Form PTO-1595 (Rev. 03-05) OMB No. 0651-0027 (exp. 6/30/2005)	United States Patent and Trademark Office
To the Director of the U.S. Patent and Trademark Office: Please	
<del></del>	<del></del>
1. Name of conveying party(ies):	2. Name and address of receiving party(ies)
Hirokazu YAMAUCHI (10/25/2006), Toshiki TAKIGUCHI (10/25/2006), Kazuhiro	Name: Sharp Kabushiki Kaisha
MATSUYAMA (10/25/2006), and	Internal Address:
Additional name(s) of conveying party(ies) attached? X Yes No	Street Address:
3. Nature of conveyance/Execution Date(s):	22-22, Nagaike-cho, Abeno-ku,
	Osaka-shi Osaka
Execution Date(s): in parentheses after inventor name	545-8522
X Assignment Merger Change of Name	JAPAN
Security Agreement Joint Research Agreement	City:
Government Interest Assignment	State:
Executive Order 9424, Confirmatory License	Country: Zip:
Other	Additional name(s) & address(es) Yes X No
	attached:
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)
NEW	
Additional numbers attached	Yes X No
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:
Name: Charles Gorenstein BIRCH, STEWART, KOLASCH & BIRCH, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00
Internal Address: Atty. Dkt.: 1907-0242PUS1	Authorized to be charged by credit card
Street Address: 8110 Gatehouse Road	Authorized to be charged to deposit account
Suite 100 East	
P.O. Box 747	x Enclosed
	None required (government interest not affecting title)
City: Falls Church	8. Payment Information
State: VA Zip: 22040-0747	a. Credit Card Last 4 Numbers
Phone Number: (703) 205-8000	Expiration Date
Fax Number: (703) 205-8050	b. Deposit Account Number

Authorized User Name

#40,439

11/29/2006	JBALINAN	00000011				1
04 FC:8021			(	40.00	QĐ	

Charles Gorenstein - 29,271
Name of Person Signing

Birch, Stewart, Kolasch & Birch, LLP

Email Address:

9. Signature:

CG/scp

November 28, 2006

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

Form PTO-1595	RECOR	DATION FORM COVER SHEET (continued)		
Additional Conveying Party(ies)/Execution Date(s) (1. Continued):				
Hiroyuki MURAI (10/2	25/2006)			
Additional Assign	ees (2. Continued):			
Assignee Name:				
Internal Address: Street Address:				
City:	State:	Country:	Zip:	
Assignee Name:				
Internal Address:				
Street Address:				
City:	State:	Country:		
Assignee Name:		•		
Internal Address:				
Street Address:				
City:	State:	Country:	Zip:	
Additional Applications and/or Patents (4. Continued):				
Additional Patent Application Numbers  4A. Continued:  Additional Patent Numbers  4B. Continued:				

Additional numbers attached?

2

Yes

No

Docket No.: 1907-0242PUS1

REEL: 018638 FRAME: 0952

## BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

## **ASSIGNMENT**

Applicat	ion No.	NEW		-	Filed 11/28/06	
Insert Name(s) of Inventor(s)				NAME (ALL CAPS))*  Toshiki TAKIGUCHI,	** Kazuhiro MATSUYAMA,	
	Hiroy	uki MURAI				
					• ""	
Insert Title of Invention	`	J		ave) invented certain new ar	nd useful improvements in	
		, .	for Letters Patent of the visional application).	ne United States of Americ	ca has been executed by the undersigned	
Insert Date of Signing of Application	on <u>October 25, 2006</u> ; and					
nsert Name f Assignee	WHE	REAS,	SHARP KABUSHI	KI KAISHA		
Insert Address of Assignee	of	22-22, Nagaik	:e-cho, Abeno-ku, Os	saka-shi, Osaka 545-8522	JAPAN	
ІЕСК ВОХ	the ent		interest in and to said		t as the Assignee) is desirous of acquiring by Letters Patent(s) that may be granted	
APPROPRIATI	NOW, of whi assigne right to right, to	THEREFORE, in control is hereby acknown and transferred, at the said invention itle and interest in a ta, its territorics, do	onsideration of the sum owledged, and other g and by these presents do in the United States of and to any and all Lett	good and valuable conside bes sell, assign and transfer America, its territories, dep ers Patent(s) which may be	the undersigned in hand paid, the receipt ration, the undersigned has (have) sold, unto said Assignee the full and exclusive bendencies and possessions and the entire granted therefor in the United States of we is designated, in any and all foreign	

and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for

Page 1 of 3

which the same may be granted.

PATENT REEL: 018638 FRAME: 0953 The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree (s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP 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.

The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	October 25, 2006	_ ,	Name of Inventor	Hirokozu Yamanchi
Date	October 25. 2006	_ ,	Name of Inventor	(signature) Hirokazu YAMAUCHI  Joshiki Jukizuchi  (signature) Toshiki TAKIGUCHI
Date	October 25, 2006	. ,	Name of Inventor	(signature) Toshiki TAKIGUCHI  Kazuhiro Matouyama (signature) Kazuhiro MATSUYAMA
Date	October 25, 2006	- '	Name of Inventor	(signatufe) Kazuhiro MATSUYAMA    Livoyuki Mwai
)at <b>e</b>		- '	Name of Inventor	(signature) Hiroyuki MURAI
Date		. '	Name of Inventor	(signature)
				(signature)

PATENT REEL: 018638 FRAME: 0954

November 2005

**RECORDED: 11/28/2006** 

Page 2 of 3