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To the Honorable Commissioner of Patents an	d Trademarks. Please re	ecord the attached origi	nal documents or copy thereof.	
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Yukihiro URAKAWA		Name: KABUSHI	KI KAISHA TOSHIBA	
Additional name(s) of conveying party(ies) a ☐ Yes ⊠ No	nttached?		va-cho, Saiwai-ku, shi, Kanagawa-ken, Japan	
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☑ Assignment☐ Merge☐ Security Agreement☐ Change of Nam☐ Other	er	JUN 2 1 2000		
Execution Date: May 30, 2000				
4. Application number(s) or patent number(s	s):	THADEMA		
If this document is being filed together with	a new application, the ex	xecution date of the app	olication is:	
A. Patent Application No.(s)	E	B. Patent No.(s)		
09/523,177				
	l Additional numbers attac	hed? □ Yes ⊠ No		
5. Name and address of party to whom corr concerning document should be mailed:	respondence 6	. Total number of appl	tications and patents involved:	
	7	. Total fee (37 CFR 3.	41):\$ <u>40.00</u>	
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PATENT REEL: 010920 FRAME: 0497

	WHEREAS, I (WE)				
10mm 11.1.470	Yukihiro URAKAWA of Kanagawa-ken, Japan				
ISERT NAMES ND RESIDENCE DDRESSES OF HE INVENTORS:					
ie inventors.					
	, respectively,				
SERT TITLE F INVENTION:	have invented certain new and useful improvements in: SEMICONDUCTOR MEMORY DEVICE				
	CAPABLE OF RECOVERING DEFECTIVE BIT AND A SYSTEM HAVING THE SAME				
ISERT DATE IN- ENTORS SIGNED ECLARATION:	SEMICONDUCTOR MEMORY DEVICE for which an application for Letters Patent was executed on				
	(Application No09/523,177, filedMarch 10,2000), and				
ISERT NAME ND ADDRESS OF OMPANY OR	WHEREAS, KABUSHIKI KAISHA TOSHIBA				
THER ASSIGNEE:	(hereinafter referred to as "ASSIGNEE") having a place of business at: 72 Horikawa-cho,				
	Saiwai-ku, Kawasaki-shi, Kanagawa-ken, Japan				
	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.

1/95

PATENT REEL: 010920 FRAME: 0498

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.

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 Fourth Floor, 1755 Jefferson Davis Highway, Arlington, Virginia 22202 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: May 30,2000	(Signature of Inventor Yukihiro URAKAWA
Date:	(Signature of Inventor)

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW FOURTH FLOOR 1755 JEFFERSON DAVIS HIGHWAY ARLINGTON, VIRGINIA 22202

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PATENT REEL: 010920 FRAME: 0499

RECORDED: 06/21/2000