10-31-2002

FORM PTO-1599 U.S. DEPARTMENT OF COMMERCE 1/31/92 Patent and Trademark Office To the Honorable Commissioner of Patents and Trademarks: Please Record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Name: Sony Corporation TAKESHI NOGAMI Internal Address: **NAOKI KOMAI** 7-35, Kitashinagawa 6-chome **HIDEYUKI KITO** Shinagawa-ku, Tokyo 141, Japan **MITSURU TAGUCHI** Additional name(s) of conveying party(ies) Street Address: attached? ☐ Yes ⊠ No State: 3. Nature of conveyance: ☐ Merger Additional Name(s) & Address(es) attached ☐ Yes ☒ No Security Agreement

Change of Name Other_ Execution Date September 16, 17 & 20, 2002 4. Application (number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: Patent Application No.(s) B: Patent No.(s) U.S. Serial No. 10/149,481 filed June 11, 2002 Attorney Docket No. 09792909-5218 Ó Additional numbers attached? ☐ Yes ☒ No 6. Total number of applications and patents involved 5. Name and address of party to whom correspondence concerning document should be mailed: **⊠**Enclosed ☐ Authorized to be charged to American Express **SONNENSCHEIN NATH & ROSENTHAL** Acct. No. 378571697401002. Form 2038 is attached for P.O. Box #061080 that purpose. Wacker Drive Station Any deficiency is authorized to be charged to **Sears Tower** deposit account or any additional fees Chicago, IL 60606-1080 Customer ID No. 26263 8. Deposit Account Number: 19.3140 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 9. Statement and signature: To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. October 3, 2002 David R. Metzger Date Signature Name of Person Signing Total number of pages 5 Mail documents to be recorded and required cover sheet information to: Commissioner of Patents and Trademarks **Box Assignments** 00000250 10149481 Washington, D.C. 20231+

10/30/2002 DBYRNE

01 FC:8021

40.00 DP

PATENT

REEL: 13425 FRAME: 0882

501p15060503

09792909-5218	
Docket Number:	

ASSIGNMENT

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, 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 SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, Sony Corporation, a Japanese corporation with offices at 7-35 Kitashinagawa 6-Chome, Shinagawa-Ku, Tokyo, Japan (hereinafter referenced as ASSIGNEE) is desirous of acquiring 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 consideration of the sum of One Dollar (\$1.00), and other 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 the 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 countries foreign thereto, 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 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 countries foreign thereto, 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;

And 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 countries foreign thereto;

And 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;

And 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;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Serial No. PCT/JP01/08989

International Filing Date: October 12, 2001

This assignment executed on the dates indicated below.

TAKESHI NOGAMI Name of first or sole inventor	Execution date of U.S. Patent Application
Residence of first or sole inventor	Cot. 16.02
Signature of first or sole inventor	Date of this assignment

NAOKI KOMAI	
Name of second inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of second inventor	
Signature of second inventor	Date of this assignment
HIDEYUKI KITO Name of third inventor	Execution date of U.S. Patent Application
	Expeditor out of other raises, approaches
KANAGAWA, JAPAN Residence of third inventor	
Kezidence of timed inventor	
· · · · · · · · · · · · · · · · · · ·	Date of this assignment
Signature of third inventor	Date of this assignment
MITSURU TAGUCHI	Execution date of U.S. Patent Application
Name of fourth inventor	Execution date of O.S. Patent Application
TOKYO, JAPAN	
Residence of fourth inventor	
	Date of this assignment
Signature of fourth investor	Date of this assignment
Name of lifth inventor	Execution date of U.S. Patent Application
Residence of fifth inventor	
lignature of fifth inventor	Date of this assignment

09792909	-5218
Docket Number:	

ASSIGNMENT

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, 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 SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, Sony Corporation, a Japanese corporation with offices at 7-35 Kitashinagawa 6-Chome, Shinagawa-Ku, Tokyo, Japan (hereinafter referenced as ASSIGNEE) is desirous of acquiring 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 consideration of the sum of One Dollar (\$1.00), and other 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 the 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 countries foreign thereto, 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 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 countries foreign thereto, 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;

And 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 countries foreign thereto;

And 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;

And 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;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Seráal No. PCT/JP01/08989

International Filing Date: October 12, 2001

This assignment executed on the dates indicated below.

TAKESHI NOGAMI Name of first or sole inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN Residence of first or sole inventor	
	·
Signature of first or sole inventor	Date of this assignment

NAOKI KOMAI	
Name of second inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of second inventor	
· Nacki Komen	September 17, 2002 Date of this assignment
Signature of second inventor	Date of this assignment
·	
,	
HIDEYUKI KITO Name of third inventor	Execution date of U.S. Patent Application
Name of (mrd inventor	Execution date of 0.5.1 atent Application
KANAGAWA, JAPAN	
Residence of third inventor	
Signature of third inventor	September 17, 2002
Signature of third inventor	Date of this assignment
MITSURU TAGUCHI	The Stip Days Assisting
Name of fourth inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN	
Residence of fourth inventor	
Mitsierre Taguchi	September 20, 2002
Signature of fourth inventor	Date of this assignment
J. galica o o o o o o o o o o o o o o o o o o o	
	•
Name of fifth inventor	Execution date of U.S. Patent Application
Residence of fifth inventor	
Residence of thin machin.	•
	Date of this assignment
Signature of fifth inventor	5 to 0, 1

RECORDED: 10/10/2002