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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ	· ·			
		Name	Execution Date		
EDWARD GRINSHPUN			09/20/2019		
CINZIA SARTORI			08/19/2019		
SAMEERKUMAR SHAR	RMA		09/03/2019		
RECEIVING PARTY DA	TA				
Name:	NOKIA	NOKIA SOLUTIONS AND NETWORKS OY			
Street Address:	KARAK	(ARAKAARI 7			
City:	ESPOO	ESPOO			
State/Country:	FINLAN	FINLAND			
Postal Code:	02610				
Property Type		Number	1		
Property Type		Number			
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PCT Number:	l	JS2018019611			
PCT Number: CORRESPONDENCE D Fax Number:	ATA	JS2018019611 (703)668-8200			
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PATENT REEL: 053564 FRAME: 0340

ASSIGNMENT - WORLDWIDE

ASSIGNOR(S)

Edward Grinshpun, Freehold, New Jersey, USA

Cinzia Sartori, Pullach, Germany

Sameerkumar Sharma, Holmdel, New Jersey, USA

ASSIGNEE

Nokia Solutions and Networks Oy

Karakaari 7 (as of 1 July 2019, formerly Karaportti 3), 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: METHOD AND SYSTEM FOR AUTOMATED DYNAMIC NETWORK SLICE DEPLOYMENT USING ARTIFICIAL INTELLIGENCE

Application number: <u>PCT/US2018/019611</u> Filing date: <u>2018-02-25</u> (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, reexaminations, 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.

v-24Jun19

PATENT REEL: 053564 FRAME: 0341 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(5) 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.

In witness whereof, each inventor/assignor please sign and date below:					
Inventor (First Middle LAST)	Signature	Date (YYYY-MM-DD)			
Edward Grinshpun	N ational Control (1997)				
Cinzia Sartori	Qualact.	19.08.2019			
Sameerkumar Sharma					
This assignment should pro witnesses who also sign here, or (b)		inventor(s) before (a) at least two e U.S.A.:			
Witness Name (First Middle LAST)	Signature	Date (YYYY-MM-DD)			
Ahmad Awade	AhradAwai	2019-08-19			
Gavilloume Decarrow	<u></u>	2019-08-19			

The ASSIGNEE accepts this assignment:		
Name	Signature Date (YYYY-MM-DD)	OCT 0 3 2019
Name Louis Diep Title Director, Filing & Prosecution Admin.	Signature Date (YYYY-MM-DD)	

2/2

v-24Jun19

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.

In witness whereof, each inventor/assignor please sign and date below:				
Inventor (First Middle LAST) Signal	ture	Date (YYYY-MM-DD)		
Edward Grinshpun	Edward Gring	<u>5013-03</u> -50		
Cinzia Sartori	·			
Sameerkumar Sharma				
This assignment should preferably be signed by the inventor(s) before (a) at least two witnesses who also sign here, or (b) a Notary Public if within the U.S.A.:				
Witness Name (First Middle LAST) Signature		Date (YYYY-MM-DD)		
Kathorine H. Guo <u>6</u> 2	<u>116 - 222</u>	LOQ/20		
Katharine H. Gua (200 Susan 1. Witzel Sism	WWWW	2019 19-20		
The ASSIGNEE accepts this assignment:				
Name	Signature			
Title	Date (YYYY-MM-DD)	OCT 0 3 2019		
Name <u>Louis Diep</u>	Signature			
Title Director, Filing & Prosecution Admin.	_ Date (YYYY-MM-DD)	OCT 0 3 2019		

2/2

v-24Jun19

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.

In witness whereof, each inventor/assignor please sign and date below:				
Inventor (First Middle LAST)	Signature		Date (YYYY-MM-DD)	
Edward Grinshpun				
Cinzia Sartori				
Sameerkumar Sharma	<u></u> ha	umq	2019-09-03	
This assignment should preferably be signed by the inventor(s) before (a) at least two witnesses who also sign here, or (b) a Notary Public if within the U.S.A.:				
Witness Name (First Middle LAST)	Signature	*.;	Date (YYYY-MM-DD)	
<u>SNEHA SIARMA</u>	<u>Srikes</u>	<u>Xame</u>	2017-09-11	
SUDHA-SIARMA	Aliving		_2019-09-12	
The ASSIGNEE accepts this assignment:				
Name Yan Wang	Si	gnature		
Titte Manager, Patenti	ng D	ate (YYYY-MM-	DD)OCT 0 3 2019	
Name Louis Diep	Si	gnature		
Title Director, Filing & Prosecutio	<u>n Admin.</u> Da	ate (YYYY-MM-l	OCT 0 3 2019	

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RECORDED: 08/21/2020