

## 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>
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15547222
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<b>SIGNATURE:</b>	/Sandy Fong-Hou/
<b>DATE SIGNED:</b>	07/28/2017
<b>Total Attachments: 5</b>	
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## ASSIGNMENT

I/we, (The ASSIGNOR(S)):

Samiul Md Haque  
Di Wei  
Stefano Borini  
Salvatore Zarra

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby assign to (hereafter referred to as The ASSIGNEE):

Nokia Technologies OY  
Karaportti 3  
02610 Espoo  
Finland.

An invention entitled (invention Title):

## APPARATUS AND METHOD

The PATENT RIGHTS referred to in this agreement are:

☐ a national Patent Application No. \_\_\_\_\_ filed on \_\_\_\_\_  
☒ European Patent Application No. 15154047.3 filed on February 06, 2015  
☐ PCT application No. \_\_\_\_\_ filed on \_\_\_\_\_

for this invention, executed by the ASSIGNOR(S)

☒ U.S. Patent Application Serial No. 15/547222, filed July 28, 2017  
☐ U.S. Patent No. \_\_\_\_\_, issued \_\_\_\_\_

The PATENT RIGHTS assigned under this agreement are:

☒ U.S. Patent rights  
☒ worldwide Patent rights. In this case, the assignee shall have the right to claim the benefit of the filing date of any Patent Application identified above.  
☒ the full and exclusive right to the invention;

The ASSIGNOR(S) do hereby assign the following to each ASSIGNEE; their successors and assigns:

an equal interest in and to the entire right, title and interest in and to the PATENT RIGHTS in the invention, all continuations, continuations-in-part, divisionals, re-issues, and re-examination patents and patent applications; and

the right to claim priority under 35 U.S.C. § 119, based on any earlier foreign applications for this invention.

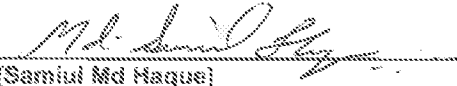
As to all U.S. Patent Applications assigned under this Agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue all Letters Patent to the ASSIGNEE(S) as the ASSIGNEE(S) of an equal interest in the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE(S), their successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE(S), or their representatives, any facts known to the ASSIGNOR(S) respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE(S), make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE(S), their successors and assigns, to obtain and enforced proper protection for said invention.


Further, I/We authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

Each Inventor: Please sign and date below:

NC86915

  
[Samiul Md Haque]

12/2/2015  
Date

  
Witness Signature  
Printed Name Nadine Harris

12/2/2015  
Date

NC86915

*Di Wei*

[Di Wei]

*11/2/2015*

Date

*Matteo Bruna*

Witness Signature

Printed Name MATTEO BRUNA

*11/2/2015*

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MAE BOWEN

Witness Signature

Printed Name MAE BOWEN

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PATENT

REEL: 043127 FRAME: 0006

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[Salvatore Zarra]

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Witness Signature

Printed Name MARIA ROSA

11-2-2015

Date