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SHEET U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

Attorney's Docket No. 030673-179

To the Director of the United States Patent and Trademark Office

he attached original documents or copy thereof.

1. Name of conveying party(ies):  
 1. Muneo MITAMURA  
 2. Kazuhiro HANE  
 3. Yoshinori ITO

2. Name and address of receiving party(ies):  
 Name: 1. Harmonic Drive Systems Inc. 2. Kazuhiro Hane  
 Internal Address:  
 Street Address:  
 1. 25-3, Minamioji 6-chome, Shinagawa-ku Tokyo, 140-0013 Japan  
 2. 9-21-5, Nakayama, Aoba-ku, Sendai-shi, Miyagi-ken, 981-0952 Japan  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Additional name(s) of conveying party(ies) attached?  Yes  No

3. Nature of conveyance:  
 Assignment  Merger  
 Security Agreement  Change of Name  
 Other

Execution Date: 1. May 20, 2004 2. May 24, 2004  
 3. May 21, 2004

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: \_\_\_\_\_

A. Patent Application No.(s)  
 10/828,184

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:  
 Name: William C. Rowland  
 Address:  
 Burns, Doane, Swecker & Mathis, L.L.P.  
 Customer Number 2 1 8 3 9  
 P.O. Box 1404  
 Alexandria, Virginia 22313-1404

6. Total number of applications and patents involved:

7. Total fee (37 CFR 3.41).....\$ 40.00  
 Enclosed  
 Authorized to be charged to deposit account  
 Credit card. Form PTO-2038 is attached.

8. Deposit account number:  
 02-4800  
 (Attach duplicate copy of this page if paying by deposit account.)

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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.

William C. Rowland 30,888 Reg. No. *Reg No. 30,885*  
 Name of Person Signing Signature Date August 30, 2004

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

Mail documents to be recorded with required cover sheet information to:  
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PATENT  
 REEL: 015744 FRAME: 0279

## ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by MUNEO MITAMURA, KAZUHIRO HANE, and YOSHINORI ITO, residing at HOTAKA-MACHI, MINAMIAZUMI-GUN, NAGANO-KEN, JAPAN; SENDAI-SHI, MIYAGI-KEN, JAPAN; and HOTAKA-MACHI, MINAMIAZUMI-GUN, NAGANO-KEN, JAPAN (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in PROJECTION ENCODER set forth in an application for Letters Patent of the United States,

- (1)  which is a provisional application
  - (a)  bearing Application No. \_\_, and filed on \_\_;
  - (b)  to be filed herewith; or
  
- (2)  which is a non-provisional application
  - (a)  bearing Application No. 10/828,184 and filed on APRIL 21, 2004;
  - (b)  having an oath or declaration executed on even date herewith prior to filing of application;
  - (c)  having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, HARMONIC DRIVE SYSTEMS INC., a corporation duly organized under and pursuant to the laws of JAPAN and having its principal place of business at 25-3, MINAMIOI 6-CHOME, SHINAGAWA-KU, TOKYO, 140-0013 JAPAN; AND KAZUHIRO HANE, AN INDIVIDUAL, CITIZEN OF JAPAN, RESIDING AT 9-21-5, NAKAYAMA, AOBA-KU, SENDAI-SHI, MIYAGI-KEN, 981-0952 JAPAN (hereinafter referred to as "the Assignees"), are desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignees, their successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignees, for their own use and behoof and the use and behoof of their successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

Application No. \_\_\_\_\_  
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AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignees, their successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignees, or the counsel of their successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignees, their successors, legal representatives, and assigns, but at the cost and expense of the Assignees, their successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of BURNS, DOANE, SWECKER & MATHIS, L.L.P. to insert in the spaces provided above the filing date, application number, and attorney docket number of said application when known.

AND the Assignors hereby request the Director of the United States Patent and Trademark Office to issue any and all said Letters Patent of the United States to the Assignees as the Assignees of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignees, their successors, legal representatives, and assigns.

Date May 20, 2004 Signature of Assignor Muneo Mitamura  
Muneo MITAMURA

Date May 24, 2004 Signature of Assignor Kazuhiro Hane  
Kazuhiro HANE

Date May 21, 2004 Signature of Assignor Yoshinori Ito  
Yoshinori ITO