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1 Sony Drive		
4. Application number(s) or patent number(s): 10/305,559		
If this document is being filed together with a new application, the execution date of the application is:		
B. Patent No.(s)		
6. Total number of applications and patents involved: I		
7. Total fee (37 CFR 3.41): \$ 40.00		
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formation is true and correct and any attached copy is a true December 17, 2002 Date		

PATENT REEL: 13301 FRAME: 0473

Docket No. 73551 (Sony Ref. No. 50\$5082)

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 FIELD EMISSION CATHODE STRUCTURE USING PERFORATED GATE 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 and Sony Electronics Inc. a Delaware corporation with offices at 1 Sony Drive, Park Ridge, New Jersey 07656 (hereinafter referenced as ASSIGNEES) 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 ASSIGNEES, 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 ASSIGNEES, as the assignees 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 ASSIGNEES or its designee, as ASSIGNEES or its successors, assigns and legal representatives may from timeto-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 ASSIGNEES thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEES 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 execution date, serial number and filing date of this application in the spaces that follow: Serial Number: _____ , Filing Date: _

This assignment is being executed on the date indicated below. AMIN EDWARD RUSS COUNTY OF On this day of in the year of before me personally appeared the above-named assignor, BENJAMIN EDWARD RUSS, personally known to me (or preved to me on Notary Public, evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he she/they executed the same in his her/their authorized capacity (tox), and that his her/their signature (s) op/the instrument, the person(e) or the entity upon behalf of which the person(e) acted, executed the instrument. CARRIE MERZBACHER Notary Public ⊜©MM. #129**9928**. ARY PUBLIC - CALIFORNIA O JAN DIFGO COUNTY

III

______ May 4, 2005

Docket No. 73551 (Sony Ref. No. 50S5082)	
JACK BARGER	Dated: 11/25/02
STATE OF	, before mc,, Notary Public, own to me (or proved to me on the basis of satisfactory evidence) to be it to me that he/she/they executed the same in his/her/their authorized or the entity upon behalf of which the person(s) acted, executed the
	Notary Public
JAMES WANG	Dated: ///21/2002_
On this by day of line in the year of personally appeared the above-named assignor, JAMES WANG, personally the person whose name is subscribed to the within instrument, and acknowledge capacity (ich); and that Misher/their signature(s) on the instrument, the persons instrument.	
CAP RIE MERZBACHER J CAP RIE M	Notary Public