

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5980224

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	PASCHALIS TSIAFLAKIS	12/04/2019
RECEIVING PARTY DATA		
Name:	NOKIA SOLUTIONS AND NETWORKS OY	
Street Address:	KARAKAARI 7	
City:	ESPOO	
State/Country:	FINLAND	
Postal Code:	02610	
PROPERTY NUMBERS Total: 1		
Property Type	Number	
Application Number:	16800124	
CORRESPONDENCE DATA		
Fax Number:	(215)557-8477	
<i>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.</i>		
Phone:	215-557-6656	
Email:	amy@mendelip.com, Nokia.ipr@nokia.com	
Correspondent Name:	STEVE MENDELSON	
Address Line 1:	MENDELSON DUNLEAVY, P.C.	
Address Line 2:	1500 JOHN F. KENNEDY BLVD., SUITE 312	
Address Line 4:	PHILADELPHIA, PENNSYLVANIA 19102	
ATTORNEY DOCKET NUMBER:	318379-US-NP	
NAME OF SUBMITTER:	YURI GRUZDKOV	
SIGNATURE:	/Yuri Gruzdkov/	
DATE SIGNED:	02/25/2020	
Total Attachments: 2		
source=NC318379_Executed Assignment#page1.tif		
source=NC318379_Executed Assignment#page2.tif		

ASSIGNMENT - WORLDWIDE

ASSIGNOR(S)

Name	City	Country
Paschalis Tsiaflakis	Schriek	Belgium

ASSIGNEE

Nokia Solutions and Networks Oy
Karakaari 7, 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).

**Title of Invention: REINFORCEMENT LEARNING BASED STEP SIZE
SELECTION FOR CHANNEL TRACKING RELATED ALGORITHMS UNDER
UNKNOWN CHANNEL DYNAMICITIES**

Application Title: COMMUNICATION-CHANNEL TRACKING AIDED BY REINFORCEMENT
LEARNING

Application number: 16/800,124

Filing date: 2020-02-25
(YYYY-MM-DD)

I/we, the ASSIGNOR(S), hereby authorize and request a representative of the ASSIGNEES 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 ASSIGNEES 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, re-examinations, 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.

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)
<u>Paschalis Tsiaflakis</u>	<u>Paschalis Tsiaflakis</u>	<u>2019-12-04</u>

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>Kelvin Hoaghe</u>	<u>[Signature]</u>	<u>2019-12-04</u>
<u>Souradip Sarkar</u>	<u>[Signature]</u>	<u>2019-12-04</u>

The ASSIGNEE accepts this assignment:

Name <u>Yan Wang</u>	Signature <u>[Signature]</u>
Title <u>Manager, Patenting</u>	Date (YYYY-MM-DD) <u>19 DEC 2019</u>
Name <u>Jarmo J. Kemppainen</u>	Signature <u>[Signature]</u>
Title <u>Senior IPR Specialist</u>	Date (YYYY-MM-DD) <u>19 DEC 2019</u>