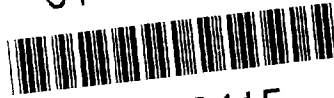


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J.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office Atty Docket No.: FUSA 19.314

10/037836 01/03/02

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): Masatsugu SHIMIZU Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies) FUJITSU LIMITED Name: Internal Address: Street Address: 1-1, Kamikodanaka 4-chome Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588, Japan City: State: Zip: Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other Execution Date: December 19, 2001

4. Application number(s) or patent number(s): 10/037836 January 3, 2002 If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed: Rosenman & Colin LLP Name: IP Department 15th Fl. Internal Address: Street Address: 575 Madsion Avenue City: New York State: New York Zip: 10022-2585

6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41): \$ 40.00 Enclosed Authorized to be charged to deposit account 8. Deposit account number: 50-1290 (Attach duplicate copy of this page if paying by deposit account)

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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. Samson Helfgott January 3, 2002 Name of Person Signing Signature Date

Total number of pages including cover sheet, attachments, and documents: 3

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

01/15/2002 AHMED1 00000150 501290 10037836 01 FC:581 40.00 CH

ASSIGNMENT

FUSA 19.314

Docket No. \_\_\_\_\_

WHEREAS, the below named inventor, ASSIGNOR, has made a certain new and useful invention in: TRANSCEIVER APPARATUS AND TRANSCEIVING METHOD IN COMMUNICATION SYSTEM

for which

(check one)  an application is being filed concurrently herewith,

an application for a Patent of the United States was filed on \_\_\_\_\_ and given Application Serial No. \_\_\_\_\_

and WHEREAS, FUJITSU LIMITED,  
having a place of business at 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588 Japan ASSIGNEE

is desirous of obtaining the entire right, title and interest in, to and under the said invention and the said application.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, the said ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument; and

ASSIGNOR covenants and agrees that he has full right to convey the entire interest herein assigned, and has not executed, and will not execute, any agreement in conflict herewith; and

ASSIGNOR further covenants and agrees that he will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

Full name of sole or first inventor Masatsugu Shimizu  
Inventor's Signature Masatsugu Shimizu Date Dec. 19, 2001  
Residence Kawasaki, Japan Citizenship Japanese  
Post Office Address c/o FUJITSU LIMITED, 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588 Japan

Full name of second joint inventor, if any \_\_\_\_\_  
Second Inventor's Signature \_\_\_\_\_ Date \_\_\_\_\_  
Residence \_\_\_\_\_ Citizenship \_\_\_\_\_  
Post Office Address \_\_\_\_\_

Full name of third joint inventor, if any \_\_\_\_\_  
Third Inventor's Signature \_\_\_\_\_ Date \_\_\_\_\_  
Residence \_\_\_\_\_ Citizenship \_\_\_\_\_  
Post Office Address \_\_\_\_\_

PATENT