

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Satoshi MIZUKAMI</td> <td>03/04/2013</td> </tr> <tr> <td>Yoshikazu AKIYAMA</td> <td>03/04/2013</td> </tr> <tr> <td>Masaru SHINKAI</td> <td>03/04/2013</td> </tr> <tr> <td>Osamu MACHIDA</td> <td>03/04/2013</td> </tr> </tbody> </table>		Name	Execution Date	Satoshi MIZUKAMI	03/04/2013	Yoshikazu AKIYAMA	03/04/2013	Masaru SHINKAI	03/04/2013	Osamu MACHIDA	03/04/2013
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Yoshikazu AKIYAMA	03/04/2013										
Masaru SHINKAI	03/04/2013										
Osamu MACHIDA	03/04/2013										
RECEIVING PARTY DATA											
Name:	Ricoh Company, Ltd.										
Street Address:	3-6, Nakamagome 1-chome, Ohta-ku										
City:	Tokyo										
State/Country:	JAPAN										
Postal Code:	143-8555										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13821378</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13821378						
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Application Number:	13821378										
CORRESPONDENCE DATA											
Fax Number:	2027978188										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	202 797 4181										
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Correspondent Name:	IPUSA, P.L.L.C										
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Address Line 2:	Suite 400										
Address Line 4:	Washington, DISTRICT OF COLUMBIA 20007										
ATTORNEY DOCKET NUMBER:	12R-124										
NAME OF SUBMITTER:	Chris Tanner										
Total Attachments: 3 source=12R-124AssignmentRecordation#page1.tif source=12R-124AssignmentRecordation#page2.tif source=12R-124AssignmentRecordation#page3.tif											

CH \$40.00 13821378

RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Satoshi MIZUKAMI, Yoshikazu AKIYAMA, Masaru SHINKAI, and Osamu MACHIDA

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

2. Name and address of receiving party(ies)

Name: Ricoh Company, Ltd.

Internal Address: _____

Street Address: 3-6, Nakamagome 1-chome,

Ohta-ku,

City: Tokyo

State: _____

Country: Japan Zip: 143-8555

Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) March 4, 2013

- Assignment Merger
 Security Agreement Change of Name
 Joint Research Agreement
 Government Interest Assignment
 Executive Order 9424, Confirmatory License
 Other _____

4. Application or patent number(s):

This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? Yes No

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

Name: IPUSA, PLLC

Internal Address: _____

Street Address: 1054 31st Street, N.W., Suite 400,

City: Washington

State: DC Zip: 20007

Phone Number: 202-797-4181

Fax Number: 202-797-8188

Email Address: ipusa@ipusapat.com

6. Total number of applications and patents involved: 1**7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00**

- Authorized to be charged by credit card
 Authorized to be charged to deposit account
 Enclosed
 None required (government interest not affecting title)

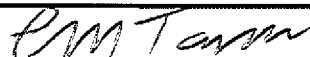
8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 50-4424

Authorized User Name Christopher M. Tanner

9. Signature:



Signature

Mar 7, 2013

Date

Christopher M. Tanner

Name of Person Signing

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

3

ASSIGNMENT

THIS ASSIGNMENT, by (1) Satoshi MIZUKAMI, (2) Yoshikazu AKIYAMA, (3) Masaru SHINKAI, and (4) Osamu MACHIDA (hereinafter referred to as "Assignors"), residing at (1) Kanagawa, Japan, (2) Kanagawa, Japan, (3) Kanagawa, Japan, and (4) Kanagawa, Japan, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in ELECTROMECHANICAL TRANSDUCING DEVICE AND MANUFACTURING METHOD THEREOF, AND LIQUID DROPLET DISCHARGING HEAD AND LIQUID DROPLET DISCHARGING APPARATUS,

(Application No. _____, filed _____)

set forth in a patent application for Letters Patent of the United States, either previously filed or executed concurrently herewith; and

WHEREAS, Ricoh Company, Ltd. (hereinafter referred to as "Assignee"), having offices at 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo 143-8555 Japan, is desirous of acquiring the entire right, title and interest in and to said inventions and said application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefor and thereon;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuation-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and Assignment not been made;

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles, and or interests that have arisen to Assignee under the law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to

said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will 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 any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives, and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns shall advise; that any proceeding in connection with said inventions, or said patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable;

AND Assignors hereby request that the Director of the United States Patent and Trademark Office issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the said Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns;

AND Assignors hereby grant the following individuals 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 and Trademark Office for recordation of this document: All practitioners associated with the Customer Number 77464.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Mar. 4, 2013

Date
Mar. 4, 2013

Date
Mar. 4, 2013

Date
Mar. 4, 2013

Date

Satoshi Mizukami

Satoshi MIZUKAMI
Yoshikazu Akiyama

Yoshikazu AKIYAMA
Masaru Shinkai

Masaru SHINKAI
Osamu Machida

Osamu MACHIDA