

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3188524

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MAGNUS PERSSON	01/30/2014
MARTIN KARLSSON	03/02/2014
FREDRIK KARLSSON	03/02/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SONY CORPORATION
<b>Street Address:</b>	1-7-1 KONAN, MINATO-KU
<b>City:</b>	TOKYO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	108-0075
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14409044
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	
<b>Email:</b>	kristinrobinett@mvalaw.com
<b>Correspondent Name:</b>	MOORE & VAN ALLEN PLLC
<b>Address Line 1:</b>	3015 CARRINGTON MILL BOULEVARD
<b>Address Line 2:</b>	SUITE 400
<b>Address Line 4:</b>	MORRISVILLE, NORTH CAROLINA 27560
<b>ATTORNEY DOCKET NUMBER:</b>	PS13 1930US1.1283
<b>NAME OF SUBMITTER:</b>	SREENIVAS VEDANTAM
<b>SIGNATURE:</b>	/Sreenivas Vedantam/
<b>DATE SIGNED:</b>	01/20/2015
<b>Total Attachments: 5</b>	
source=1283 Assignment as filed#page1.tif	
source=1283 Assignment as filed#page2.tif	
source=1283 Assignment as filed#page3.tif	
source=1283 Assignment as filed#page4.tif	



**ASSIGNMENT**

**WHEREAS**, the undersigned inventors, hereinafter called the "Assignors", have invented a new and useful invention entitled:

**METHOD FOR IMPROVED INDOOR POSITIONING AND CROWD SOURCING  
USING PDR**

for which reference a full description was made in an application for Letters Patent of the United States filed on December 18, 2014, under U.S. Patent Application No. 14/409,044.

**WHEREAS, SONY CORPORATION**, a foreign corporation having a principal office and place of business at, 1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan, hereinafter called the "Assignee", is desirous of acquiring the entire right, title and interest in and to said invention, the application above identified, and in, to and under Letters Patent which may be obtained for said invention, as hereinafter more fully set forth;

**NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN**, be it known that for valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the Assignee, its successors and assigns, the entire right, title and interest in and to the invention and the application herein above identified, and all Letters Patents that may issue for the said invention, and all divisions, reissues, substitutions, continuations, and extensions thereof, to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns to the full end of the term for which any and all of said Letters Patents for the said invention may issue.

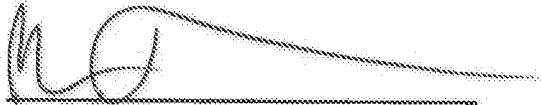
**FURTHER**, be it known that the Assignors have sold, assigned and transferred, and by these presents does sell, assign and transfer unto the Assignee, its successors and assigns, the entire foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

And the Assignors do hereby covenant and agree, for themselves and their legal representatives, that they will assist the Assignee in the prosecution of the application herein identified; in the making and prosecution of any other applications for Letters Patent that the Assignee may elect to make covering the invention herein identified, as hereinbefore set forth, including any application for reissue, application for reexamination, application for foreign patent rights, or any proceeding in the United States Patent and Trademark Office affecting the invention, investing in the Assignee exclusive title in and to all such other applications and Letters Patent; and in the prosecution of any interference which may arise involving said invention, or any application or Letters Patents herein contemplated; that they will promptly execute and deliver to the Assignee any and all additional papers and make all lawful oaths which may be requested by the Assignee to fully carry out the terms of this assignment; and further that they will communicate to Assignee, or to its successors, assigns, and legal representatives, any facts known respecting said invention, and at the expense of the

Assignee, testify in any legal proceedings, and generally do everything possible to aid the Assignee, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.


And the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all Letters Patent to the Assignee in accordance with the terms of the assignment.

IN TESTIMONY WHEREOF, the undersigned has hereunto set his hand and seals  
on the date after his signature.

  
Magnus Persson, Assignor

  
Witness 1


2014-01-30  
Date

  
Witness 2

IN TESTIMONY WHEREOF, the undersigned has hereunto set his hand and seals  
on the date after his signature.


  
Martin Karlsson, Assignor

  
Witness 1

  
Date


  
Witness 2

IN TESTIMONY WHEREOF, the undersigned has hereunto set his hand and seals  
on the date after his signature.

  
Fredrik Karlsson, Assignor

  
Witness 1

3/2 - 14  
Date

  
Witness 2