FORM PTO-1595 (Rev. 6-93) OMB No. 0651-0011 (exp. 4/94) M&G- 50019.243US01/P05662 T $\xi$ 

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

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To the Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): 8.29.03 Tushar Shah National Semiconductor Corporation Manouchehr Rafie 2900 Semiconductor Drive Santa Clara, California 95051-8090 Additional name(s) & address(es) attached? 

Yes 

No Nature of conveyance: Assignment Merger Security Agreement Change of Name Other: Execution Date: August 28, 2003 and August 29, 2003, respectively 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: August 28, 2003 and August 29, 2003 A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? Yes No 5. Name and address of party to whom correspondence concerning 6. Total number of applications and patents involved: 1 document should be mailed: 7. Total fee (37 CFR 3.41): \$40 Name: Mark R. Hennings Address: Merchant & Gould P.C. Authorized to be charged to deposit account P.O. Box 2903 Minneapolis, MN 55402-0903 8. Please charge any additional fees or credit any overpayments to our Deposit account number: 13-2725 DO NOT USE THIS SPACE 9. Statement and signature: To the best of my knowledge and belief, the foregoing inflymation is tyue and correct and any attached copy is a true copy of the original document. Mark R. Hennings, Reg. #48,982 August 29, 2003 Name of Person Signing Si&nature Total number of pages including cover sheet, attachments, and document: 4 Do not detach this portion Mail documents to be recorded with required cover sheet information to: Mail Stop Assignment Recordation Services Director - U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of information systems, PK2-1000C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project (0651-0011), Washington, D.C. 20503. 09/06/2003 STON11 00000083 10652411 01 FC:8021

> PATENT REEL: 014454 FRAME: 0684

## ASSIGNMENT

WHEREAS, we, Tushar Shah, residing at 325 Woodruff Way, Milpitas, California 95035 and Manouchehr Rafie, residing at 529 Cherrywood Drive, Sunnyvale, California 94087, made certain new and useful inventions and improvements as described and claimed in the specification forming part of an application for Letters Patent of the United States executed herewith, which is entitled COMMUNICATION SIGNAL PROCESSOR ARCHITECTURE.

AND WHEREAS, National Semiconductor Corporation, a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having an office and place of business at 2900 Semiconductor Drive, Santa Clara, California 95051-8090 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW THEREFORE, to all whom it may concern, be it known that for good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

PATENT REEL: 014454 FRAME: 0685 AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREON	F, I have hereunto set my hand this 28 day of
August 2003.	RHO
	Tushar Shah
STATE OF California,	
COUNTY OF Santa Clans ss.	

On this 28 day of Akk US +, 2003, before me personally appeared Tushar Shah to me known and known to me to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

[SEAL]

KAREN L. METZ
Commission # 1417865
Notary Public - California
Santa Clara County
My Comm. Expires Jun 11, 2007

PATENT

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**RECORDED: 08/29/2003** 

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