Form PTO-1595 (Rev. 08/05) OMB No. 0651-0027 (exp. 6/30/2008)



U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office

08-02-2007

TATEN	A RANGE HAVE RELIED AND REALER WHILE WHITE HAVE HERE SHIP THE
To the Director of the U.S. Patent and Trademark Office: Ple	103432915 .dress(es) below.
1. Name of conveying party(ies): Execution Date(s):	2. Name and address of receiving party(ies)
Yoshihiro NORIKANE 01-24-2007 Shinji TEZUKA 01-24-2007 •Masaru OHGAKI 01-24-2007 Masahiro MASUZAWA 01-24-2007	Name: Ricoh Company, Ltd.
Masahiro MASUZAWA Hideyuki MIYAZAWA O1-24-2007 O1-24-2007 Additional name(s) of conveying party(ies) attached?  Yes X No  Nature of conveyance/Execution Date(s):  Execution Date(s): in parentheses after inventor name	Internal Address:  Street Address:  3-6, Nakamagome 1-chome Ohta-ku, Tokyo 143-8555 JAPAN
Assignment Merger Change of Name	5, 1, 7, 11
Security Agreement Joint Research Agreement	City:
Government Interest Assignment	State:
Executive Order 9424, Confirmatory License  X Other Corrective Assignment recorded at Reel 019059, Frame 0910	Country: Zip:
A. Application or patent number(s):  A. Patent Application No.(s)  11/652,083  Additional numbers attached	This document is being filed together with a new application.  B. Patent No.(s)  Yes X No
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:
Name: Mark J. Thronson DICKSTEIN SHAPIRO LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00
Internal Address: Atty. Dkt.: R2184.0542/P542 Street Address: 1825 Eye Street, NW	Authorized to be charged by credit card  Authorized to be charged to deposit account  Enclosed  X None required (government interest not affecting title)
City: Washington	8. Payment Info@79119/2007 ATRINH 00000071 /11552083
State:         DC         Zip:         20006-5403           Phone Number:         (202) 420-4742	a. Credit Card 91 Ft. 2544 Numbers Expiration Date 0 1/11
Fax Number: (202) 420-2201 Email Address: ThronsonM@dicksteinshapiro.com	b. Deposit Account Number  Authorized User Name
9. Signature:	June 8, 2007
<del>Sig/lat</del> ure	Date

PATENT SMDB-2270420v01

**REEL: 019672 FRAME: 0405** 

	0 182
CORRECTED DOCUMENT (of PTO-1595/As 06 - 20 - 07 - 08/05) OMB No. 0651-0027 (exp. 6/30/2008)	U.S. DEPARTMENT COMMERCES
6-8-07 103417	
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): Execution Date(s): Yoshihiro NORIKANE 01-24-2007 Shinji TEZUKA 01-24-2007 Masaru OHGAKI 01-24-2007 Masahiro MASUZAWA 01-24-2007 Hideyuki MIYAZAWA 01-24-2007 Additional name(s) of conveying party(ies) attached? Yes X No  3. Nature of conveyance/Execution Date(s):  Execution Date(s): in parentheses after inventor name  X Assignment Merger Change of Name  Security Agreement Joint Research Agreement  Government Interest Assignment	2. Name and address of receiving party(les)  Name: Ricoh Company, Ltd.  Internal Address:  Street Address:  3-6, Nakamagome 1-chome Ohta-ku, Tokyo 143-8555 JAPAN  City:  State:
Executive Order 9424, Confirmatory License	Country: Zip:
Other	Additional name(s) & address(es) Yes X No attached?
4. Application or patent number(s):  A. Patent Application No.(s)  11/652,083  Additional numbers attached?	This document is being filed together with a new application.  B. Patent No.(s)  Yes X No
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:
Name: Mark J. Thronson DICKSTEIN SHAPIRO LLP Internal Address: Atty. Dkt.: R2184.0542/P542 Street Address: 1825 Eye Street, NW	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 0.00  Authorized to be charged by credit card  Authorized to be charged to deposit account  Enclosed  X None required (government interest not affecting title)
City:         Washington           State:         DC         Zip: 20006-5403           Phone Number:         (202) 420-4742           Fax Number:         (202) 420-2201           Email Address:         ThronsonM@dicksteinshapiro.com	8. Payment Information  a. Credit Card Last 4 Numbers 1002 Expiration Date 01/11  b. Deposit Account Number Authorized User Name
Signature:	June 8, 2007  Date  Total number of pages including cover
Mark J. Thronson - 33,082/Ranga Sourirajan -	
Name of Person Signing	1   1

PATENT<sup>B-2270420v01</sup>

REEL: 019672 FRAME: 0406

Form PTO-1595 RECORDATION FORM COVER SHEET  (continued)			
Additional Conve	ying Party(ies)/Exec	cution Date(s) (1. Continued):	
Hideyuki Miyazawa-(	1/14/2007) (1/24)	2007)	
Additional Assign	ees (2. Continued):		
Assignee Name:			
Internal Address: Street Address:			
City:	State:	Country:	Zip:
Assignee Name:			
Internal Address:			
Street Address:			
City:	State:	Country:	Zip:
Assignee Name:			
Internal Address:			
Street Address:			
City:	State:	Country:	Zip:
Additional Applica	ations and/or Patent	s (4. Continued):	
Additional Patent Applicati		Additional Patent Numbers 4B. Continued:	
			4.
			·
	Additional number	s attached? Yes No	

Docket No.: R2184.0542/P542

DSMDB-2229957v01

## **ASSIGNMENT**

THIS ASSIGNMENT, by YOSHIHIRO NORIKANE, SHINJI TEZUKA,

MASARU OHGAKI, MASAHIRO MASUZAWA, and HIDEYUKI MIYAZAWA

(hereinafter referred to as "Assignors"), residing at Kanagawa, Japan, Kanagawa, Japan, Kanagawa, Japan, and Tokyo, Japan, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in <u>MICROSCOPIC</u> FLOW PASSAGE STRUCTURE, MICROSCOPIC LIQUID DROPLET GENERATING METHOD, MICROSCOPIC LIQUID DROPLET GENERATING SYSTEM, PARTICLES, AND MICROSCOPIC LIQUID DROPLET application for Letters Patent of the United States, 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 continuations-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 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 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 the 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

PATENT REEL: 019672 FRAME: 0408 • 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 the Director of the United States Patent and Trademark Office to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the 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 Customer Number 24998 (Dickstein Shapiro LLP).

1 1.1. 1 .1

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

Date Date	yoshihiro (horikane
Date	YOSHIHIRO NORIKANE
January 24, 2007	Shinji Tezuker
Date	SHINJI TEZUKA
January 24, 2007	Masaru Ohgaki
Date	MASARU OHGAKI
Jan. 24. 2007	Masahiro Masuzawa
Date	MASAHIRO MASUZAWA
January 24, 2007 Date	Hideyuli Miyazawa
Date '	HIDEYUKI MIYAZAWA
January 24, 2007	author the
Date	Witness
January 24, 2007	In form
Date	Withess

2

2109643 DSMDB-2109643v01

RECORDED: 07/16/2007