

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT3972831

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RAMY ABDALLAH	07/20/2016
KAZUYUKI SAKODA	07/20/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SONY CORPORATION
<b>Street Address:</b>	1-7-1 KONAN
<b>Internal Address:</b>	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>
Application Number:	15175615
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(916)498-1074
<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>Phone:</b>	916-498-1010
<b>Email:</b>	sek@intellectual.com
<b>Correspondent Name:</b>	STEVEN E KENNEDY
<b>Address Line 1:</b>	400 CAPITOL MALL
<b>Address Line 2:</b>	SUITE 1550
<b>Address Line 4:</b>	SACRAMENTO, CALIFORNIA 95814
<b>ATTORNEY DOCKET NUMBER:</b>	SONY.305A (201505570.01)
<b>NAME OF SUBMITTER:</b>	STEVEN E. KENNEDY
<b>SIGNATURE:</b>	/STEVEN E. KENNEDY/
<b>DATE SIGNED:</b>	07/21/2016
<b>Total Attachments: 3</b>	
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Attorney Docket No.: SONY.305A (201505570.01)

**ASSIGNMENT**

WHEREAS, I, as a below named inventor, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in **TRAINING METHOD AND SYSTEM FOR DIRECTIONAL TRANSMISSION IN WIRELESS COMMUNICATION** for which application for Letters Patent of the United States of America has been filed on the date and has the serial number indicated below.

AND WHEREAS, **Sony Corporation, a Japanese corporation with offices at 1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan** (hereinafter referenced as ASSIGNEE) is desirous of securing all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in return for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and any foreign countries, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America or any foreign country adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and foreign countries, including the right to sue for past infringement, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and foreign countries;

I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with or impact in any way this assignment and sale;

I further agree that all obligations hereunder shall survive any termination of my employment and shall be binding on my heirs, executors, administrators, or other legal representatives or assigns;

I hereby authorize and request the attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow:

Serial Number: 15/175,615 Filing Date: June 7, 2016.

This assignment is being executed on the date indicated below.

Inventor: Ramy Abdallah Date: July 20<sup>th</sup> 2016  
RAMY ABDALLAH

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF California )  
COUNTY OF Santa Clara ) ss.

On July 20, 2016 before me, Yu-Ching Hsu, Notary Public  
(Date) (name and title) (notary public)

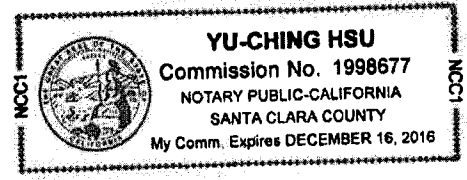
personally appeared Ramy Abdallah  
name(s) of signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and office seal.

[Signature]  
Notary Public



Inventor: *Kazuyuki Sakoda*  
KAZUYUKI SAKODA

Date: July 20<sup>th</sup>, 2016

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF California )  
COUNTY OF Santa Clara ) ss.

On July 20, 2016 before me, Yu-Ching Hsu, Notary Public  
(Date) (name and title) (notary public)

personally appeared Kazuyuki Sakoda  
name(s) of signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and office seal.  
*Yu-Ching Hsu*  
Notary Public

