

PATENTS ONLY

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1. Name of party or parties conveying an interest:  <b>Steve Richard Jahnke</b> <b>Hiromichi Hamakawa</b>	2. Name and address of party or parties receiving an interest:  Name: Texas Instruments Incorporated a Delaware Corporation 7839 Churchill Way, MS 3999 Dallas, Texas 75251
3. Description of the interest conveyed:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Security Agreement  Execution Date: August 17, 2006; August 22, 2006	Other:
4. Application number(s) or patent number(s). Additional sheet attached? YES___ NO <u>X</u>  A. Patent Application no.(s): N/A filed August 30, 2006	If the document is being filed together with a new application, the execution date of the application is: <u>August 30, 2006</u> B. Patent no.(s):
5. Name and address of party to whom correspondence concerning this cover sheet should be mailed: Name: Alan Stewart Reg. No. 35,373 Texas Instruments Incorporated USPTO Customer No. 23494	6. Number of applications and/or patents identified on this cover sheet: 1 ----- 7. Amount of fee enclosed or authorized to be charged: \$40.00 ----- 8. <i>Any additional required fee may be charged, or any overpayment credited to our deposit account: 50-2455</i>

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9. To the best of my knowledge and belief, the information contained on this cover sheet is true and correct and any copy submitted is a true copy of the original document. I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this date:

Date: 8.30.06
  
Mark G. Hanley  
Registration No.: 44,736
Total number of pages including cover sheet, attachments, and document: 3

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## 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

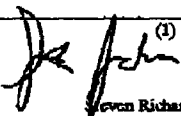

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, P.O. Box 655474, MS 3999, Dallas, Texas 75265, is desirous of acquiring my entire right, title and interest 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	METHODS AND APPARATUS TO PROVIDE REFRESH FOR GLOBAL OUT OF RANGE READ REQUESTS		
SIGNATURE OF INVENTOR AND NAME	 Steven Richard Jahole <sup>(1)</sup>	 Hiromichi Hamada <sup>(2)</sup>	<sup>(3)</sup>
DATE	8/22/06	8/17/06	
RESIDENCE (City, State)	6-16-6-601 Roppongi Minato-ku, Tokyo, 106-0032 Japan	299-8 Sudachi Inashiki Ibaraki 300-0521 Japan	
DATE APPLICATION EXECUTED	8/22/06	8/17/2006	

After recordation, please return Assignment to:

Ron Neerings  
Texas Instruments Incorporated

PATENT

RECORDED: 08/30/2006

REEL: 018258 FRAME: 0061