505163351 10/29/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JANET A STERN-BERKOWITZ	09/19/2017
POURIYA SADEGHI	09/05/2018
J. PATRICK TOOHER	10/27/2017
SAMIAN KAUR	04/06/2018
MARIAN RUDOLF	10/26/2017
PASCAL M. ADJAKPLE	09/22/2017

RECEIVING PARTY DATA

Name:	INTERDIGITAL PATENT HOLDINGS, INC.
Street Address:	200 BELLEVUE PARKWAY
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City:	WILMINGTON
State/Country:	DELAWARE
Postal Code:	19809

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15543794

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	ILTE_12425US02
NAME OF SUBMITTER:	CASSANDRA KATZ
SIGNATURE:	/Cassandra Katz/
DATE SIGNED:	10/29/2018

505163351 PATENT REEL: 047346 FRAME: 0942

Total Attachments: 9 source=ILTE_12425US02_FullyExecutedAssignment#page1.tif source=ILTE_12425US02_FullyExecutedAssignment#page2.tif source=ILTE_12425US02_FullyExecutedAssignment#page3.tif source=ILTE_12425US02_FullyExecutedAssignment#page4.tif source=ILTE_12425US02_FullyExecutedAssignment#page5.tif source=ILTE_12425US02_FullyExecutedAssignment#page6.tif source=ILTE_12425US02_FullyExecutedAssignment#page7.tif source=ILTE_12425US02_FullyExecutedAssignment#page8.tif source=ILTE_12425US02_FullyExecutedAssignment#page9.tif

PATENT REEL: 047346 FRAME: 0943 Docket No.: ILTE_12425US02

PATENT ASSIGNMENT

WHEREAS, We,

- 1. Janet A Stern-Berkowitz 41-20 Glenwood Street Little Neck, New York, 11363 United States of America
- 3. J. Patrick Tooher 7171 Drolet Montreal, Quebec, H2R 2C1 Canada
- 5. Marian Rudolf 1843 Rue Baile Montreal, Quebec, H3H 1P5 Canada

- 2. Pouriya Sadeghi 15653 Tanner Ridge Rd San Diego, California, 92127 United States of America
- 4. Samian Kaur
 6 Ashwood Lane
 Plymouth Meeting, Pennsylvania, 19462
 United States of America
- 6. Pascal M. Adjakple 67 Red Brook Road Great Neck, New York, 11024 United States of America

(hereinafter "Assignors"), are joint inventors of certain inventions or improvements set forth in United States Patent Application No. 15/543,794 and International Application No. PCT/US16/15464, filed January 28, 2016, entitled:

Uplink Operation For LTE in an Unlicensed Band ("Patent Application"); and

WHEREAS, InterDigital Patent Holdings, Inc., a Delaware corporation having a place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809 (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in, to and under the Patent Application; the inventions, discoveries and improvements disclosed or claimed therein ("Inventions"); and any and all patents, certificates of invention, utility models and other forms of protection which may be granted thereon or as a result thereof in any and all countries ("Patents").

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, we, the undersigned Assignors, hereby agree to sell, assign, transfer and convey, and by these presents do sell, assign, transfer and convey to Assignee, our entire right, title and interest in and to any and all of the following:

- the Patent Application, the Inventions and the Patents, for the United States, its possessions and territories and all foreign countries and territories;
- the rights of priority created by the Patent Application and the Patents under any treaty relating thereto, including the rights to apply for Patents covering the Inventions in any and all countries;

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- iii. any and all patent applications and Patents resulting from the Patent Application or covering the Inventions in any and all countries, including provisionals, nonprovisionals, divisionals, continuations, continuations-in-part, renewals, substitutions, extensions, reissues and re-examinations thereof;
- iv. all past, present and future causes of action and enforcement rights, whether currently pending, filed or otherwise, in connection with the Patent Application, the Inventions, the Patents, or the patents and patent applications resulting therefrom, including without limitation, all rights to sue for any past, present or future infringements thereof, including the rights to license and to collect and receive any damages, royalties, injunctive relief, and/or any other settlements or remedies for such infringements, and including any provisional rights having arisen from any publication of the Patent Application or any patent application resulting therefrom:

the same to be held and enjoyed by Assignee for its own use and enjoyment, and for the use and enjoyment of its successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignors, if this Assignment and sale had not been made.

