506175719 07/28/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT6222457 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| MARTTI MOISIO | 05/06/2020 |
| ZEXIAN LI | 03/03/2020 |
| MIKKO UUSITALO | 03/03/2020 |

RECEIVING PARTY DATA

| Name: | NOKIA TECHNOLOGIES OY |
|-----------------|-----------------------|
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| State/Country: | FINLAND |
| Postal Code: | 02610 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16643579 |

CORRESPONDENCE DATA

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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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Email: sandy.fong@nokia.com

NOKIA OF AMERICA CORPORATION **Correspondent Name:**

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| ATTORNEY DOCKET NUMBER: | 102827US INV TO NTECH |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | SANDY FONG |
| SIGNATURE: | /Sandy Fong/ |
| DATE SIGNED: | 07/28/2020 |

Total Attachments: 4

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PATENT REEL: 053332 FRAME: 0130 506175719

ASSIGNMENT - WORLDWIDE

ASSIGNOR(S)

| Name | City | Country |
|----------------|-----------|---------|
| Martti Moisio | Klaukkala | Finland |
| Zexian Li | Espoo | Finland |
| Mikko Uusitalo | Helsinki | Finland |

ASSIGNEE

Nokia Technologies Oy

Karakaari 7 (as of 1 July 2019, formerly 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).

Application Title: REDUCING COVERAGE PROBLEMS VIA DYNAMIC

MEASUREMENTS

Application number: WO PCT/FI2017/050614 Filing date: 2017-09-01

(YYYY-MM-DD)

I/we, the ASSIGNOR(S), hereby authorize and request a representative of the ASSIGNEES to insert the application title, application number and filing date when known/received, after the execution of this document. The ASSIGNOR(S) hereby acknowledge and agree that the ASSIGNEES 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.

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PATENT REEL: 053332 FRAME: 0131 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 inve | intor/assignor please sign and d | late below: |
|---|--|--|
| Inventor (First Middle LAST) | Signature | Date (YYYY-MM-DD) |
| Martti Moisio | | |
| Zexian Li | Sand Market State of the State | 2020-03-03 |
| Mikko Uusitalo | The state of the s | <u> </u> |
| This assignment should prefer witnesses who also sign here, or (b) a Witness Name (First Middle LAST) Kimno TAMO VALIKEALART Nemai Markos KOSKINEN | erably be signed by the inventor Notary Public if within the U.S. Signature Quo Que | or(s) before (a) at least two .A.: Date (YYYY-MM-DD) |

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) | |
| Martti Moisio | Martti Maisia Marii Moisio (Nay 6, 2010) | May 6, 2020 | |
| Zexian Li | | | |
| Mikko Uusitalo | | | |
| 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) | | | |
| , | | (| |
| | | | |
| | | | |

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PATENT REEL: 053332 FRAME: 0133 The ASSIGNEE accepts this assignment:

Name Anne Ojanperä

Title Authorized Signatory

Name Rauni Kittilä

Title Authorized Signatory

Title Authorized Signatory

Date (YYYY-MM-DD)

Name Authorized Signatory

Date (YYYY-MM-DD)

Date (YYYY-MM-DD)

May 4, 2020

Date (YYYY-MM-DD)

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RECORDED: 07/28/2020 REEL: 053332 FRAME: 0134