PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5186988

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
AJIT NIMBALKER	04/14/2015
VIJAY NANGIA	04/14/2015
MURALI NARASIMHA	04/14/2015
RAVIKIRAN NORY	04/14/2015

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16159561	

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ATTORNEY DOCKET NUMBER:	SMM01314-US-CNT
NAME OF SUBMITTER:	MATTHEW C. LOPPNOW
SIGNATURE:	/Matthew C. Loppnow/
DATE SIGNED:	10/12/2018

Total Attachments: 2

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PATENT REEL: 047153 FRAME: 0731 505140223

ASSIGNMENT AND DECLARATION FOR UTILITY PATENT APPLICATION

Title of Invention: METHOD AND APPARATUS FOR SIGNALING APERIODIC CHANNEL STATE INDICATION REFERENCE SIGNALS FOR LTE OPERATION

Whereas, I have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the above-indicated Motorola Mobility Docket Number,

I hereby declare as follows:

- This declaration under 37 C.F.R. § 1.63 is directed to the attached application, or (if checked) to [X] United States or PCT international patent application serial number 14/672342 filed on March 30, 2015
- I believe myself to be the original inventor or an original joint inventor of a claimed invention in the application.
- The above-identified application was made or authorized to be made by me.
- I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

Whereas, Motorola Mobility LLC (as the "ASSIGNEE"), a limited liability company of the State of Delaware, having a place of business at 222 West Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, USA, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto,

I hereby (as "ASSIGNOR), for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such

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MOTOROLA MOBILITY DOCKET NUMBER: MM01314

patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby grant the ASSIGNEE, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment.

I hereby acknowledge that any willful false statement made herein is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) L	egal Name of In	ventor: AJIT NIMBALKER		
Si	gnature:	Sph Nimbula	Date:	4/14/15
(2) Le	egal Name of In	ventor: VIJAY NANGIA		
Si	gnature: <u></u>	John Mandre	Date:	4/14/15
(3) Le	egal Name of In	ventor: MURALI NARASIMHA		
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