

02-20-2004



Form PTO-1595 (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002)

102676130 PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

1. Name of conveying party(ies): Ramachandra Divakaruni (01/30/2004) and Larry Nesbit (01/15/2004) 2.9.04 Additional name(s) of conveying party(ies) attached? [] Yes [x] No

2. Name and address of receiving party(ies) International Business Machines Corporation Name: Corporation Internal Address: Street Address: New Orchard Road City: Armonk State: NY Zip: 10504 Additional name(s) & address(es) attached: [] Yes [x] No

3. Nature of Conveyance: [x] Assignment [] Merger [] Security Agreement [] Change of Name [] Other Execution Date: see Box 1, conveying parties

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the new application is: January 15, 2004 A. Patent Application No.(s): 10774827 B. Patent No.(s): Additional numbers attached? [] Yes [x] No

5. Name and address of party to whom correspondence concerning document should be mailed: Name: Lawrence E. Russ LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP Internal Address: Atty. Dkt.: 02P15178US INTECH 3.0-079 Street Address: 600 South Avenue West City: Westfield State: NJ Zip: 07090

6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41) \$ 40.00 [] Enclosed [x] Authorized to be charged to deposit account [] Authorized to be charged to credit card (Form 2038 enclosed) 8. Deposit account number: 12-1095 (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. Lawrence E. Russ Name of Person Signing Signature Date 2/9/04 Total number of pages including cover sheet, attachments, and documents: 5 February 9, 2004

19270 U.S. PTO 10774827 020904

02/19/2004 LNUJELLER 00000223 121095 10774827 01 FC:0021 40.00 BA

476652_1.DOC

PATENT REEL: 014984 FRAME: 0379

PATENT ASSIGNMENT FORM

For and in consideration of good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor acknowledges his/her prior and ongoing obligation to sell, assign, and transfer, and agrees to sell, assign, and transfer the entire world wide right, title and interest for the United States and all foreign countries, in and to any and all inventions and improvements conceived during and within the scope of his/her employment, and further acknowledges that he/she has sold, assigned, and transferred, and hereby sells, assigns, and transfers, unto:

**INTERNATIONAL BUSINESS MACHINES CORPORATION ("IBM"),
Armonk, New York 10504**

a corporation of New York, and IBM desires to acquire all right, title, and interest, in and to the certain inventions (identified below), applications, and any United States and foreign patents to be obtained therefor relating to:

Title of Invention for United States Patent

**LINE MASK DEFINED ACTIVE AREAS FOR 8F2 DRAM CELLS
WITH FOLDED BIT LINES AND DEEP TRENCH PATTERNS**

as set forth in United States Patent Application executed by each undersigned inventor on the date indicated by each inventor signature below, and further identified by **Attorney Docket Number 02 P 15178 US / INTECH 3.0-079**;

(select one): executed concurrently herewith or Serial No. _____ Filed on _____

for and to said United States Patent Application including any and all divisions or continuations thereof and in and to any and all Letters Patent of the United States and foreign patents and all rights of priority to be obtained therefor which may issue on any such application or for said invention therein disclosed, including any and all reissues or extensions thereof, to be held and enjoyed by, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made;

Each undersigned inventor hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to IBM, its successors and assigns, in accordance herewith;

Each undersigned inventor warrants and covenants that he/she has the full and unencumbered right to sell and assign the interests hereby sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith;

Each undersigned inventor further covenants and agrees that he/she, upon the request and at the expense of the IBM, will execute and deliver any papers, make all rightful oaths, testify in any legal proceeding relating to said inventions and improvements, communicate to the IBM all facts known to the undersigned relating to such inventions and improvements and the history thereof; and perform all other lawful acts deemed necessary or desirable by IBM, and its legal representatives, to secure, maintain, and enforce patent protection for such inventions and improvements and for vesting title to such inventions and improvements in the IBM, and in particular to perfect title to said above-identified certain inventions, and applications including divisions and continuations thereof, and any and all Letters Patent which may be granted therefor or thereon, including reissues, extensions, or counterparts;

Each undersigned inventor hereby grants the IBM and the firm of the power to insert in this Assignment any further identification which may be necessary or desirable for recordation of this Assignment.

This assignment is governed by the substantive laws of the state of New York.

PATENT

DOCKET NO. 02 P 15178 US / INTECH 3.0-079

Executed by Inventor 1 of 2

Signature: Ramachandra Divakaruni Date: Jan 30, 2004
RAMACHANDRA DIVAKARUNI

Executed by Inventor 2 of 2

Signature: _____ Date: _____
LARRY NESBIT

PATENT ASSIGNMENT FORM

For and in consideration of good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor acknowledges his/her prior and ongoing obligation to sell, assign, and transfer, and agrees to sell, assign, and transfer the entire world wide right, title and interest for the United States and all foreign countries, in and to any and all inventions and improvements conceived during and within the scope of his/her employment, and further acknowledges that he/she has sold, assigned, and transferred, and hereby sells, assigns, and transfers, unto:

**INTERNATIONAL BUSINESS MACHINES CORPORATION ("IBM"),
Armonk, New York 10504**

a corporation of New York, and IBM desires to acquire all right, title, and interest, in and to the certain inventions (identified below), applications, and any United States and foreign patents to be obtained therefor relating to:

Title of Invention for United States Patent

**LINE MASK DEFINED ACTIVE AREAS FOR 8F2 DRAM CELLS
WITH FOLDED BIT LINES AND DEEP TRENCH PATTERNS**

as set forth in United States Patent Application executed by each undersigned inventor on the date indicated by each inventor signature below, and further identified by **Attorney Docket Number 02 P 15178 US / INTECH 3.0-079**;

(select one): executed concurrently herewith or Serial No. _____ Filed on _____

for and to said United States Patent Application including any and all divisions or continuations thereof and in and to any and all Letters Patent of the United States and foreign patents and all rights of priority to be obtained therefor which may issue on any such application or for said invention therein disclosed, including any and all reissues or extensions thereof, to be held and enjoyed by, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made;

Each undersigned inventor hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to IBM, its successors and assigns, in accordance herewith;

Each undersigned inventor warrants and covenants that he/she has the full and unencumbered right to sell and assign the interests hereby sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith;

Each undersigned inventor further covenants and agrees that he/she, upon the request and at the expense of the IBM, will execute and deliver any papers, make all rightful oaths, testify in any legal proceeding relating to said inventions and improvements, communicate to the IBM all facts known to the undersigned relating to such inventions and improvements and the history thereof; and perform all other lawful acts deemed necessary or desirable by IBM, and its legal representatives, to secure, maintain, and enforce patent protection for such inventions and improvements and for vesting title to such inventions and improvements in the IBM, and in particular to perfect title to said above-identified certain inventions, and applications including divisions and continuations thereof, and any and all Letters Patent which may be granted therefor or thereon, including reissues, extensions, or counterparts;

Each undersigned inventor hereby grants the IBM and the firm of the power to insert in this Assignment any

further identification which may be necessary or desirable for recordation of this Assignment.

This assignment is governed by the substantive laws of the state of New York.

PATENT
DOCKET NO. 02 P 15178 US / INTECH 3.0-079

Executed by Inventor 1 of 2

Signature: _____ Date: _____
RAMACHANDRA DIVAKARUNI

Executed by Inventor 2 of 2

Signature: *Larry Nesbit* _____ Date: *Jan. 15, 2004*
LARRY NESBIT