| FORM PTO-1596<br>1-31-92                          |   | U.S. DEPARTMENT OF COMMERCE  Patent and Trademark Office |
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| Docket No.: 65326-019                             | 102375779                                 |  |
| To the Honorable Commissioner for Patents         | and Trademarks: Please record the artac   |  |
| 1. Name of Conveying Party(ies):                  | 2. Name and address of                    |  |
| Takahide HIRAWA 2. 14.03                          |   | ON SCREEN MFG. CO., LTD.                                 |
|   |   | kitamachi, Teranouchi-agaru 4-chome,                     |
| Additional name(s) of conveying party(ies) attach |   |  |
| 3. Nature of Conveyance:                          | Kamikyo-                                  | ku, Kyoto JAPAN  |
|   | rger                                      | S = 3  |
| Security Agreement Cha                            | ange of Name                              |  |
| Other   |   |  |
| Execution Date: January 29, 2003                  | A 11:6- m-1 m-m-(-) 0                     | - 1.1() -44119   |
| 1 ()  | Additional name(s) &                      | address(es) attached? Yes                                |
| 4. Application number(s) or patent number(s):     | VOS6                                      | 6558   |
| If the document is being filed together with a r  | B. Patent No(s).                          | application is: January 29, 2003                         |
| A. Patent Application No(s).                      | B. Fatent No(s).                          |  |
|   |   |  |
|   |   |  |
|   | Additional numbers attached?  Yes         |  |
| 5. Name and address of party to whom correspon    |   | plications and patents involved:                         |
| concerning document should be mailed:             | or row name or or up                      | p  |
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| of the original document.                         |   |  |
|   | Longo                                     |  |
| Stephen A. Becker, 26,527                         | Diskle)                                   | February 14, 2003  |
| Name and Registration No. of Person Signing       | Signature                                 | Date   |
|   | Total number of pages                     | comprising cover sheet:                                  |
| CMB No. 0851-0011 (exp. 4/94)                     |   |  |

PATENT REEL: 013776 FRAME: 0704

| Docket No.:   |  |  |
|---|--|--|
| ASSIGNMENT  |  |  |
| In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,  |  |  |
| Takahide HIRAWA   |  |  |
| who has made a certain new and useful invention, hereby sells, assigns and transfers unto   |  |  |
| DAINIPPON SCREEN MFG. CO., LTD. of 1-1 Tenjinkitamachi, Teranouchi-agaru  |  |  |
| 4-chome, Horikawa-dori, Kamikyo-ku, KYOTO, JAPAN  |  |  |
|   |  |  |
| its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled  |  |  |
| Image Recording Apparatus and Image Recording Method Using Diffraction Grating Type   |  |  |
| Light Modulator   |  |  |
| (a) for which an application for United States Letters Patent was filed on and identified by United States Serial No.   |  |  |
| (b) for which an application for United States Letters Patent was executed on   |  |  |
| and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefor and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;   |  |  |
| AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred. |  |  |
| SIGNED on the date indicated aside my signature:  |  |  |
| INVENTOR DATE SIGNED  |  |  |
| Takahira Hirama 2003/11/29  |  |  |

(SAB)

Name: Takahide HIRAWA

**RECORDED: 02/14/2003** 

PATENT REEL: 013776 FRAME: 0705