

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6573957

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
DEEPAK NAYAK	01/25/2019
CHANDRASHEKHAR THEJASWI	01/25/2019
SURESH KALYANASUNDARAM	01/25/2019
RAJEEV AGRAWAL	02/01/2019
HUA XU	02/01/2019
ANAND BEDEKAR	02/04/2019
VERONIQUE CAPDEVIELLE	01/25/2019
CLAUDIU MIHAILESCU	01/25/2019
BORIS KOUASSI	01/25/2019
AFEF FEKI	01/25/2019
RECEIVING PARTY DATA	
Name:	NOKIA SOLUTIONS AND NETWORKS OY
Street Address:	KARAPORTTI 3
City:	ESPOO
State/Country:	FINLAND
Postal Code:	02610
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17271918
CORRESPONDENCE DATA	
Fax Number:	
<i>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.</i>	
Phone:	(650) 868-6292
Email:	sandy.fong@nokia.com
Correspondent Name:	NOKIA OF AMERICA CORPORATION
Address Line 1:	600-700 MOUNTAIN AVENUE
Address Line 4:	MURRAY HILL, NEW JERSEY 07974-0636
ATTORNEY DOCKET NUMBER:	307151US INV TO NSN

NAME OF SUBMITTER:	SANDY FONG
SIGNATURE:	/Sandy Fong/
DATE SIGNED:	02/26/2021
Total Attachments: 7 source=NC307151-WO-PCT_Executed assignment#page1.tif source=NC307151-WO-PCT_Executed assignment#page2.tif source=NC307151-WO-PCT_Executed assignment#page3.tif source=NC307151-WO-PCT_Executed assignment#page4.tif source=NC307151-WO-PCT_Executed assignment#page5.tif source=NC307151-WO-PCT_Executed assignment#page6.tif source=NC307151-WO-PCT_Executed assignment#page7.tif	

ASSIGNMENT - WORLDWIDE

ASSIGNOR(S)

Deepak Nayak, Bangalore, IndiaChandrashekhar Thejaswi, Bangalore, IndiaSuresh Kalyanasundaram, Bangalore, IndiaRajeev Agrawal, Glenview, Illinois, United States of AmericaHua Xu, Hawthorn Woods, Illinois, United States of AmericaAnand Bedekar, Glenview, Illinois, United States of AmericaVeronique Capdevielle, Magny-Les-Hameaux, FranceClaudiu Mihailescu, Versailles, FranceBoris Kouassi, Massy, FranceAfef Feki, Sceaux, France

ASSIGNEE

Nokia Solutions and Networks Oy
Karaportti 3, 02610 Espoo, Finland

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the ASSIGNOR(S) agree to assign and hereby assign, sell, transfer and set over to the ASSIGNEE and its successors, assigns and legal representatives, the entire right, title and interest, for United States of America and for all other countries in and to (1) the invention(s) identified by the following title or application number and filing date, and (2) any and all related inventions ("RELATED INVENTIONS" as defined below).

Title: **APPARATUS AND METHOD FOR DESIGNING A GRID-OF-BEAMS USING MACHINE LEARNING**

Application number: **PCT/US2018/050872** Filing date: **2018-09-13**
(YYYY-MM-DD)

I/we, the ASSIGNOR(S), hereby authorize and request a representative of the ASSIGNEE to insert the application number and filing date when known/received, after the execution of this document. The ASSIGNOR(S) hereby acknowledge and agree that the ASSIGNEE shall have the right to claim priority, directly or through another patent application, to the application identified above in any and all related patent applications subsequently filed in all jurisdictions.

I/we the ASSIGNOR(S) hereby acknowledge and agree that RELATED INVENTIONS include all national, regional and international patent applications filed and to be filed in any and all jurisdictions, that claim priority to the invention(s) identified by the above title or application number and filing date, said patent applications include all divisionals, continuations, re-issues, re-examinations, and continuations-in-part applications, and RELATED INVENTIONS include all rights and privileges in said patent applications and under any and all letters patent that may be granted in the United States of America and in all other countries resulting from said patent applications.

The ASSIGNOR(S) authorize the ASSIGNEE to make applications for such protection in its own name and maintain such protection in any and all countries including the United States of America, and to invoke and claim for any application for patent or other form of protection for said invention(s), without further authorization from us, any and all benefits, including the rights of priority provided by any and all treaties, conventions, or agreements.

The ASSIGNOR(S) hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of the ASSIGNEE to apply for patent or other form of protection for said invention(s) and to claim the aforesaid benefit of the right of priority.


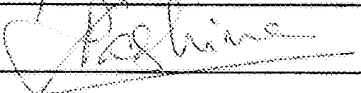
The ASSIGNOR(S) request that any and all patents for said invention(s) be issued to the ASSIGNEE, its/their successors, assigns and legal representatives, in the United States of America and in all other countries, or to such nominees as the ASSIGNEE may designate.

