

ASSIGNMENT

FOR VALUE RECEIVED, the receipt of which is hereby acknowledged, the following inventor or inventors (hereinafter called "ASSIGNOR")

Yasuhiro Nanba of Tokyo, Japan

hereby assigns, transfers and sets over to:

NEC Corporation

of 7-1, Shiba 5-chome, Minato-ku, Tokyo, Japan

(hereinafter called "ASSIGNEE"), the entire worldwide right, title and interest in and to the invention known as:

SEMICONDUCTOR MEMORY DEVICE WITH A REFRESH FUNCTION

for which a United States Patent Application was executed on March 19, 2001 and all rights and privileges under any Letters Patent which may be granted thereon, including all rights, if any, throughout the entire world to sue for all past infringements which may have occurred before the execution of this assignment.

(1) The ASSIGNOR agrees without charge to said ASSIGNEE but at its expense (a) to execute (i) all necessary papers to be used in connection with this application and any additional, continuing, or divisional applications, as the ASSIGNEE may deem necessary or expedient, (ii) all papers in connection with any interference or other legal or quasi-legal proceedings relating to this application or any additional, continuing, or divisional application thereof, (iii) all papers and documents which may be necessary in connection with the preparation and filing of any foreign applications or with making claims to priority rights granted under the provisions of the International Convention for Protection of Industrial Property or similar agreements; (b) to cooperate with ASSIGNEE in every way possible in obtaining evidence and going forward in any such proceedings; and (c) to perform all other affirmative acts which may be necessary or desirable to obtain a grant of a valid patent for said invention in any country throughout the world.

(2) ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and the appropriate officials in any other country, to issue any and all Letters Patent that may be granted upon any patent application or any additional, continuing or divisional applications thereof to the ASSIGNEE, its successors and assigns.

(3) ASSIGNOR hereby covenants and warrants that he has full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

(4) ASSIGNOR hereby grants to the law firm of LAFF, WHITESEL & SARET, LTD. of Chicago, Illinois, authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

Date Mar. 19, 2001 Signature of Inventor Yasuhiro Nanba (SEAL)
Yasuhiro Nanba

Date _____ Signature of Inventor _____ (SEAL)

Date _____ Signature of Inventor _____ (SEAL)

Date _____ Signature of Inventor _____ (SEAL)

Date _____ Signature of Inventor _____ (SEAL)

Date _____ Signature of Inventor _____ (SEAL)

Witness:

Nitashi Ukai
[Signature]

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