504893070 05/01/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DOCOMO INNOVATIONS, INC.	03/30/2018

RECEIVING PARTY DATA

Name:	NTT DOCOMO, INC.
Street Address:	11-1, NAGATACHO 2-CHOME, CHIYODA-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	100-6150

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15564873

CORRESPONDENCE DATA

Fax Number: (713)228-8778

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.

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Correspondent Name: THOMAS K. SCHERER

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Address Line 4: HOUSTON, TEXAS 77010

ATTORNEY DOCKET NUMBER:	37945/010002	
NAME OF SUBMITTER:	THOMAS K. SCHERER	
SIGNATURE:	/Thomas K. Scherer/	
DATE SIGNED:	04/30/2018	

Total Attachments: 2

 $source=37945-010002_Assignment \ as \ Filed \ (Docomo\ Innovations\ to\ NTT\ Docomo)\#page1.tif\\ source=37945-010002_Assignment \ as\ Filed \ (Docomo\ Innovations\ to\ NTT\ Docomo)\#page2.tif$

PATENT 504893070 REEL: 045677 FRAME: 0053



ASSIGNMENT - WORLDWIDE

Whereas, the undersigned entity, Docomo Innovations, Inc. (referred to herein as "ASSIGNOR") is in receipt of an Assignment from each of the Inventor(s) conveying the entire rititle, and interest, worldwide, in and to the INVENTION described in:			
The attached application to be filed:	as a United States application or PCT international		
application, or	••		
☐ United States application or PCT in	ternational application number 15/564.873 filed on		
October 6, 2017; and, entitled:	•		

BASE STATION, USER EQUIPMENT, AND METHOD FOR DETERMINING PRECODING MATRIX

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR hereby assigns, transfers, and sets over to:

NTT DOCOMO, Inc.

having the following address:

11-1, Nagatacho 2-chome, Chiyoda-ku, Tokyo, Japan 100-6150

(referred to herein as "ASSIGNEE"), its successors, and assigns, the entire right, title, and interest, worldwide, in and to the invention described in the patent application identified above (referred to herein as "INVENTION"), together with said patent application, all divisions, continuations, continuations-in-part, reissues, and extensions thereof, and all Letters Patent (domestic and foreign) that may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by ASSIGNEE, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the ASSIGNOR if this assignment had not been made.

In addition, the undersigned ASSIGNOR hereby agrees:

- 1. To sign and execute any further documents that may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to ASSIGNEE;
- 2. To execute all papers and documents and to perform all lawful acts that may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
- 3. To perform all lawful affirmative acts that may be necessary to obtain the grant of valid and enforceable patents to ASSIGNEE.

The undersigned ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, or reissue thereof to ASSIGNEE.



intellectual Property Law

The undersigned ASSIGNOR hereby grants to the firm of OSHA LIANG LLP the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for the recordation of this document.

IN WITNESS WHEREOF, this Assignment has been executed by the undersigned individual having authority to bind the ASSIGNOR on the date appearing by such individual's signature: 3/30/20/8 ASSIGNOR Signature: Print or Type Name: Takashi Suzuki Print or Type Name: President & CEO Print or Type Title: DOCOMO Innovations, Inc. This Assignment may be signed before either: (a) a Notary Public for one of the States of the United States, or (b) two witnesses who sign below: State of County of NOTARY PUBLIC Before me personally appeared: 3nd Inventor each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment. Dated: Notary Public My commission expires: **WITNESSES** Signature of Witness: Date Print or Type Name: Signature of Witness:

22511
PATENT TRADEMARK OFFICE

Print or Type Name:

PATENT REEL: 045677 FRAME: 0055

RECORDED: 05/01/2018

Date