AND for the aforesaid consideration Assignors hereby covenant, agree and undertake to execute and deliver to Assignee, its successors, assigns, nominees, or legal representatives, whenever requested and without undue delay, all patent applications, assignments, oaths and any other papers which Assignee may deem necessary or desirable for securing to or maintaining for the Assignee the Patent Application, the Patents and the Inventions hereby assigned, and each of the undersigned Assignors agrees to communicate to Assignee or to its nominee all known facts respecting the Patent Application, the Patents and the Inventions, to testify in any legal or administrative proceeding related thereto, and generally to cooperate with and do everything possible to aid Assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for their own benefit proper patent protection for the Inventions in any and all countries, all without further compensation to the undersigned Assignors.

AND Assignors hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to Assignee, as Assignee of the entire right, title and interest, any and all Patents for the Inventions that may be issued and granted on or as a result of the Patent Application, in accordance with the terms of this assignment.

AND Assignors hereby authorize Assignee or Assignee's representative to insert the application number and/or filing date of the Patent Application if they are unknown at the time of execution of this Assignment.

AND Assignors hereby covenant that Assignors have full right to convey the entire interest herein assigned, and that Assignors have not executed and will not execute any agreement in conflict herewith.

AND this Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original of this Assignment. Additionally, we hereby authorize Assignee or

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Assignee's representative to collect the signature pages of each executed counterpart and to attach those signature pages to a single copy of this instrument, which single copy and attached signature pages together shall constitute an original of this Assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

PATENT ASSIGNMENT Docket No.: ILTE_12425US02

Signature of Witness

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915/2018	the state of the s
Date	Pouriya Sadeghi
Signed at <u>Scalling</u> (City and Coun	ý <i>o</i> utry)
STATEMENT OF WITNES	S: I, <u>Neda Enticati</u> Name of Witness
whose full address is: 1565	S Jannes 12 de Ril San Deso, 9212 7 Address of Witness
was personally present and did	I see Pouriya Sadeghi execute this Assignment on the
	, 20 ₄ % and such Assignor is personally known to me to be the
	<u>AL CL</u> Signature of Witness

<u> </u>	J. Patrick Tooher
Signed at(City and Country)	ARON COLONOS
STATEMENT OF WITNESS: I, _	Name of Witness
whose full address is:	1000 Sherbrooks St. West, 10th Floor MTL, OC Canada HSA 3G4 Address of Witness
was personally present and did see J. day of (1) (20) person described herein.	Patrick Tooher execute this Assignment on the and such Assignor is personally known to me to be the
	Signature of Witness

Docket No.: ILTE_12425US02

| Date | Docket No.: ILTE_12425US02 | Docket N

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PATENT ASSIGNMENT Docket No.: ILTE_12425US02 26 10 00000 2017 Date	Marian Rudy	
Signed at VIVAA //City and Cou	Austria itry)	
STATEMENT OF WITNES	18:1, Luminita Mihaela POPESCU Name of Witness	
whose full address is:	MLGASSE 5, HAUS 5, MOO VIENNA, AUSTRI Address of Witness	A
was personally present and did day of <u>October</u> person described herein.	I see Marian Rudolf execute this Assignment on the <u>26</u> , 20 and such Assignor is personally known to me to be the	

Signature of Witness

PATENT ASSIGNMENT Docket No.: ILTE_12425US02 PATENT ASSIGNMENT Docket No.: ILTE_12425US02	Pascal M. Adjakple
Signed at(City and Country)	MELVILLE, NEW YORK USA
STATEMENT OF WITNESS: I,	BRINGST LETREN Name of Witness
whose full address is:	I HUNTINGTON QUADRANGLE 4TH FLOOR/SOUTH WING MELVILLE, NY 11747 USA Address of Witness
was personally present and did see Pascal M. Adjakple execute this Assignment on the	
	Budget Jette Signature of Witness