

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	ADNAN AIJAZ	06/01/2017
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<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	15487163	
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<b>Fax Number:</b>		
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<b>SIGNATURE:</b>	/Anita L. Nylander/	
<b>DATE SIGNED:</b>	06/29/2017	
<b>Total Attachments: 2</b>		
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**ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION**

**ASSIGNMENT:**

WHEREAS I/We, the below-named Inventor(s), (hereinafter referred to as Assignor(s)), of an invention entitled:

Method for Assisting Bidirectional Communication in Wireless Networks  
filed herewith or on April 13, 2017 as United States Application No. 15/487,163 (Confirmation No. [Text]) attached hereto  
and/or PCT International Application No. [Text]; and

WHEREAS, Kaushiki Kaisha Toshiba  
a corporation of Japan

whose post office address is 1-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan 105-8001

(hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, provisional Application No. [Text], filed [Date] (if any), and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority in any foreign country on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application in any foreign country, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request the Director of the United States Patent and Trademark Office and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE HEREBY authorize and request that the attorneys having Power of Attorney in this application, insert here in parentheses (Application No.[Text], filed [Date]) the filing date and application number of said application when known.

**DECLARATION:**

As a named inventor below, I hereby declare that: (1) This declaration is directed to the above-identified application; (2) the above-identified application was made or authorized to be made by me; (3) my residence and mailing address are as stated below next to my name; and (4) I believe I am an original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statements made in this declaration are punishable by fine or imprisonment of not more than five (5) years, or both, under section 1001 of Title 18 of the United States Code.

As a below named inventor, I have reviewed and understand the contents of the application, including the claims, and am aware of the duty to disclose to the US PTO all information known to me to be material to patentability as defined in 37C.F.R. § 1.56.

1. LEGAL NAME OF SOLE OR FIRST ASSIGNOR Adnan Allaz	SIGNATURE <i>Adnan Allaz</i>	DATE 01/06/17.
MAILING ADDRESS c/o Toshiba Research Europe Limited 32 Queen Square, Bristol, BS1 4ND, United Kingdom		RESIDENCE Bristol, United Kingdom
2. LEGAL NAME OF SECOND ASSIGNOR, IF ANY	SIGNATURE	DATE
MAILING ADDRESS		RESIDENCE
3. LEGAL NAME OF THIRD ASSIGNOR, IF ANY	SIGNATURE	DATE
MAILING ADDRESS		RESIDENCE