06-14-1999 **FORM PTO-1595** U.S. Department of Commerce Patent and Trademark Office 101066196 To the Honorable Commissioner of Patents and Trademarks Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and Address of receiving party(ies): Name: TEXAS INSTRUMENTS INCORPORATED Ken Saitoh 1) Shoji Wada Address: P.O. Box 655474, MS 3999 2) City: Dallas State: TXZip: 75265 Additional name(s) & address(es) attached? ___ Yes _X_ No 3. Nature of Conveyance: _X_ Assignment _ Merger Security Agreement Change of Name Other_ Execution Date: March 30, 1999, April 7, 1999 4. Application number(s) or patent number(s). This document is being filed together with a new application. Execution date of the application: March 19, 1999 Title: ADDRESS CONTROLLED SENSE AMPLIFIER OVERDRIVE TIMING FOR SEMICONDUCTOR MEMORY DEVICE Docket No: T1-23722 B. Patent No.(s) A. Patent Application No.(s) S.N. **09/272,872** Additional numbers attached? _____ Yes __X__ No Additional numbers attached? _____ Yes __X_ No 5. Name and address of party to whom correspondence concerning 6. Number of applications and patents involved: ____(1)____ document should be mailed: Name: Robby T. Holland Texas Instruments Incorporated P.O. Box 655474, MS 3999 Address: Dallas Zip: 75265 State: TX7. Amount of fee enclosed or authorized to be charged: \$40

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 attaches copy is a true does of the original document.

June 7, 1999

Date

Robby T. Holland Reg. No 25,304

8. Deposit Account No: 20-0668 (Duplicate copies not required).

PATENT REEL: 010011 FRAME: 0423

PAGE 1 OF 1

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, P.O. Box 655474, MS 3999, Dallas, Texas 75265, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED, as assignee of my entire right, title and interest.

I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TEXAS INSTRUMENTS INCORPORATED, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TEXAS INSTRUMENTS INCORPORATED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	ADDRESS CONTROLLED SENSE AMPLIFIER OVERDRIVE TIMING FOR SEMICONDUCTOR MEMORY DEVICE		
SIGNATURE OF INVENTOR AND NAME	fun Dallu Ken Saitoh	(2)	(3)
DATE	3/3-/99		
RESIDENCE (City, County, State)	Kanagawa, Japan		
DATE APPLICATION EXECUTED	3/30/99		

After recordation, please return Assignment to:

Mark A. Valetti Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265

> PATENT REEL: 010011 FRAME: 0424

PAGE 1 OF 1

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, HITACHI LIMITED, of Japan, with its principal office at 6, Kanda-Surugadai 4-chome, Chiyoda-ku, Tokyo 101-8010, Japan, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said HITACHI LIMITED, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said HITACHI LIMITED, as assignee of my entire right, title and interest.

I also hereby sell and assign to HITACHI LIMITED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said HITACHI LIMITED, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said HITACHI LIMITED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	ADDRESS CONTROLLED SENSE AMPLIFIER OVERDRIVE TIMING FOR SEMICONDUCTOR MEMORY DEVICE		
SIGNATURE OF INVENTOR AND NAME	Shoji Wada	(2)	(3)
DATE	april /7/89		
RESIDENCE (City, County, State)	Tokyo, Japan		
DATE APPLICATION EXECUTED	april/7/99		

After recordation, please return Assignment to:

RECORDED: 06/10/1999

Mark A. Valetti Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265

> PATENT REEL: 010011 FRAME: 0425