07-26-2002



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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

Attorney Docket No.: 70840/57642

COVER SHEET

DNLY

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.					
1. Name of conveying party(ies):		2. Name and address of receiving party(ies):			
A. Satoru INOUE B. Hajime TAKEZAWA C. Minehiro KONYA		Name: Sharp Kabushiki Kaisha			
		Street Address: 22-22 Nagaike-cho,			
Additional name(s) of conveying party(ies) attached? Yes Mo		City/Region/Country: Abeno-ku, 5	45-8522 Osaka JAPAN		
		Additional name(s) & address(es) attached?			
		Yes M No			
3. Nature of Conveyance:		L les L No	FINANCE		
☑ Assignment ☐ Mer	ger		Acceptance of the second of th		
	ange of Name		Ö 🥹		
Other:	g		M 7: 59		
Execution Date: (A): May 15, 2002; (B): May	14, 2002; and		15 PECORDS 14 7: 59 SECTION		
(C): May 13, 2002		i de la composition della comp	- 9 DS		
4. Application number(s) or patent number	(s):				
If this document is being filed together with	a new application, th	ne execution date of the application is:			
A. D. (1.0.1) and (1.0.1) 10/146 905		B. Patent No.(s)			
A. Patent Application No(s): 10/146,825					
Addit	ional numbers attacl	ned? Yes Vo			
5. Name and address of party to whom correspondence concerning document should be mailed:		6. Total number of applications and patents involved: [1]			
Name: David G. Conlin, Esq. (Reg	, No.: 27,026)				
Street Address: EDWARDS & ANGELL, LLP					
P.O. Box 9169 City: <u>Boston</u> State: <u>MA</u> Zip	o: <u>02209</u>				
		7. Total fee (37 CFR 3.41):	\$ <u>40.00</u>		
		☑ Enclosed			
		☑ Authorized to be charged to deposit account for			
		additional or excess fees.			
	1	8. Deposit account number: 04-110 (Attach duplicate copy of this page if	<u>)5</u> paying by deposit		
7/25/2002 DBYRNE 00000185 10146825		account)			
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O Statement and signature. To the best of	my knowledge and b	elief, the foregoing information is true	and correct and any		
attached copy is a true copy of the original d	locument.				
John J. Penny, Jr., (Reg. No. 36,984)			Ly 15, 2002 Date		
Name of Person Signing	ature pages including cover sheet, attachm				
	Total number of	pages including cover sheet, attachin			
OMB No. 0651-0011 (exp. 4/94) < BOS2_3060)43.1>				

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ASSIGNMENT

WHEREAS, the following inventor(s): Satoru INOUW, Hajime TAKEZAWA, and Minehiro KONYA

WHEREAS, SHARP KABUSHIKI KAISHA, a Japanese Corporation, having its principal place of business at 22-22 Nagaike-Cho, Abeno-ku, Osaka 545-8522 Japan, its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and to any Letters Patent(s) that may be granted therefor in the United States of America;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration to the undersigned, the receipt of which is hereby acknowledged, the undersigned has (have) sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America and its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America and its territories, dependencies and possessions, and in and to any and all divisions, reissues, continuations and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional 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 furnish all pertinent facts and documents relating to said application, said invention and said patent(s) as may be known and accessible to the undersigned, and will testify as to the same in any interference or litigation related thereto, and will promptly execute and deliver to Assignee any and all papers, instruments or affidavits necessary or desirable to apply for, obtain, maintain or enforce said application or said patent(s) in connection with any interference which may be declared, and any litigation concerning this application or any continuation, division or reissue thereof or Patent(s) or reissue patent(s) issued thereon, and to cooperate with the

PATENT REEL: 013113 FRAME: 0579 Assignee in every way possible in obtaining and producing evidence and proceeding with such interference or litigation.

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 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 grant(s) the law firm of Dike, Bronstein, Roberts & Cushman, Intellectual Property Group of Edwards & Angell, LLP, of 130 Water Street, Boston, Massachusetts 02109-4280, U.S.A. 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 authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States of America resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he or she has the full right to convey the entire interest herein assigned, and that he or she has not executed, and will not execute, any agreement in conflict herewith.

In witness whereof, signed by the undersigned on the date(s) opposite the undersigned names.

Date May 15, 2002	Signature of Inventor: Satory INOUE			
	Name: Satoru INOUE			
Date May 14, 200)	Signature of Inventor: Hajime TAKEZAWA			
Date / Iny	Name:Hajime TAKEZAWA			

Date May 13, 2002	Signature of Inventor:	Minehiro	KONYA
•	Name:Minehiro KONYA		
Date	Signature of Inventor:		
	Name:		
Date	Signature of Inventor:		
	Name:		
Date	Signature of Inventor:		
	Name:		