The ASSIGNOR(S) agree that, when requested, we shall, without charge to the ASSIGNEE sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

In witness whereof, each inventor/assignor please sign and date below:

Inventor (First Middle LAST)	Signature	Date (YYYY-MM-DD)
<u>Deepak Nayak</u>	<u>[Signature]</u>	<u>Jan 25, 2019 (2019-01-25)</u>
<u>Chandrashekhar Thejaswi</u>	<u>P. S. C. Thejaswi</u>	<u>Jan 25, 2019</u>
<u>Suresh Kalyanasundaram</u>	<u>[Signature]</u>	<u>Jan 25, 2019</u>
<u>Rajeev Agrawal</u>		
<u>Hua Xu</u>		
<u>Anand Bedekar</u>		
<u>Veronique Capdevielle</u>		
<u>Claudiu Mihailescu</u>		
<u>Boris Kouassi</u>		
<u>Afef Feki</u>		

This assignment should preferably be signed by the inventor(s) before (a) at least two witnesses who also sign here, or (b) a Notary Public if within the U.S.A.:

Witness Name (First Middle LAST)	Signature	Date (YYYY-MM-DD)
<u>Richa Gupta</u>	<u></u>	<u>2019-01-25</u>
<u>Prakhar V. Nishine</u>	<u></u>	<u>2019-01-25</u>

The ASSIGNEE accepts this assignment:

Name _____	Signature _____
Title _____	Date (YYYY-MM-DD) _____
Name _____	Signature _____
Title _____	Date (YYYY-MM-DD) _____

I/we the ASSIGNOR(S) hereby acknowledge and agree that RELATED INVENTIONS include all national, regional and international patent applications filed and to be filed in any and all jurisdictions, that claim priority to the invention(s) identified by the above title or application number and filing date, said patent applications include all divisionals, continuations, re-issues, re-examinations, and continuations-in-part applications, and RELATED INVENTIONS include all rights and privileges in said patent applications and under any and all letters patent that may be granted in the United States of America and in all other countries resulting from said patent applications.

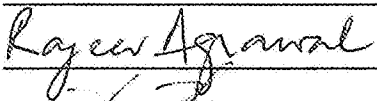
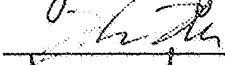
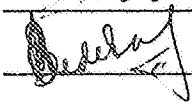
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In witness whereof, each inventor/assignor please sign and date below:

Inventor (First Middle LAST)	Signature	Date (YYYY-MM-DD)
<u>Deepak Nayak</u>	_____	_____
<u>Chandrashekhar Thejaswi</u>	_____	_____
<u>Suresh Kalyanasundaram</u>	_____	_____
<u>Rajeev Agrawal</u>		<u>2/1/2019</u>
<u>Hua Xu</u>		<u>2019-02-01</u>
<u>Anand Bedekar</u>		<u>2019-02-04</u>
<u>Veronique Capdevielle</u>	_____	_____
<u>Claudiu Mihailescu</u>	_____	_____
<u>Boris Kouassi</u>	_____	_____
<u>Afef Feki</u>	_____	_____

This assignment should preferably be signed by the inventor(s) before (a) at least two witnesses who also sign here, or (b) a Notary Public if within the U.S.A.:

Witness Name (First Middle LAST)	Signature	Date (YYYY-MM-DD)
SUBHASIS LAHA	<i>Subhasis Laha</i>	2019-02-04
Jamil Shihab	<i>[Signature]</i>	2019-02-04

The ASSIGNEE accepts this assignment:

Name _____	Signature _____
Title _____	Date (YYYY-MM-DD) _____
Name _____	Signature _____
Title _____	Date (YYYY-MM-DD) _____

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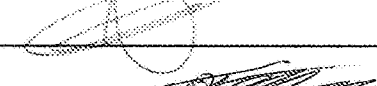


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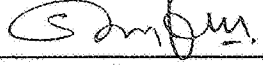
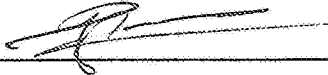
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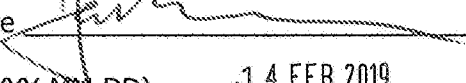
Inventor (First Middle LAST)	Signature	Date (YYYY-MM-DD)
<u>Deepak Nayak</u>	_____	_____
<u>Chandrashekhar Thejaswi</u>	_____	_____
<u>Suresh Kalyanasundaram</u>	_____	_____
<u>Rajeev Agrawal</u>	_____	_____
<u>Hua Xu</u>	_____	_____
<u>Anand Bedekar</u>	_____	_____
<u>Veronique Capdevielle</u>		JAN. 25. 2019
<u>Claudiu Mihailescu</u>		2019 01 25
<u>Boris Kouassi</u>		JAN. 25. 2019
<u>Afef Feki</u>		Jan 25, 2019

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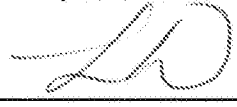
Witness Name (First Middle LAST)	Signature	Date (YYYY-MM-DD)
<u>Fahad SYED MUHAMMAD</u>	<u></u>	<u>2019-01-25</u>
<u>PLIGNIERE ERIC</u>	<u></u>	<u>2019-01-25</u>

The ASSIGNEE accepts this assignment:

Name Jarmo J. Kemppainen
 Title Senior IPR Specialist

Signature 
 Date (YYYY-MM-DD) 14 FEB 2019

Name Louis Diep
 Title Director, Filing & Prosecution Admin

Signature 
 Date (YYYY-MM-DD) 14 FEB 2019