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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. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): 3.15.02 Hon Kin Chiu National Semiconductor Corporation 2900 Semiconductor Drive Santa Clara, CA 95051-8090 3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other: Execution Date: March 7, 2002 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: March 15, 2002 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): \$40.00 Brett A. Hertzberg Name: Authorized to be charged to deposit account Merchant & Gould P.C. Address: 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 information is true and correct and any attached copy is a true copy of the original document. Brett A. Hertzberg, Reg. No. 42,660 March 15, 2002 Name of Person Signing mature Total number of pages including cover sheet, attachments, and document: 3 Do not detach this portion Mail documents to be recorded with required cover sheet information to **Box Assignments** Director - U.S. Patent and Trademark Office Washington, D.C. 20231 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. 20503 00000048 10099529 03/27/2002 DBYRNE 40.00 UP 01 FC:581

## ASSIGNMENT

WHEREAS, I, Hon Kin Chiu, residing at 21103 Gary Drive #312, Hayward, CA 94546, 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 FREQUENCY DETECTOR FOR PHASE LOCKED LOOP SYSTEM.

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 and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, I 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 I 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, I do hereby agree that I and my 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 me 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

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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.

AND, furthermore I 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 me and that full right to convey the same as herein expressed is possessed by me.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 7th day of March, 2002.

HON KIN CHIU

COUNTY OF Santa Claver

On this Hand day of Mark, 2002, before me personally appeared to me HON KIN CHIU 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 # 1223997
Noticey Public - California
Destin Chua County

**RECORDED: 03/15/2002** 

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