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FORM PTO-1595

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U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

To the Director of the United States Patent and Trademark Office. Please record the attached original documents or copy thereof. 1. Name of conveying party(ies) 2. Name and address of receiving party(ies): Tomoaki SHINO Name: KABUSHIKI KAISHA TOSHIBA Address: 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan Additional name(s) of conveying party(ies) attached?

Yes No 3. Nature of Conveyance: Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name □ Other Execution Date: April 14, 2004 Additional name(s) and address(es) attached?

Yes No 4. Application number(s) or patent number(s): ☐ This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/814,345 Additional numbers attached? ☐ Yes ■ No 5. Name and address of party to whom correspondence concerning document should be mailed: 6. Total applications and patents involved: 1 7. Total fee (37 CFR 3.41): \$40.00 Customer Number Enclosed Authorized to be charged to deposit account Tel. (703) 413-3000 8. Deposit account number: 15-0030 Fax. (703) 413-2220 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 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. Eckhard H. Kuesters Name of Person Signing Joseph A. Scafetta, Jr. Registration Number: 28,870 Registration No. 26, 803 Total number of pages including this cover sheet: 3 Do not detach this portion Mail documents to be recorded with required cover sheet information to: Director of the United States Patent and Trademark Office **Mail Stop Assignment Recordation Services** Alexandria, Virginia. 22313 08/19/2004 MMEKONEN 00000055 10814345 01 FC:8021

> PATENT REEL: 015691 FRAME: 0001

Assignment of Application

Page 1 of 2

WHEREAS, I (WE)	Tomoaki SHINO of c/o I	intellectual l	Property Division, To	oshiba Corporation,	1-1, Shibaura
1-chome, Minato-ku,	Tokyo 105-8001, JAPAN				
	 				
		 			
					, respectively,
have invented certain r	new and useful improvement				•
DATA AS STATE O	F MAJORITY CARRIERS	ACCUMUL	ATED IN CHANNI	EL BODY AND ME	ETHOD
OF MANUFACTURI	NG THE SAME		· · · · · · · · · · · · · · · · · · ·		
for which an application	n for Letters Patent was exe	cuted on			
	0/814,345		April 1, 200	4), and
WHEREAS, KA	ABUSHIKI KAISHA TOSH	IBA			
(hereinafter referred to	as "ASSIGNEE") having a	place of bus	siness at:		
1-1, Shibaura 1-chome	e, Mianto-ku, Tokyo 105-80	01, JAPAN			
is desirous of acquiring	the entire right, title and in	terest in and	to said invention a	nd in and to any I ett	ers Patent that

is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

10/01

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

The undersigned hereby grant(s) the firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. of 1940 Duke Street Alexandria, Virginia 22314 the power to insert on this assignment any further identification, including the application number and filing date, 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.

Date:	April 14,2004	Tomoaki Shino
-		(Signature of Inventor) Tomoaki SHINO
Date:		(Signature of Inventor)
Date:		
-		(Signature of Inventor)
Date:		(Signature of Inventor)
Date:		
		(Signature of Inventor)
Date:		(Signature of Inventor)
Date:		
		(Signature of Inventor)
Date:		(Signature of Inventor)

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
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10/01

RECORDED: 08/18/2004

PATENT REEL: 015691 FRAME: 0003