Docket No. 09792909-6393

OND No. 0661 0027 (*** 6/20/2006)	ORM COVER SHEET U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office	
To the Director of the U.S. Patents and Trademarks: Please record the attached documents or the new address(es) below.		
Name of conveying party(ies)/Execution Date(s) Shigekuni Dewa Masashi Yamada Takuji Ohkubo Takashi Nasu Execution Date(s) 1/27/06, 1/30/06, 2/2/06, 2/3/06		
Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No		
3. Nature of conveyance: Assignment Merger		
☐ Security Agreement ☐ Change of Name		
☐ Government Interest Assignment		
☐ Executive Order 9424, Confirmatory License		
Other: Correction of assignment previously recorded on Reel/Frame 017585/0904 - execution data for co-inventors Ohkubo, T. and Yamada, M., 02/02/2006 and 01/30/2006 respectively	Additional name(s) & address(es) attached? Yes No	
4. Application patent number(s): This document	at is being filed together with a new application.	
A. Patent Application No.(s)	B. Patent No.(s)	
A. Fatent Approacion 110.(3)	D. Fatent 140.(5)	
11/289,225		
Additional numbers	attached Yes No	
Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: One	
David R. Metzger		
Sonnenschein Nath & Rosenthal LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00	
Post Office Box 061080 Wacker Drive Station	Authorized to be charged to credit card Authorized to be charged to deposit account	
Sears Tower	☐ Enclosed	
Chicago, Illinois 60606-1080 (312) 876-8000 main	None required (government interest not affecting title)	
(312) 876-8000 main (312) 876-7934 facsimile	8. Payment Information	
dmetzger@sonnenschein.com	a. Credit Card Last 4 Numbers 2000	
	Expiration Date <u>07/06</u>	
	b. Deposit Account Number 19-3140 Authorized User Name David R, Metzger	
9. Signature:	Tamadalide Chea Timade are the an alexanger	
Jan 1 Metal		
Name of Person Signing Date May 25, 2006 Date		

PATENT

REEL: 017680 FRAME: 0909

02-23-	2006
abile minimum	Docket No. 09792909-6393
Form PTO-1595 (Rev. 09/04) OMB No. 0651-0027 (exp. 6/30/2005) 10318	U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
To the Director of the U.S. Patents and Trademarks: Please	e record the attached documents or the new address(es) below.
1. Name of conveying party(ies)/Execution Date(s) Shigekuni Dewa Masashi Yamada Takuji Ohkubo Takashi Nasu	Sony Corporation 7-35 Kitashinagawa 6-Chome
Execution Date(s) 1/27/06, 1/30/06, 2/2/06, 2/3/06 Additional name(s) of conveying party(ics) attached? Yes No	Shinagawa-Ku, Tokyo, JAPAN
3. Nature of conveyance:	
☑ Assignment ☐ Merger	•
☐ Security Agreement ☐ Change of Name	·
Government Interest Assignment	
Executive Order 9424, Confirmatory License	
Other:	
4 4 4 4	Additional name(s) & address(es) attached? Yes No
4. Application patent number(s): This document	
A. Patent Application No.(s)	B. Patent No.(s)
11/289,225	(0)
•	
	ttached Yes No
Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: One
David R. Metzger	
Sonnenschein Nath & Rosenthal LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00
Post Office Box 061080 Wacker Drive Station	Authorized to be charged to credit card
Sears Tower	
Chicago, Illinois 60606-1080	None required (government interest not affecting title)
(312) 876-8000 main (312) 876-7934 facsimile	8. Payment Information
dmetzger@sonnenschein.com	a. Credit Card Last 4 Numbers 2000
•	Expiration Date 07/06
	b. Deposit Account Number 19-3140 Authorized User Name David R. Wetzer 5
9. Signature:	61 FCF6821 /48.00
	1000

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450

Total number of pages including cover sheet, attachments, and documents;

David R. Metzger

Name of Person Signing

PATENT

February 17, 2006

Date

REEL: 017680 FRAME: 0910

Docket Number	09792909-6393

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 LIQUID CRYSTAL DISPLAY APPARATUS AND COOLING DEVICE

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 filling 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: Serial Number: 11/289,225 Filing Date: November 29,2005

This assignment executed on the dates indicated below.

Shigekuni DEWA	
Name of first or sole inventor	Execution date of U.S. Patent Application
Tokyo, Japan	
Residence of first or sole inventor	66.01,27
Signature of first or sole inventor	Date of this assignment

PATENT REEL: 017680 FRAME: 0911

Masashi YAMADA	
Name of second inventor	Execution date of U.S. Patent Application
Kanagawa, Japan	
Residence of second inventor	
山田井だ	106.01.30
Signature of second inventor	Date of this assignment
	*
Takuji OHKUBO	
Name of third inventor	Execution date of U.S. Patent Application
Chiba, Japan	
Residence of third inventor	
Takaji Ohkuloo	06.02.02
Signature of third inventor	Date of this assignment
Takashi NASU	
Name of fourth inventor	Execution date of U.S. Patent Application
Tokyo, Japan	
Residence of fourth inventor	1
Takash hasv	706.02.03
Signature of fourth inventor	Date of this assignment
Name of fifth inventor	Execution date of U.S. Patent Application
Residence of fifth inventor	· · · · · · · · · · · · · · · · · · ·
Signature of fifth inventor	Date of this assignment

PATENT REEL: 017680 FRAME: 0912

RECORDED: 05/25/2006