03/14/2019 505374285

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
MOHAMED ADEL SALEM	02/06/2019
ZHENFEI TANG	02/06/2019
AMINE MAAREF	02/06/2019
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### **RECEIVING PARTY DATA**

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#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16231006

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ATTORNEY DOCKET NUMBER:	HW 85673538US02
NAME OF SUBMITTER:	MARANDA BRALLEY
SIGNATURE:	/Maranda Bralley/
DATE SIGNED:	03/14/2019

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## **Total Attachments: 3**

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PATENT REEL: 048594 FRAME: 0919

#### ASSIGNMENT

WHEREAS, I/We, the undersigned inventor(s) (or one of the undersigned joint inventors), of residence as listed below, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, Huawei Technologies Co., Ltd. ("Assignee"), a corporation organized and existing under the laws of China, having a principal place of business at Huawei Administration Building, Bantian, Longgang, Shenzhen, Guangdong, 518129 China, is desirous of acquiring my/our entire right, title and interest in the said invention, and to the said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I/we will assign, and hereby assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive right, title and interest in and to the invention in the United States and every other country and the entire right, title, and interest in and to the patent application and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisional, reissues, reexaminations, National Phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every other country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and I/we do hereby authorize and request the Commissioner for Patents to issue U.S. patents for said invention, or patent resulting therefrom, insofar as my/our interest is concerned, to the Assignee agreeably with the terms of this assignment document.

I/we also hereby agree to sell and to assign, and sell and assign to Assignee, its successors and assigns, my/our international rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of any International Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I/we hereby further agree that I/we will communicate to Assignee, or its successors, assigns, and legal representative, any facts known to me/us respecting said invention or the file history thereof, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all documents required for divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid such Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said

Huawei Technologies Co., Ltd. Patent Reference No. HW 85673538US02 Page 1 of 3

## ASSIGNMENT

invention in all countries.

Title of Invention

Patent Reference No. HW 85673538US02

I/we hereby authorize Assignee to modify this Assignment at a later date for the purpose of adding information to better identify the invention, such as the application serial number, and filing date of a patent application filed thereon.

Systems and Methods for Reliable Transmission Over

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

	Network Resources			
	Appl. No.	Fi	ling Date:	
	• • •		2/21/2018	
Signature of Inventor:	11/12/4	and the state of t	a na ang karan kahika na ang kanan kahika na na ang ana kahika na mananan na ng ana kahika na na na na na na n	
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Witness Name:	USA VILATPORNSAWAZ	Date	Feb 6th 2019	
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Signature of Inventor:	Zhanfer Tann	and a superior and a		
Inventor Name:	Zhenfel Tang	Date	Feb 6th 2015	
Residence (City/State):	Ottawa, ON			
Signature of Witness:	M. J. Alyloni Javad Abdoli	Date	Fol. 62018	
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westerne (city/state):	0Hawa,01			
Signature of Inventor:		Service Services and an arrangement to the	communicación de la communicación de la communicación de la colonia del colonia de la colonia de la colonia de la colonia del colonia de la colonia de la colonia del colonia de la colonia del la colon	
Inventor Name:	Amine Maaref	Date	Feb. 06,2019	
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Signature of Witness:	H. Commonstar		10. <u>(j </u>	
Witness Name:	Hamilweza Farmon	<i>Nor</i> Pate	Feb. 6/2019	
Residence (City/State):	Ottawa on		. ⊕¢	
Huawei Technologies	Co., Ltd.		Page 2 of 3	

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# ASSIGNMENT

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Inventor Name:	Jiayin Zhang	Date	orania de la compania
Residence (City/State);	Kanntu		Jan 28 201
Signature of Witness	Cang Da .		
Witness Name: Residence (City/State):	Qiong Jia Shaadan China	Date	Jan. 28. 201)
			and the second s
Signature of Incentor:	talist.		
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