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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PETRI MATTI OLAVI PIIPPO	09/27/2011
JAN PETER ERIK ESKOLIN	10/25/2011
JUSSI SEVERI UUSITALO	09/26/2011
TERO JUHANI HAKALA	11/06/2011

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:	15583191

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	042933/497660
NAME OF SUBMITTER:	STEPHANIE R. CRISTIANO
SIGNATURE:	/Stephanie R. Cristiano/
DATE SIGNED:	08/10/2017

Total Attachments: 5

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> PATENT REEL: 043260 FRAME: 0147

ASSIGNMENT

Title of Invention				
	nment is directed to (check all that app	ply): filed on _		_
X u.s.	Application No. 13/250138	filed on _	September 30,	_2011
which	is a 371 National Stage of		filed on	

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, 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.);

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-in-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.

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ASSIGNMENT

I/WE HEREBY further covenant, and agree to bind my/our 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.

nventor: Petri Matti Olavi PIIPPØ)	Date: Sep. 27, 2011
Signature: 16/6/1/4/2000	Residence: Lempäälä, Fl
Witness Signature: Winh Gilliam	
Printed Name: Kima & Rojnela	Date: 5 & p. 27 2011

ASSIGNMENT

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

Inventor: Ja	n Peter Erik ES	KOLIN	Date:	A5.10.20	<u> </u>
Signature:	<u> </u>	Cont. only	Residence	· Pirkkala, Fl	
William Charles	ature:				
	acure: The second acure acure		Date: A	رجدر مردد کمر	ſ.

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

nventor: Jussi Severi UUSITALO Date: 5 47 7. 2	
nventor: Jussi Severi UUSITALO Date: 3777. 2	

Witness Signature:	May 1	79			
			Ī ,	<i>2</i> 017 7	7 2011
Printed Name:	tyteo their	上いるでつ	Date:	-1 1	

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

Inventor: Tero Juhani HAKALA	Date: 6, 11, 2011
Signature:	Residence: Kangasala, FI
Witness Signature: Wun the	
Printed Name: VIRTI HARALA	Date: 6 11.2011

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