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U.S. Department of Commerce

| OMB No. 0651-0011 (exp. 4/94)                                                                                                                                               | 0                                                                                                                                                         |
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|                                                                                                                                                                             | 36343 £                                                                                                                                                   |
| To the Honorable Commissioner of Patents and Trademarks:                                                                                                                    | Please record the attached original documents or copy thereof.                                                                                            |
| Name of conveying party(ies):     BIN HUO AND FINBARR MOYNIHAN                                                                                                              | Name and address of receiving party(ies):     Name: ANALOG DEVICES, INC.                                                                                  |
| Additional name(s) of conveying party(ies attached?                                                                                                                         | Internal Address:                                                                                                                                         |
| 3. Nature of conveyance:                                                                                                                                                    | Street Address: ONE TECHNOLOGY WAY                                                                                                                        |
| Assignment                                                                                                                                                                  |                                                                                                                                                           |
| ☐ Security Agreement ☐ Change of Name ☐ Other                                                                                                                               | City: NORWOOD State: MA Zip: 02062                                                                                                                        |
| Execution Date: January 21, 2002                                                                                                                                            | Additional name(s) & address(es) attached?                                                                                                                |
| Application number(s) or patent number(s):     If this document is being filed together with a new application,     A. Patent Application No.(s)  Additional numbers attach | B. Patent No.(s)                                                                                                                                          |
|                                                                                                                                                                             |                                                                                                                                                           |
| Name and address of party to whom correspondence concerning document should be mailed:  Name: Richard S. Koppel                                                             | 6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 3.41)\$ 40.00                                                               |
|                                                                                                                                                                             |                                                                                                                                                           |
| Internal Address: Koppel, Jacobs, Patrick & Heybl                                                                                                                           | Enclosed                                                                                                                                                  |
|                                                                                                                                                                             | Authorized to be charged to deposit account.                                                                                                              |
| Street Address: 555 St. Charles Drive, Suite 107                                                                                                                            | 8. Deposit account number: 11-1580                                                                                                                        |
| City: Thousand Oaks State: CA Zip: 91360                                                                                                                                    | The Commissioner is hereby authorized to charge any additional filing fees which may be required or credit any overpayment to Deposit Account No. 11-1580 |
| DO NOT US                                                                                                                                                                   | E THIS SPACE                                                                                                                                              |
| 9. Statement and signature.  To the best of my knowledge and belief, the foregoing information the original document  Richard S. Koppel  Name of Person Signing             | Signature (130/02)                                                                                                                                        |
|                                                                                                                                                                             | cover sheet, attachments, and document: 2                                                                                                                 |
| Mail deguments to be recorded with                                                                                                                                          | th required cover sheet information to:                                                                                                                   |

Commissioner of Patents & Trademarks, Box Assignments

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**PATENT REEL: 012578 FRAME: 0019** 

Washington, D.C. 20231

## ASSIGNMENT

We, Bin Huo and Finbarr Moynihan, respectively residing at 1612 Worcester Road, #226A, Framingham, Massachusetts 01702 and 27 Electric Avenue #3, Somerville, Massachusetts 02144, represent that we have invented a new and useful "SPACE VECTOR MODULATION METHODS AND STRUCTURES FOR ELECTRIC-MOTOR CONTROL" for which we have executed an application for Letters Patent of the United States of America on the same day as my execution of this Assignment.

ANALOG DEVICES, INC. (ADI) is a corporation organized and existing under the laws of the State of Massachusetts, has a place of business at One Technology Way, Norwood, Massachusetts 02062, and desires to acquire the entire right, title, and interest in and to the invention, application, and letters patent to be granted and issued thereon.

For valuable consideration, the receipt and legal sufficiency of all of which we acknowledge, we have sold and do hereby sell, assign, transfer, and set over unto ADI, its successors and assigns, the entire right, title, and interest in and to the invention and all improvements thereon, in and to the application for letters patent thereon, in and to applications pertaining to or based upon the invention and application, including divisional and continuing applications and continuations-in-part, and in and to any and all letters patent which may be granted and issued on the invention and applications, or any of them, in the United States of America, its territories and possessions, and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

We also agree that we will, at the request of ADI, execute any and all applications for letters patent for the invention, execute any and all other papers and documents and do all other and further lawful acts that ADI may deem necessary or desirable to obtain letters patent on the invention, to secure the grant of such letters patent and to protect and vest in ADI the undivided interests in the right, title and interest in the invention, applications and letters patent.

We also authorize and empower ADI, its successors and assigns to apply for and obtain, in its or their own names, letters patent for the invention before competent International Authorities and in any and all countries foreign to the United States in which applications for letters patent can be so made or letters patent so obtained.

Signed at, Willminston. MA. 01702, Massachusetts, Jan 215t. 2002

Thisaw Waynela.

Finbarr Moynihan

Bin Huo

Steve Francis Petre Minciunes cu

PATENT RECORDED: 01/31/2002 REEL: 012578 FRAME: 0020