PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4901378

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MAHENDRA FULESHWAR PRASAD	03/23/2018
SCOTT LEONARD DILL	03/23/2018
JASON WAYNE JANTZI	03/01/2018
ALEXANDER JOHN OGLE	03/01/2018

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15906117

CORRESPONDENCE DATA

Fax Number: (713)468-8883

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: 713-468-8880 Email: chayes@tphm.com

Correspondent Name: TROP PRUNER & HU, P.C. **Address Line 1:** 1616 SOUTH VOSS ROAD

Address Line 2: SUITE 750

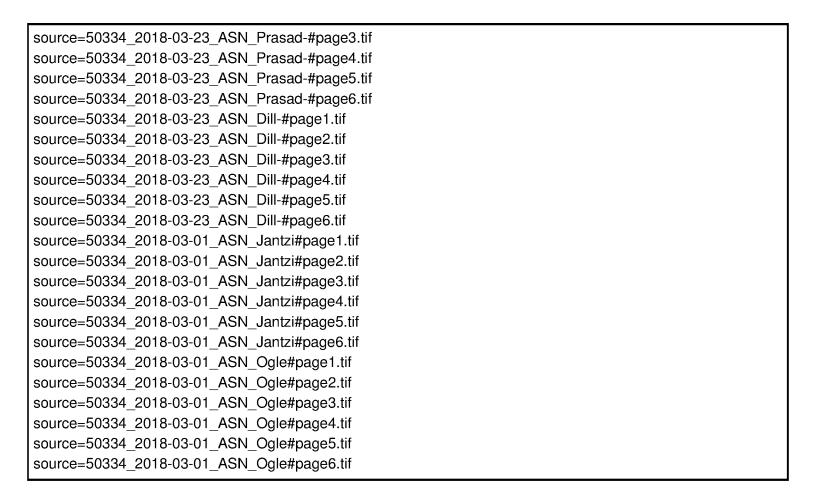
Address Line 4: HOUSTON, TEXAS 77057-2631

ATTORNEY DOCKET NUMBER:	50334 (RIM.0207US)
NAME OF SUBMITTER:	DAN C. HU
SIGNATURE:	/Dan C. Hu, Reg. No. 40,025/
DATE SIGNED:	04/05/2018

Total Attachments: 24

source=50334_2018-03-23_ASN_Prasad-#page1.tif source=50334_2018-03-23_ASN_Prasad-#page2.tif

PATENT 504854639 REEL: 045843 FRAME: 0625



PATENT REEL: 045843 FRAME: 0626

WORLDWIDE ASSIGNMENT

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

Mahendra FULESHWAR PRASAD, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada

Scott Leonard DILL, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada Jason Wayne Jantzi, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada Alexander John OGLE, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada

am an/are inventor(s) of an invention entitled **DETERMINING POSITIONS OF DEVICES** ("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 # 15/906117, FILED February 27, 2018 PCT, APPLICATION # PCT/US2018/019844, FILED February 27, 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

Page 1 of 6 V7.3

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 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.

Page 2 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Date: March 23 2018 Mahendra NHESHWAR PRASAD 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada
STATEMENT BY WITNESS
I, <u>Vu Gao</u> , whose full Post Office address is
505 THORNWEN Place. Waterloo, ON NITENT
(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.
Jack 23, 2018
(Signature of Witness)

Page 3 of 6

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Scott Leonard DILL 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address is
(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
Date:

Page 4 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Jason Wayne Jantzi 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address is
(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
Date:

Page 5 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Alexander John OGLE 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address is
(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
Date:

Page 6 of 6 V7.3

WORLDWIDE ASSIGNMENT

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

Mahendra FULESHWAR PRASAD, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada

Scott Leonard DILL, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada Jason Wayne Jantzi, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada Alexander John OGLE, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada

am an/are inventor(s) of an invention entitled **DETERMINING POSITIONS OF DEVICES** ("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 # 15/906117, FILED February 27, 2018 PCT, APPLICATION # PCT/US2018/019844, FILED February 27, 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 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.

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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.

