

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Eko N. Onggosanusi</td> <td>07/18/2009</td> </tr> <tr> <td>Badri N. Varadarajan</td> <td>07/16/2009</td> </tr> <tr> <td>Runhua Chen</td> <td>07/22/2009</td> </tr> </tbody> </table>		Name	Execution Date	Eko N. Onggosanusi	07/18/2009	Badri N. Varadarajan	07/16/2009	Runhua Chen	07/22/2009				
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RECEIVING PARTY DATA													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Name:</td> <td>Texas Instruments Incorporated</td> </tr> <tr> <td>Street Address:</td> <td>7839 Churchill Way</td> </tr> <tr> <td>Internal Address:</td> <td>M/S 3999</td> </tr> <tr> <td>City:</td> <td>Dallas</td> </tr> <tr> <td>State/Country:</td> <td>TEXAS</td> </tr> <tr> <td>Postal Code:</td> <td>75251</td> </tr> </table>		Name:	Texas Instruments Incorporated	Street Address:	7839 Churchill Way	Internal Address:	M/S 3999	City:	Dallas	State/Country:	TEXAS	Postal Code:	75251
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CORRESPONDENCE DATA													
Fax Number: (972)917-4418 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: (972) 917-5290 Email: uspto@ti.com Correspondent Name: Texas Instruments Incorporated Address Line 1: 7839 Churchill Way Address Line 2: M/S 3999 Address Line 4: Dallas, TEXAS 75251													
ATTORNEY DOCKET NUMBER:	TI-66622												
NAME OF SUBMITTER:	Robert D. Marshall, Jr.												

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PATENT
REEL: 023020 FRAME: 0531

Total Attachments: 2

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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.

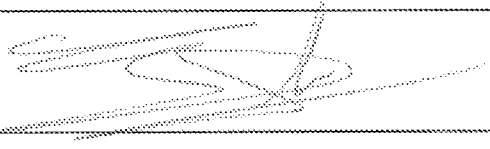
WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, M/S 3999, Dallas, Texas 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon, as well as to U.S. Provisional Application No. 61/078,231, filed 07/03/2008;

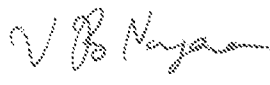
NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application(s) and all patents which may be granted therefore, 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.

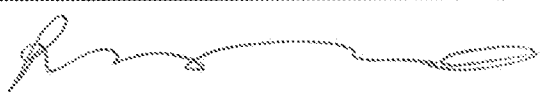
I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the Paris Convention for the Protection of Industrial Property, 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	Higher Order Multiple Input, Multiple Output Extension
APPLICATION NO(S).	12/497,111
SIGNATURE OF INVENTOR AND NAME	Eko N. Onggosanusi 
DATE	06/10/2009
RESIDENCE (CITY AND STATE)	Allen, TX

TITLE OF INVENTION	Higher Order Multiple Input, Multiple Output Extension
APPLICATION NO(S).	12/497,111
SIGNATURE OF INVENTOR AND NAME	Badri N. Varadarajan 
DATE	07/16/2009
RESIDENCE (CITY AND STATE)	Dallas, TX

TITLE OF INVENTION	Higher Order Multiple Input, Multiple Output Extension
APPLICATION NO(S).	12/497,111
SIGNATURE OF INVENTOR AND NAME	Runhua Chen 
DATE	07/22/2009
RESIDENCE (CITY AND STATE)	Dallas, TX

After recording, return Assignment to:

Texas Instruments Incorporated
P.O. Box 655474, M/S 3999
Dallas, TX 75265