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OMB No. 0651-0027 (exp 5/31/2002)
P08A/REV03

06-04-2002

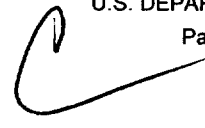


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1. Name of conveying party(ies):

Hiroshi FUJI
Hiroyuki KATAYAMA
Kunio KOJIMA
Kenji OHTA

5-31-02

Additional names(s) of conveying party(ies) Yes No

2. Name and address of receiving party(ies):

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If this document is being filed together with a new application, the execution date of the application is: _____

Patent Application No. Filing date

09/864,060 May 23, 2001

B. Patent No.(s)

Additional numbers Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: William J. Daley, Jr.

Registration No. 35,487

Address: EDWARDS & ANGELL, LLP.

P.O. BOX 9169

City: BOSTON State/Prov.: MA

Country: U.S.A. ZIP: 02209

6. Total number of applications and patents involved: **1**

7. Total fee (37 CFR 3.41):.....\$ 40.00

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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 J. Daley, Jr., (Reg. 35,487)

William J. Daley
Signature

5-13-02

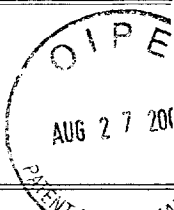
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1. Name of conveying party(ies):

Hiroshi FUJI
Hiroyuki KATAYAMA
Kuniko KOJIMA
Kenji OHTAAdditional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies):

Name: Sharp Kabushiki KaishaStreet Address: 22-22 Nagaike-cho, Abeno-kuCity: Osaka State: JAPAN Zip: _____Additional name(s) & address(es) attached? yes no

Please see attached.

3. Nature of Conveyance:

- Assignment Merger
 Security Agreement Change of Name
 Other:

Execution Date: July 2, 2001

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) 09/864,060

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 J. Daley, Jr.

Street Address:

Dike, Bronstein, Roberts & Cushman
Intellectual Property Practice Group
EDWARDS & ANGELL, LLP
P. O. Box 9169

City: Boston State: MA Zip: 022096. Total number of applications and patents involved: [1]7. Total fee (37 CFR 3.41):.....\$ 40.00 Enclosed Authorized to be charged to deposit account8. Deposit account number: 04-1105

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9. signature.

William J. Daley, Jr. (Reg. No. 35,487)
 Name of Person Signing

William J Daley
 Signature

August 24, 2001
 Date

Total number of pages including cover sheet, attachments, and documents [4]

OMB No. 0651-0011 (exp. 4/94)

ASSIGNMENT

We Hiroshi FUJI, Hiroyuki KATAYAMA and Kuniro KOJIMA for good and valuable consideration from SHARP KABUSHIKI KAISHA, a Japanese corporation, having its principal place of business in Osaka, Japan hereinafter called the Assignee, receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto the Assignee, its successors and assigns, the entire right, title and interest in, to and under an application for Letters Patent of the United States Serial No. 09/864,060, filed on May 23, 2001 * signed by us for Improvements in INFORMATION WRITE/READ HEAD, INFORMATION WRITING/READING DEVICE, TRACKING DEVICE, AND INFORMATION RECORDING MEDIUM including all priority rights ensuing therefrom, and the inventions and any of them therein set forth and described, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor, together with the right to apply for such Letters Patent.

And for the above consideration we agree promptly upon request of the Assignee, its successors or assigns, to execute and deliver without further compensation any power of attorney, assignment, application, whether original, divisional, continuation or reissue, or other papers which may be necessary or desirable fully to secure to the Assignee, its successors and assigns, the inventions and any of them described in said application and all patent rights therein, in the United States and in any country foreign thereto.

The undersigned hereby grant(s) the law firm of Dike, Bronstein, Roberts & Cushman 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 U.S. Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, I, Hiroshi FUJI, hereunto set my hand and seal this 2nd day of July, 2001, I, Hiroyuki KATAYAMA, hereunto set my hand and seal this 2nd day of July, 2001, and I, Kuniro KOJIMA, hereunto set my hand and seal this 2nd day of July, 2001.

Hiroshi Fuji
Hiroyuki Katayama
Kuniro Kojima

Commonwealth [State] of
County of ss.

Before me this day of 19, personally appeared, who is to me personally known, and acknowledged the foregoing instrument of assignment to be [her] his free act and deed.

Notary Public

Commonwealth [State] of
County of ss.

Before me this day of 19, personally appeared, who is to me personally known, and acknowledged the foregoing instrument of assignment to be [her] his free act and deed.

Notary Public

*Where the application is assigned before it is filed, and hence has no Serial No., this shall be left blank.

ASSIGNMENT

We Kenji OHTA

and _____
for good and valuable consideration from SHARP KABUSHIKI KAISHA

, a Japanese corporation,
having its principal place of business in Osaka, Japan

hereinafter called the Assignee, receipt of which is hereby acknowledged, do hereby
sell, assign and transfer unto the Assignee, its successors and assigns, the entire
right, title and interest in, to and under an application for Letters Patent of the
United States Serial No. 09/864,060, filed on May 23, 2001 * signed by us
for Improvements in INFORMATION WRITE/READ HEAD, INFORMATION WRITING/READING
DEVICE, TRACKING DEVICE, AND INFORMATION RECORDING MEDIUM

including all priority rights ensuing therefrom, and the inventions and any of them
therein set forth and described, and any and all Letters Patent of the United States
and of countries foreign thereto which may be granted thereon or therefor, together
with the right to apply for such Letters Patent.

And for the above consideration we agree promptly upon request of the Assignee,
its successors or assigns, to execute and deliver without further compensation any
power of attorney, assignment, application, whether original, divisional, continuation
or reissue, or other papers which may be necessary or desirable fully to secure to the
Assignee, its successors and assigns, the inventions and any of them described in said
application and all patent rights therein, in the United States and in any country
foreign thereto.

The undersigned hereby grant(s) the law firm of Dike, Bronstein, Roberts &
Cushman 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
U.S. Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, I, Kenji OHTA, hereunto set my
hand and seal this 2nd day of July, 2001, I, _____,
hereunto set my hand and seal this _____ day of _____,
and I, _____, hereunto set my hand and seal
this _____ day of _____.

Kenji Ohta

Commonwealth [State] of _____ ss.
County of _____

Before me this _____ day of _____, 19____, personally appeared
_____, who is to me personally known, and acknowledged
the foregoing instrument of assignment to be [her] his free act and deed.

Notary Public

Commonwealth [State] of _____ ss.
County of _____

Before me this _____ day of _____, 19____, personally appeared
_____, who is to me personally known, and acknowledged
the foregoing instrument of assignment to be [her] his free act and deed.

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