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To the Director of the U.S. Patent and Trademark C	103421892 e new address(es) below.
1. Name of conveying party(ies): Noboru Koyama (6/18/07); Izumi Kariya (6/22/07); Mitsuo Yanase (6/22/07); Toru Morikawa (6/22/07)  Additional name(s) of conveying party(ies) attached?  Yes X No  3. Nature of conveyance/Execution Date(s):  Execution Date(s): Listed above in parenthesis  X Assignment Merger Change of Name  Security Agreement Joint Research Agreement  Government Interest Assignment  Executive Order 9424, Confirmatory License	e new address(es) below.  2. Name and address of receiving party(ies)  Name: Sony Corporation  Internal Address:  Street Address:  1-7-1 Konan, Minato-Ku Toyko, 108-0075 JAPAN  City: State: Country: Zip:
Other	Additional name(s) & address(es) Yes X No attached?
4. Application or patent number(s):  A. Patent Application No.(s) 11/716,711  Additional numbers attached?  5. Name and address to whom correspondence concerning document should be mailed:  Name: Ronald P. Kananen RADER, FISHMAN & GRAUER PLLC  Internal Address: Atty. Dkt.: SON-3722  Street Address: 1233 20th Street, N.W. Suite 501	This document is being filed together with a new application.  B. Patent No.(s)  Yes X No  6. Total number of applications and patents involved:  7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00  Authorized to be charged by credit card  X Authorized to be charged to deposit account  Enclosed  None required (government interest not affecting title)
City: Washington  State: DC Zip: 20036  Phone Number: (202) 955-3750  Fax Number: (202) 955-3751  Email Address: rpk@raderffshiman.com  9. Signature:	8. Payment Information  a. Credit Card Last 4 Numbers Expiration Date  b. Deposit Account Number 18-0013 Authorized User Name Ronald P. Kananen  June 27, 2007 Date
Ronald F. Kananen - 24,104 Christopher M. Tobin Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:  4

06/29/2007 MJAMA1 00000032 180013 11716711 01 F0:8001 40.00 DA

Docket Number: SON-3722

## **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

## THERMAL HEAD AND PRINTER

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, located and doing business at 1-7-1 Konan, Minato-ku, Tokyo, JAPAN (hereinafter referenced as ASSIGNEE) are 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 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 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 ASSIGNEES or its designee, as ASSIGNEES 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 ASSIGNEES thereof shall hereafter require and prepare at its own expense;

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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: 11/716,711, Filing Date: March 12, 2007.

This assignment executed on the dates indicated below.

Noboru Koyama

Name of first inventor

Execution date of U.S. Patent Application

Tokyo, Japan

Residence of first inventor

Notosu, Koyama Signature of first inventor June 18, 2007 Date of this assignment

Izumi Kariya

Name of first inventor

Execution date of U.S. Patent Application

Kanagawa, Japan

Residence of first inventor

Signature of first inventor

Jun 22, 2007 Date of this assignment

Mitsuo Yanase

Name of first inventor

Name of first invento

Kanagawa, Japan

Residence of first inventor

Signature of first inventor

Execution date of U.S. Patent Application

Jun 22. 2007

Date of this assignment

Docket Number: SON-3722

Toru Morikawa

Name of first inventor

Execution date of U.S. Patent Application

Kanagawa, Japan

Residence of first inventor

Joru Morikawa Signature of first inventor

June 22, 2007
Date of this assignment

**RECORDED: 06/27/2007**