507306924 05/27/2022

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SERGE MUKERJI MANNING	05/16/2022
GREGORY SCHUMACHER	05/23/2022
MAROUANE BALMAKHTAR	05/16/2022

RECEIVING PARTY DATA

Name:	T-MOBILE INNOVATIONS LLC
Street Address:	6360 SPRINT PARKWAY
City:	6360 SPRINT PARKWAY
State/Country:	KANSAS
Postal Code:	66251-2100

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17824416

CORRESPONDENCE DATA

Fax Number: (816)421-5547

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Address Line 4: KANSAS CITY, MISSOURI 64108

ATTORNEY DOCKET NUMBER: 40868.378350 NAME OF SUBMITTER: HOPE A. MISCHLICH SIGNATURE: /Hope A. Mischlich/ **DATE SIGNED:** 05/27/2022

Total Attachments: 3

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> PATENT **REEL: 060035 FRAME: 0978**

507306924

ASSIGNMENT AND AGREEMENT IN AN APPLICATION FOR LETTERS PATENT OF THE UNITED STATES OF AMERICA

INVENTOR(S): Serge Mukerji MANNING, Gregory SCHUMACHER, and Marouane BALMAKHTAR

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

MULTIMEDIA MESSAGE (MMS) OBJECT SEQUENCES AS MULTI-FACTOR AUTHENTICATION (MFA) FOR USER IDENTIFICATION IN 5G

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 liability company 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 liability company, its successors, assigns or nominees.

I agree that I will communicate to said limited liability company or its representatives any facts known to me respecting said inventions and when requested by said limited liability company and at its expense will testify in any legal proceedings, and generally do everything possible to aid said limited liability company, 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 liability company, 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 liability

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company 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: Serge Mukerji MANNING	= <i>5/11/</i> 52			
Serge Mukerji MANING	7 Das / 1 4 7			
Residence: Plano, TX Citizenship: US Post Office address: 2512 Royal Tross Dr. Plano, TX 75025				
Inventor's Signature: Gregory SCHUMACHER	Date			
Residence: Holliston, MA Cuizenship: US Post Office address: 19 Cold Spring Road, Holliston, MA 01746				
Inventor's Signature: <u>Michael Louides</u> Starmanc BALSIAKITAR Residence: Pairfux, VA Citirenship: US Post Office address: 5511 Ashton Oaks Court, Fairfux, VA 23030	5/14/22 Date			

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company 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.

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Attn: Customer No. 32423

Melissa A. Jobe (913) 315-9262

Inventor's Signature:	
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