

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TEKNOLOGIAN TUTKIMUSKESKUS VTT OY	02/21/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PCMS HOLDINGS, INC.
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<b>Internal Address:</b>	SUITE 300
<b>City:</b>	WILMINGTON
<b>State/Country:</b>	DELAWARE
<b>Postal Code:</b>	19809
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16317797
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	12953US02-CORP
<b>NAME OF SUBMITTER:</b>	ROBERT J. IRVINE III
<b>SIGNATURE:</b>	/Robert J. Irvine III/
<b>DATE SIGNED:</b>	10/11/2019
<b>Total Attachments: 3</b>	
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## ASSIGNMENT

This ASSIGNMENT is entered into as of January 14, 2019 (the "Effective Date") by and between

TEKNOLOGIAN TUTKIMUSKESKUS VTT OY  
Vuorimiehentie 3  
VTT, Finland FI-02044,

an organization existing under the laws of Finland (hereinafter "ASSIGNOR") and

PCMS HOLDINGS, INC.,  
200 Bellevue Parkway, Suite 300  
Wilmington, Delaware 19809,

a Delaware corporation (hereinafter "ASSIGNEE").

WHEREAS ASSIGNOR is a party to a Master Research and Development Agreement (hereinafter "Master Agreement") entered into with InterDigital Communications, Inc. ("IDC"), a Delaware corporation.

WHEREAS, pursuant to the Master Agreement, ASSIGNOR has agreed to irrevocably transfer and assign to ASSIGNEE, as designee of IDC, all of its right, title and interest, on a worldwide basis, in, to and under certain patents and patent applications, including the application for Letters Patent to the United States, identified as Application No. 16/317,797, filed January 14, 2019, entitled:

"SYSTEM AND METHOD FOR OPTIMIZING AUTONOMOUS VEHICLE  
CAPABILITIES IN ROUTE PLANNING",

hereinafter the "APPLICATION."

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, the ASSIGNOR, to the extent it possess any rights, has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over to the ASSIGNEE its entire right, title and interest in and to the inventions or improvements in the above-referenced APPLICATION, and any and

all continuations, divisions and renewals of and substitutes for the **APPLICATION**, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of the Letters Patent, including our full right to sue for and collect damages for past violations of provisional rights having arisen from any publication of the **APPLICATION** or any continuations, divisions, or renewals of or substitutes for the **APPLICATION**, and the worldwide right to claim priority to the above-referenced **APPLICATION**. **ASSIGNOR** further assigns the right and authorizes the **ASSIGNEE** to file applications for Letters Patent in all countries, the same to be held and enjoyed by the **ASSIGNEE**, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which the Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by **ASSIGNOR** had this assignment, sale and transfer not been made.

**ASSIGNEE** hereby acknowledges receipt of the entire right, title and interest in and to the **APPLICATION** and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of the Letters Patent, including the worldwide right to claim priority.

**ASSIGNOR** hereby covenants that the inventions or improvements in the above-referenced **APPLICATION** originate from work performed by employees of **ASSIGNOR** and that **ASSIGNOR** acquired all rights in the inventions or improvements by virtue of the Act on the Right in Employee Inventions 29.12.1967/656.

**ASSIGNOR** further covenants and agrees that it will, each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to the inventions or improvements, the **APPLICATION** and the Letters Patent to the **ASSIGNEE**, its successors, assigns, nominees, or legal representatives, and **ASSIGNOR** agrees to communicate to the **ASSIGNEE** or to its nominee all known facts respecting the inventions or improvements, the **APPLICATION** and the Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything

possible to aid the ASSIGNEE, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for the inventions or improvements in any and all countries. Nothing in this covenant should be construed as obviating any obligation of compensation defined in other agreements.


ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to the ASSIGNEE, as ASSIGNEE of the entire right, title and interest, any and all Letters Patent for the inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

This Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original of this Assignment. Additionally, ASSIGNOR and ASSIGNEE hereby authorize their attorneys to collect the signature pages of each executed counterpart and to attach those signature pages to a single copy of this instrument, which single copy and attached signature pages together shall constitute an original of this Assignment. ASSIGNOR and ASSIGNEE hereby authorize their attorneys to insert above the application number and filing date of the above-described patent application when known.

PCMS HOLDINGS, INC.

TEKNOLOGIAN TUTKIMUSKESKUS VTT OY

By: 

By: 

Name: Christos A. Ioannidi

Name: Pasi Nikkonen

Title: SENIOR PATENT EXECUTIVE

Title: PATENT ATTORNEY

Date: 25 February 2019

Date: Feb 21, 2019