503748655 03/22/2016

PATENT ASSIGNMENT COVER SHEET

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Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:

CORRECTIVE ASSIGNMENT

Corrective Assignment to correct the 4TH INVENTOR'S LAST NAME previously recorded on Reel 038014 Frame 0556. Assignor(s) hereby confirms the ASSIGNMENT OF ASIGNOR'S INTEREST.

CONVEYING PARTY DATA

Name	Execution Date
TORSTEN MUSIOL	02/04/2016
MIKKO TAPANI SUNI	02/29/2016
OLE REINARTZ	02/27/2016
STEPHAN GRUENLOH	02/04/2016
SWAMINATHAN ARUNACHALAM	02/03/2016

RECEIVING PARTY DATA

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Street Address:	KARAPORTTI 3	
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State/Country:	FINLAND	
Postal Code:	02610	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14914699

CORRESPONDENCE DATA

Fax Number: (703)720-7801

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ATTORNEY DOCKET NUMBER: 089229.01194

NAME OF SUBMITTER: DOUGLAS H. GOLDHUSH

SIGNATURE: /Douglas H. Goldhush/

DATE SIGNED: 03/22/2016

PATENT 503748655 REEL: 038214 FRAME: 0899

Total Attachments: 8 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif source=Assignment#page6.tif

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ASSIGNMENT

For good and valuable consideration, liwe, the undersigned

Assignor 1)
Torsten Musici

Assignor 2) Mikko Tapani Suni

residing at:

Gleiwitzer Str.8 40880 Ratingen GERMANY residing at:
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Swaminathan Arunachalam

Assignor 6)

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3844 Rolling Hills drive 75025 Plano UNITED STATES OF AMERICA

hereby sell, assign, and transfer to

Nokia Solutions and Networks Oy

a Finnish corporation organized and existing under the laws of FINLAND, having its principal place of business in ESPOO, FINLAND, herein the "Assignee", its successors, assigns and legal representatives the entire and exclusive right, title and interest in and for the United States, in all and to any improvements in the

(Title:) METHODS AND APPARATUS

disclosed in the application for Letters Patent designating the United States, said application being identified in our records as

Applicants File No. US-/PCT-Application No.

2013P00173WOUS PCT/EP2013/068023

DNR: 2589 /15, 10,2010/get

and in and to said application and all divisional, continuing substitute, renewal, reissue and all other applications for Letters Patent which have been or shall be filed in the United States on any of said improvements; and in and to all original and reissued patents which have been or shall be issued in the United States on said improvements; hereby agree that said Assignee may apply for and receive Letters Patent for said improvements in its own name and that when requested without charge to but at the expense of said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this agreement, the undersigned will execute all divisional, continuing substitute, renewal, reissue and all other patent applications on any and all said improvements; execute all rightful paths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and legal representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for alding in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements and all applications for patents and all patents on said improvements in said Assignee, its successors, assigns, and legal representatives; and hereby covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed had been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Assignor 1)

Date: <u>04/02/2016</u>

Torsten Musici

Assignor 2)

Date: <u>27.2.2016</u>

Mikko Tapani Suni

5/7

Assignor 3)

Date: 17.02.2016

Ole Reinartz

Assignor 4)

Date: 4.2.2016

Stephan Gruenloh

Assignor 5)

Date: 3td Feb 2016

Swaminathan Arunachalam

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3788461

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TORSTEN MUSIOL	02/04/2016
MIKKO TAPANI SUNI	02/29/2016
OLE REINARTZ	02/17/2016
STEPHAN GRUENIOH	02/04/2016
SWAMINATHAN ARUNACHALAM	02/03/2016

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Email: ipgeneraltyc@squiresanders.com, douglas.goldhush@squirepb.com,

linda.ritter@squiresanders.com,

Correspondent Name: SQUIRE PATTON BOGGS (US) LLP Address Line 1: 8000 TOWERS CRESCENT DRIVE

Address Line 2: 14TH FLOOR

Address Line 4: VIENNA, VIRGINIA 22182-6212

Total Attachments: 7	
DATE SIGNED:	03/17/2016
SIGNATURE:	/Douglas H. Goldhush/
NAME OF SUBMITTER:	DOUGLAS H. GOLDHUSH
ATTORNEY DOCKET NUMBER:	089229.01194

Total Attachments: /

PATENT
RECORDED: 03/22/2016 REEL: 038214 FRAME: 0908