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Our Ref.: 1035-242

Commissioner of Patents and Trademarks
Box Assignment, Washington, D.C. 20231

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): Yoshihiro IZUMI Osamu TERANUMA		2. Name and address of receiving party(ies): Name: SHARP KABUSHIKI KAISHA Internal Address: Street Address: 22-22 Nagaike-cho Abeno-ku City: Osaka State/Country: Japan Zip: 545-8522	
Additional name/s of conveying party/ies attached? <input type="checkbox"/>		Additional name/s & address/es attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Assignment <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____ Execution Date: December 17, 1999			
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: December 17, 1999			
A. Patent Application No(s). (1) (2) (3)		B. Patent No(s). (1) (2) (3) 09 477338	
Additional numbers attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Name and address of party to whom correspondence concerning document should be mailed: Name: H. Warren Burnam, Jr. Internal Address: Street Address: Nixon & Vanderhye P.C. 1100 North Glebe Road 8 th Floor City: Arlington State: VA Zip: 22201		6. Total number of applications & patents involved: 1 7. Total fee (37 CFR 3.41) \$ 40.00 <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to be charged to deposit account #14-1140 8. The Commissioner is hereby authorized to charge any deficiency in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper thereafter filed in this application by this firm) to our Account No. 14-1140.	
DO NOT USE THIS SPACE			
9. Statements 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. H. Warren Burnam, Jr. January 4, 1999 Name of Person Signing Signature Date Reg. No. 29,366 Total number of pages including original cover sheet, attachments, and document: [2]			

ASSIGNMENT OF U.S. PATENT APPLICATIONYoshihiro IZUMIOsamu TERANUMA

(Inventors)

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(Assignee) SHARP KABUSHIKI KAISHA a corporation of Japan

(Address) 22-22 Nagaike-cho Abeno-ku Osaka 545-8522 Japan

(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions in the invention, and all applications for patent and any Letters Patent which may be granted therefore, known as

(Title) TWO-DIMENSIONAL IMAGE DETECTOR, ACTIVE-MATRIX SUBSTRATE, AND DISPLAY DEVICE

for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed on December 17, 1999 or has already filed U.S. application Serial No. _____, on _____.

The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Date December 17, 1999 Signature of inventor

Yoshihiro Izumi

Date December 17, 1999 Signature of inventor

Osamu Teranuma

Date _____ Signature of inventor

Date _____ Signature of inventor

Date _____ Signature of inventor

Witnessed by: _____

Date _____

Witnessed by: _____

Date _____

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