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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.

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IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Date:
Mahendra FULESHWAR PRASAD 2200 University Avenue East,
Waterloo, ON, N2K 0A7, Canada
STATEMENT BY WITNESS
I, , whose full Post Office address is
1,
V
(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)
forgramme or withess)

IN WITNESS WHEREOF, this Worldwide undersigned: Scott Leonard DILL 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada	Assignment has been executed below by the Date: 3-23-23
STATEM	IENT BY WITNESS
I, HENRY LEXA	, whose full Post Office address is
35 NICKA ROAD, GUELPH	1 ON NIC 107
	ress of Witness)

hereby declare that I was personally presen known to me to be a person named in the V (Signature of Witness)	t and did see the above named person, personally Vorldwide Assignment, duly sign and execute same. Date:

****	Date:
Jason Wayne Jantzi 2200 University Avenue East,	
Waterloo, ON, N2K 0A7, Canada	
S	TATEMENT BY WITNESS
I,	whose full Post Office address is
	, whose full Post Office address is
	, whose full Post Office address is
	, whose full Post Office address is (Address of Witness)
	# #
Ι,	(Address of Witness)
I,	.e. .e.
I,	(Address of Witness) y present and did see the above named person, personally
I,	(Address of Witness) y present and did see the above named person, personally
I,	(Address of Witness) y present and did see the above named person, personally
I,	(Address of Witness) y present and did see the above named person, personally

IN WITNESS WHEREOF, this Worldwide Assignme undersigned:	ent has been executed below by the
Alexander John OGLE 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada	
wateroo, Charle, 1421x Orr, Canada	
STATEMENT BY V	WITNESS
I,	, whose full Post Office address is
	<u>``</u>
(Address of Wit	tness)
hereby declare that I was personally present and did so known to me to be a person named in the Worldwide	ee the above named person, personally Assignment, duly sign and execute same.
(Signature of Witness)	Pate;

WORLDWIDE ASSIGNMENT

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

Mahendra FULESHWAR PRASAD, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada

Scott Leonard DILL, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada Jason Wayne Jantzi, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada Alexander John OGLE, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada

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IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:		
Mahendra FULESHWAR PRASAD 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada		
STATEMENT BY WITNESS		
I,, whose full Post Office address is		
(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.		
Date:		

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IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Scott Leonard DILL 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada
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I,, whose full Post Office address is
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Date:

Page 4 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:		
Date: Morch 1, Jolls Joseph Date: Morch 1, Jolls Joseph Date: Morch 1, Jolls Jolls Z200 University Avenue East, Waterloo, ON, N2K 0A7, Canada		
STATEMENT BY WITNESS		
I, PAUL GRBEIL , whose full Post Office address is		
200 UNIVERSITY AVE WATERLOS ON MIK OAZ (Address of Witness)		
(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.		
Date: MAR 1/18 (Signature of Wigness)		

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Alexander John OGLE 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address i
(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
Date:

Page 6 of 6 V7.3

WORLDWIDE ASSIGNMENT

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

Mahendra FULESHWAR PRASAD, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada

Scott Leonard DILL, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada Jason Wayne Jantzi, 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada Alexander John OGLE, 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada

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Mahendra FULESHWAR PRASAD 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address is
(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.
Date:

Page 3 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Scott Leonard DILL 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address is
(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 sam
Date:

Page 4 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide Assignment has been executed below by the undersigned:
Jason Wayne Jantzi 2200 University Avenue East, Waterloo, ON, N2K 0A7, Canada
STATEMENT BY WITNESS
I,, whose full Post Office address is
(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
Date:

Page 5 of 6 V7.3

IN WITNESS WHEREOF, this Worldwide undersigned:	Assignment has been executed below by the	
Alexander John OGLE 2200 University Avenue East, Waterloo, Ontario, N2K 0A7, Canada	Date: 1 MACCA 2018	
STATEMENT BY WITNESS		
1. Byron Baldon	, whose full Post Office address is	
121 Conterbuny Derve Dockertor 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: <u>March 1, 2018</u>	