PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PINGPING WEN	09/08/2022
KARRI RANTA-AHO	08/31/2022
ZHILAN XIONG	09/04/2022
TAO YANG	09/01/2022

RECEIVING PARTY DATA

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Street Address:	KARAKAARI 7	
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17056960

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	JOSEPH C. DRISH
SIGNATURE:	/Joseph C. Drish/
DATE SIGNED:	09/14/2022

Total Attachments: 2

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PATENT 507490116 REEL: 061089 FRAME: 0466

ASSIGNMENT - WORLDWIDE

ASSIGNOR(S)

Name	City	Country
Pingping Wen	Shanghai	China
Karri Ranta-aho	Espoo	Finland
Zhilan Xiong	Bristol	United Kingdom
Tao Yang	Shanghai	China

(Full legal name, city and country of each inventor)

ASSIGNEE

Nokia Technologies Oy Karakaari 7, 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: HYBRID AUTOMATIC REPEAT REQUEST IN NON-TERRESTRIAL NETWORKS

 $\textbf{Application number: WO } \underline{PCT/CN2018/087681} \qquad \textbf{Filing date: } \underline{2018-05-21}$

(YYYY-MM-DD)

I/we, the ASSIGNOR(S), hereby authorize and request a representative of the ASSIGNEE 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 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.

-1/2- v-25March2020

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.

The ASSIGNOR(S) and ASSIGNEE agree that this assignment may be executed by either handwritten signatures, including the exchange of scanned representations of handwritten signatures, or e-signatures. By using e-signature to sign this assignment, the ASSIGNOR(S) and ASSIGNEE acknowledge that execution in this manner creates a binding contract between the ASSIGNOR(S) and ASSIGNEE.

Each inventor/assignor please sign and date below:			
Inventor (First Middle Last)	Signature	Date	
Pingping Wen	Pingping Wen Pingping Wen (Sep 8, 2022 15:53 GMT+8)	08-Sep-2022	
 Karri Ranta-aho	Karri Ranta-aho Karri Ranta-aho (Aug 31, 2022 19:10 GMT+2)	31-Aug-2022	
Zhilan Xiong	2 ///////////////////////////////////	04-Sep-2022	
Tao Yang	Tav- Yang Tao Yang (Sep 1, 2022 08:56 GMT+8)	01-Sep-2022	

The ASSIGNEE accepts this assignment:

Nokia Technologies Ov

Name: Leena Hyvärinen Signature Gena Hyvärinen (Sep 1, 2022 13:35 GMT 13)

Title: Authorized Signatory Date 01-Sep-2022

Name: Anne Ojanperä Signature Anne Ojanperä (Sept 2, 2022 16:29 GMT+3)

Title: Authorized Signatory Date 02-Sep-2022