05-21-2001 Form PTO 1595 RECOR. U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office 101724120 To the Honorable Commissioner of Patents and Tr anal documents or copy thereof. Name of conveying party(ies) 2. Name and address of receiving party(ies) LOUIS L. HSU and RAJIV V. JOSHI IBM CORPORATION Name: Internal Address: Additional name(s) of conveying party(ies) attached? ___ Yes X No New Orchard Road Street Address: 3. Nature of conveyance: Assignment Armonk State: NY Zip: 10504 City: Security Agreement Merger Change of Name Additional name(s) & address(es) attached? \underline{X} No Other Execution Date(s): March 29, 2001 and April 22, 2001 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: Patent No.(s) Patent Application No.(s) 09/835,732 Additional numbers attached? Yes X No Name and address of party to whom correspondence 6. Total number of applications and patents involved concerning document should be mailed: 1 Paul J. Farrell, DILWORTH & BARRESE Name: 7. Total fee (37 CFR 3.41) \$ 40.00 Enclosed Internal Address: X Authorized to be charged to deposit account 333 Earle Ovington Boulevard Street Address: 8. Deposit account number: 50-0510 (IBM - Yorktown Heights) Uniondale State: NY Zip: 11553 City: (Attach duplicate copy of this page if paying by deposit account) Do not use this space Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correction and any attached copy is a true copy of the original document. Reg. No. 33,494 Paul J. Farrell, Esq. Name of Person Signing Total number of pages (Including cover sheet): 5Do not detach this portion Mail documents to be recorded with required cover sheet information to:

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For: [X] U.S. Application or [] U.S. Patent
By: [X] Inventor(s) or [] Present Owner

ASSIGNMENT OF INVENTION

In consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration,

ASSIGNOR(S):	LOUIS L. HSU; and RAJIV V. JOSHI
(Inventor(s) or person(s) or entity(es) who own the invention)	
	on or entity to whom invention was previously assigned and this corded in PTO add the following)
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hereby sells, assigns and	transfers to
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	New Orchard Road Address
	Armonk, New York 10504
	U.S.A. Nationality

(Assignment of Invention [16-3]-- page 1 of 3)

[x] the entire right, title and interest
 [] an undivided ______ percent (______%) interest for the United States and its territorial possessions (check the following box if foreign rights are also to be assigned)
 [x] and in all foreign countries, including all rights to claim priority, in and to any and all

and the successors, assigns and legal representatives of the ASSIGNEE

improvements which are disclosed in the invention entitled:

(complete one of the following)

T-RAM STRCTURE HAVING DUAL VERTICAL DEVICES AND METHOD FOR FABRICATING THE SAME

		(check and complete (a), (b), (c) or (d)
and wh	ich is four	
(a)	[]	U.S. patent application executed on even date herewith
(b)	ĪĪ	U.S. patent application executed on
(c)	[X]	U.S. application Serial No. 09/835,732
` '		April 16, 2001
(d)	[]	U.S. provisional application No. 60/
\ >		
(e)	[]	U.S. Patent No issued
(f)		PCT application No.
` '		
	[]	A change of address to which correspondence is to be sent regarding patent maintenance fees is being sent separately.
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(g)	[x]	and any legal equivalent thereof in a foreign country, including the right to claim priority
-	ation-in-p	Letters Patent to be obtained for said invention by the above application or any continuation, art, division, renewal, or substitute thereof, and as to letters patent any reissue or re-examination

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

(Assignment of Invention [16-3]-- page 2 of 3)

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I/	We have hereunto set hand and seal this
	(Date of signing).
WARNING: Date of signing	g must be the same as the date of execution of the application if item (a) was checked above.
he (+	$\frac{2-29-200}{\text{Dated}}$
LOUIS L. HSU	Dated
RAJIV V. JOSHI	Dated
	Dated
	Dated
	Dated
f ASSIGNOR is a legal entity	complete the following information
	Time or point the name of the share years
	Type or print the name of the above person authorized to sign on behalf of ASSIGNOR
	Title

NOTE: No witnessing, notarization or legalization is necessary. If the assignment is notarized or legalized then it will only be prima facie evidence of execution 35 USC 261. Use next page if notarization is desired.

(Assignment of Invention [16-3]-- page 3 of 3)

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I/\	We have hereunto set hand and seal this(Date of signing).
WARNING: Date of signing	must be the same as the date of execution of the application if item (a) was checked above.
LOUIS L. HSU	Dated
Rajiv V. Joshi	April 22, 2001 Dated
	Dated
	Dated
	Dated
If ASSIGNOR is a legal entity	complete the following information
	Type or print the name of the above person authorized to sign on behalf of ASSIGNOR
	Title

NOTE: No witnessing, notarization or legalization is necessary. If the assignment is notarized or legalized then it will only be prima facie evidence of execution 35 USC 261. Use next page if notarization is desired.

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(Assignment of Invention [16-3]-- page 3 of 3)