

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT7100350

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	SANGHOON SUNG	12/29/2021
RECEIVING PARTY DATA		
Name:	T-MOBILE INNOVATIONS LLC	
Street Address:	6360 SPRINT PARKWAY	
City:	OVERLAND PARK	
State/Country:	KANSAS	
Postal Code:	66251-2100	
PROPERTY NUMBERS Total: 1		
Property Type	Number	
Application Number:	17566042	
CORRESPONDENCE DATA		
Fax Number:	(816)421-5547	
<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>		
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Correspondent Name:	SHOOK, HARDY & BACON LLP	
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ATTORNEY DOCKET NUMBER:	P20077US01/377282	
NAME OF SUBMITTER:	TEARRA VAUGHN	
SIGNATURE:	/Tearra Vaughn/	
DATE SIGNED:	12/31/2021	
Total Attachments: 2		
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**ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR
LETTERS PATENT OF THE UNITED STATES OF AMERICA**

INVENTOR(S): Sanghoon Sung

I hereby declare that I am an original, first and joint inventor of the invention relating to

**MASSIVE MIMO BEAMFORMING MODE CONTROL TO COMBAT REMOTE
INTERFERENCE DUE TO TROPOSPHERIC DUCTING**

described in an application for Letters Patent of the United States of America, executed by me on even date with my execution of this Assignment.

For valuable consideration received, I hereby sell, assign and transfer to T-MOBILE INNOVATIONS LLC, a limited liability company duly organized and existing under the laws of the State of Delaware, United States of America, its successors and assigns, my entire right, title and interest, for all countries in and to said inventions and all the rights and privileges under any and all Letters Patent that may be granted therefore, and any divisions, continuations, reissues and extensions thereof.

I agree that, when requested, I will, without charge to said limited partnership but at its expense, sign all papers, take all rightful oaths, make all rightful declarations and do all acts which may be necessary, desirable or convenient for securing and maintaining patents or other forms of protection for said inventions in any and all countries and for vesting title thereto in said limited partnership, its successors, assigns or nominees.

I agree that I will communicate to said limited partnership or its representatives any facts known to me respecting said inventions and when requested by said limited partnership and at its expense will testify in any legal proceedings, and generally do everything possible to aid said limited partnership, its successors, assigns and legal representatives or nominees, to obtain or enforce proper protection for said inventions in any and all countries.

I authorize and empower said limited partnership, its successors, assigns or nominees, to make application for patent or other form of protection for said inventions in its or their own name, or in my/our name, in any and all countries to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me.

I hereby consent that a copy of this Assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of the said limited partnership or its successors, assigns or nominees to apply for patent or other proper protection for said inventions, and to claim the aforesaid benefits of the right of priority provided by the

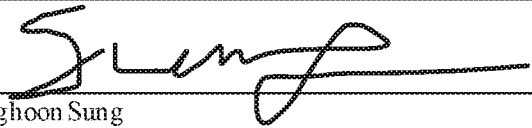
International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

I covenant with T-MOBILE INNOVATIONS LLC, its successors, assigns, legal representatives, and nominees, that to the best of my knowledge the right, title and interest herein conveyed by me are free and clear of any encumbrance, and that I have the full right to convey the same as herein expressed.

This Agreement and Assignment supersedes all other assignments, agreements and addenda related to the above identified application.

Please direct any questions regarding this Assignment to:

Attn: Customer No. 32423
Melissa A. Jobe
(913) 315-9262

Inventor's Signature:		12/29/2021
	Sanghoon Sung	Date
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