07-19-2001



Substitute Form PTO -1595 Attorney Docket No. AUS920000905US1 101783093 To The Honorable Commissioner of Patents and trademarks: Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): Execution date: 16/29/01 Ravi Kumar Arimilli James Stephen Fields, Jr. Sanjeev Ghai , 2001 Praveen S. Reddy .2001 William John Starke , 2001 2. Name and address of receiving party(ies): 3. Nature of conveyance: International Business Machines Corporation Assignment Merger New Orchard Road Security Agreement ☐ Change of Name Armonk, New York 10504 Other 4. Application number(s) or patent number(s): Execution/Filing/Issue Date 129/01, 6/28/01, 6/28/01, 4/28/01 New Patent Application, execution date of application Patent Application Number: Filing Date Patent Number: Issue Date 6. Total number of applications and patents involved: 5. Name and address of party to whom correspondence concerning document should One be mailed: 7. Total fee (37 CFR 3.41). \$ 40.00 Casimer K. Salys □ Enclosed Authorized to be charged to deposit account IBM CORPORATION Authorized to charge any deficiency to deposit account Intellectual Property Law Zip 4054 8. Deposit account number: 11400 Burnet Rd. Austin, Texas 78758 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is 9. Statement and signature a true copy of the original document. CASIMER K. SALYS Ca

Total number of pages including cover sheet, attachments, and documents: 3

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Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

PATENT

REEL: 011977 FRAME: 0197

ASSIGNMENT

Whereas, We,

- (1) Ravi Kumar Arimilli of Austin, Williamson County, Texas
- (2) James Stephen Fields, Jr. of Austin, Williamson County, Texas
- (3) Sanjeev Ghai of Round Rock, Williamson County, Texas
- (4) Praveen S. Reddy of Austin, Travis County, Texas
- (5) William John Starke of Round Rock, Williamson County, Texas

have invented certain improvements in:

METHOD AND APPARATUS FOR ALLOCATING DATA USAGES WITHIN AN EMBEDDED DYNAMIC RANDOM ACCESS MEMORY DEVICE

| and executed, respecti | vely, a United State | es patent applicat | ion therefor on (I | Date Inventor Signed |
|------------------------|----------------------|--------------------|--------------------|----------------------|
| Declaration) (1) | 6/28 | , 2001 and (2) | 6/29 | , 2001, and |
| (3) $6/28$ | , 2001 and | $(4) _{6/28}$ | , 2001, a | nd |
| (5) $6/28$ | , 2001. | | | |

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, we, the above named, hereby sell, assign, and transfer to IBM, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and all rights of priority resulting from the filing of said United States application, and we request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in said application to IBM, its successors and assigns; and we hereby agree that IBM may apply for foreign Letters Patent on said invention and we will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by IBM.

Page 1 of 2

PATENT REEL: 011977 FRAME: 0198

| (1) Signed at _ | Austin, TX | on | 6/28 | , 2001. |
|-----------------|------------|-------------|---------|-------------------------|
| | Le Le | au Mei | - 6 | UE: |
| | | | | Ravi Kumar Arimilli |
| (2) Signed at _ | Austin, TX | on | 6/29 | , 2001. |
| | Jam | 142 Stylien | Ful Jai | nes Stephen Fields, Jr. |
| (3) Signed at _ | Justin, TX | | , | |
| | | Janjen | Jhan) | Sanjeev Ghai |
| (4) Signed at _ | Austin, | | | _ |
| | | France | S. /+ | Praveen S. Reddy |
| (5) Signed at _ | AUSTIN TX | on | 6/28 | , 2001. |
| | | Nell-John & | type | William John Starke |

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RECORDED: 06/29/2001

PATENT REEL: 011977 FRAME: 0199