PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TROELS ROENNOW	04/08/2016
HONGWEI LI	04/08/2016
ENRIQUE MARTIN LOPEZ	04/08/2016

RECEIVING PARTY DATA

Name:	NOKIA TECHNOLOGIES OY	
Street Address:	KARAPORTTI 3	
City:	ESPOO	
State/Country:	FINLAND	
Postal Code:	02610	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16086643	

CORRESPONDENCE DATA

Fax Number: (408)737-0908

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: 650-868-6292

Email: Sandy.Fong-Hou@nokia.com

NOKIA USA INC. ATTN: INTELLECTUAL PROPE **Correspondent Name:**

Address Line 1: 200 SOUTH MATHILDA AVE

Address Line 4: SUNNYVALE, CALIFORNIA 94086

ATTORNEY DOCKET NUMBER: 100219US INV TO NTECH	
NAME OF SUBMITTER:	SANDY FONG-HOU
SIGNATURE:	/Sandy Fong-Hou/
DATE SIGNED:	09/20/2018

Total Attachments: 4

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> **PATENT REEL: 046920 FRAME: 0866** 505102967

ASSIGNMENT

I/we, (The ASSIGNOR(S)):

Troels Roennow Hongwei Li Enrique Martin Lopez

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby assign to (hereafter referred to as The ASSIGNEE):

Nokia Technologies OY Karaportti 3 02610 Espoo Finland

An invention entitled (invention Title):

MANAGEMENT OF CRYPTOGRAPHIC TRANSACTIONS

	NT RIGHTS referred to in this agreeme a national Patent Application No.	nt are: filed on					
···	European Patent Application No.	filed on					
X		PCT application No. PCT/FI2016/050187 filed on March 23, 2016.					
for this inve	ention, executed by the ASSIGNOR(S)	40/000040		0-1100-0040			
×	U.S. Patent Application Serial No.	16/086643	_, filed _	September 20, 2018			
NOW.	U.S. Patent No.	, issued					
The PATE	NT RIGHTS assigned under this agree	ment are:					
X	U.S. Patent rights						
X X	worldwide Patent rights. In this cas benefit of the filing date of any Pate						
X	the full and exclusive right to the in-	vention;					

The ASSIGNOR(S) do hereby assign the following to each ASSIGNEE; their successors and assigns:

an equal interest in and to the entire right, title and interest in and to the PATENT RIGHTS in the invention, all continuations, continuations-in-part, divisionals, re-issues, and re-examination patents and patent applications; and

the right to claim priority under 35 U.S.C. § 119, based on any earlier foreign applications for this invention.

As to all U.S. Patent Applications assigned under this Agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue all Letters Patent to the ASSIGNEE(S) as the ASSIGNEE(S) of an equal interest in the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE(S), their successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE(S), or their representatives, any facts known to the ASSIGNOR(S) respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE(S), make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE(S), their successors and assigns, to obtain and enforced proper protection for said invention.

Further, 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.);

Each Inventor: Please sign and date below:

PATENT REEL: 046920 FRAME: 0867 NC100219

| Sold - 2016 |
| Troels Roennow | Date |
| Wilness Signature | Printed Name | ANTON (Seponssu | Date |

NC100219

[Hongwei Li]

Witness Signature
Printed Name 10ACHIN

08/04/16

Date

NC100219

[Enrique Martin Lopez]

Witness Signature
Printed Name <u>JOACH IM</u>

08/04/2016

8 APRIL 2016

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RECORDED: 09/20/2018