505958501 03/10/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6005208

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MISKA MATIAS HANNUKSELA	12/17/2012
SRIKANTH MANCHENAHALLY GOPALAKRISHNA	12/17/2012

RECEIVING PARTY DATA

Name:	NOKIA CORPORATION
Street Address:	KEILALAHDENTIE 4
City:	ESPOO
State/Country:	FINLAND
Postal Code:	02150

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16812977

CORRESPONDENCE DATA

Fax Number: (704)444-1111

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.

Phone: 7044441000

Email: usptomail@alston.com Correspondent Name: ALSTON & BIRD LLP

Address Line 1: BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET

Address Line 2: **SUITE 4000**

Address Line 4: CHARLOTTE, NORTH CAROLINA 28280-4000

ATTORNEY DOCKET NUMBER:	042933/545214
NAME OF SUBMITTER:	GUY R. GOSNELL
SIGNATURE:	/Guy R. Gosnell/
DATE SIGNED:	03/10/2020

Total Attachments: 3

source=545214_Assign_Inv-Corp#page1.tif source=545214 Assign Inv-Corp#page2.tif source=545214 Assign Inv-Corp#page3.tif

> **PATENT** REEL: 052132 FRAME: 0592 505958501

Docket No.: NC77292US-NP

ASSIGNMENT

Title of Invention	REFERENCE PICTURE HAI	NDLING	
	nment is directed to (check all that provisional No. 61/557386	apply): ZOIJ filed on November 8, 2012	E46- 3/10/2020
	Application No. 13/671410	filed on November 7, 2012	
which	n is a 371 National Stage of	filed on	<u>gagagaaaaaaaga</u>

As the below named inventor(s), I/we have invented certain improvements in the patent application for which I/we have filed an application for Letters Patent of the United States of America as identified above;

WHEREAS, twe authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filling date, senal number, etc.);

WHEREAS, NOKIA CORPORATION, a corporation organized under the laws of Finland, having its principal office in Espoo, Finland (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the entire right, title and interest in and under the said invention and the said application, and in and to any and all Letters Patent which shall be granted therefore in the United States of America and in any and all foreign countries;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged. I/we have sold and do hereby sell, assign, transfer and convey unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and to said invention and application, and in all divisionals, reissues, substitutions, continuations, continuation-im-part and, in any and all Letters Patents of the United States of America and all foreign countries or reissues, reexaminations, or extensions thereof which may be granted therefore or thereon, for the full end of the term for which said Letters Patent may be granted, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me if this assignment and sale had not been made.

I/WE ALSO HEREBY authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom to the said ASSIGNEE of my/our entire right, title and interest.

I/WE FURTHER HEREBY sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said application throughout the world, including, without limitation, the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries. I/we further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

I/WE HEREBY covenant that I/we have not and I/we will not execute any agreement in conflict herewith.

Page 1

Docket No.: NC77292US-NP

ASSIGNMENT

IWE HEREBY further covenant, and agree to bind my/cur heirs, legal representatives, and assigns, promptly to communicate to said ASSIGNEE or its representatives any facts known to me relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors, or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said ASSIGNEE, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF, I/we have hereunto set my/our hand and seal on the date indicated below.

Inventor: Miska Matias Hannuksela	Date:
Signature:	Residence: Tampere, Finland
Witness Signature: 22-2//	
Printed Name: <u>/AÝ/NAN Á-C(AK I</u>	Date: <u>17.12 2012</u>

Page 2

Docket No.: NC77292US-NP

ASSIGNMENT

IN WITNESS WHEREOF, I/we have hereunto set my/our hand and seal on the date indicated below.

Inventor: Snikar	nth Manchenahally	Gopalakrishna	_ Date:	>112/2012	
Signature:	2-	,,	Residence:	Tampere, Finland	
Witness Signatu	re: <i>144 1</i>		-		
Printed Name: _	ZaTroan/	AFLAKI	Date:	12.2012	*****

Page 3

PATENT REEL: 052132 FRAME: 0595