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

31040 U.S. PTO
09/792111
02/23/01

<p>1. Name(s) of conveying party(ies): Timothy M. Schmid Srinath Hosur Anand G. Dabak <i>2.23.01</i></p> <p>Additional names(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>2. Name and address of receiving party(ies) Name: TEXAS INSTRUMENTS INCORPORATED Internal Address: M/S 3999 Street Address: 7839 Churchill Way City: Dallas State: Texas Zip: 75251 Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other</p> <p>Execution Date: February 20, 2001</p>	
<p>4. Application number(s) or patent number(s): If the document is being filed together with a new application, the execution date of the application is: February 20, 2001</p> <p>A. Patent Application No.(s) B. Patent No.(s)</p> <p><i>09/792111</i> Additional Numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>5. Names and address of party to whom correspondence concerning document should be mailed: Name: Ronald O. Neerings Internal Address: M/S 3999 Street Address: P.O. Box 655474 City: Dallas State: Texas Zip: 75265</p>	<p>6. Total number of applications and patents involved: [1]</p> <p>7. Total Fee (37 C.F.R 3.41) \$ <u>40.00</u> <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account.</p> <p>8. Deposit account number: 20-0668 <i>(Attach duplicate copy of the this page if paying by deposit account.)</i></p>
<p>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.</p> <p>Stephen L. Levine <i>Stephen L. Levine</i> <u>2/23/01</u> Name of Person Signing Signature Date</p> <p>Total number of pages including cover sheet, attachments and document: [2]</p>	

03/14/2001 GT011 00000201 200668 09792111
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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, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, 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 hand and seal this day and year;

TITLE OF INVENTION	Wireless Code Division Multiple Access Communications System With Channel Estimation Using Fingers With Sub-chip Spacing		
SIGNATURE OF INVENTOR AND NAME	<i>Timothy M. Schmid</i> Timothy M. Schmid	<i>H. Srinath</i> Srinath Hosur	<i>ANAND G. DABAK</i> Anand G. Dabak
DATE	<i>Feb 20, 2001</i>	<i>20th February, 2001</i>	<i>Feb. 20, 2001</i>
RESIDENCE (City, County, State)	900 Vantage Point No. 737 Dallas County Dallas, Texas 75243	8800 Canyonlands Drive Collin County Plano, Texas 75025	8625 Kendall Drive Collin County Plano, Texas 75025
DATE APPLICATION EXECUTED	<i>Feb 20, 2001</i>	<i>20th Feb., 2001</i>	<i>Feb. 20, 2001</i>

After recording returning Assignment to:

Ronald O. Neerings, Esq.
Texas Instruments Incorporated
P.O. Box 655474, M/S 3999
Dallas, Texas 75265