of ASSIGNEE and/or its successors and assigns (as applicable), which may be necessary or desirable to enable ASSIGNEE, and/or its successors and assigns (as applicable), to file, prosecute, bring proceedings and take other actions with respect to any and all of the Invention, Applications, Further Applications, Divisionals, Grants and Extensions, and any and all patents and registrations granted thereon and other forms of protection, rights and titles relating thereto, and ASSIGNOR(S) further agrees/agree to execute, upon request and at the expense of ASSIGNEE and/or its successors and assigns (as applicable), any and all further documents which may be necessary or desirable to vest or perfect the title of ASSIGNEE therein.

ASSIGNOR(S) does/do hereby authorize ASSIGNEE or its patent agents or attorneys to insert, above, the jurisdictions, application numbers, filing dates and any other indicia identifying the Applications when such information is available for the purpose of recording this assignment.

ASSIGNOR(S) does/do hereby authorize and request The Commissioner of Patents or any equivalent authority to issue to ASSIGNEE each and every patent, registration and other form of protection, right, and title granted upon the Applications, Further Applications, Divisionals and Extensions.

THIS WORLDWIDE ASSIGNMENT shall inure to the benefit of ASSIGNEE and its successors and assigns, and shall be binding upon ASSIGNOR(S) and their successors and permitted assigns.

DELIVERY of this Worldwide Assignment by copy, however transmitted, constitutes valid and effective delivery. This Worldwide Assignment may be executed in one or more counterparts, each of which when so executed and delivered shall be an original, and such counterparts shall together constitute one and the same instrument.

V7.3

Date: Nov 5th 2018

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:

YANG, Chang Fung

4701 Tahoe Blvd., Tahoe A,

Mississauga, ON,

L4W 0B5,

Canada

STATEMENT BY WITNESS

I, Steven Victor Craig, whose full Post Office address is

4100 Ponyfreil Drill Unit 1808, Mississenga, ON (Address of Witness)

hereby declare that I was personally present and did see the above named person, personally known to me to be a person named in the Worldwide Assignment, duly sign and execute same.

(Signature of Witness)

Date: 018 - 11 - 05

V7.3

IN	WITNESS	WHEREOF,	this	Worldwide	Assignment	has	been	exec	uted	below	by :	the
un	dersigned:											

XU, Jason Songbo

4701 Tahoe Blvd., Tahoe A,

Mississauga, ON,

L4W 0B5,

Canada

STATEMENT BY WITNESS

I, Sasha Obucino	an de la companya de Na companya de la co	, whose full P	ost Office	address i
4701 Tahoe	Blvd. Tahoe	A		
	(Address of Witness			

hereby declare that I was personally present and did see the above named person, personally known to me to be a person named in the Worldwide Assignment, duly sign and execute same.

<u>Jasha</u> Wricinc (Signature of Witness)

Date: Nov 5, 2018

Page 4 of 4

V 7.3