

## PATENT ASSIGNMENT

Electronic Version v1.1

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Tarik Muharemovic</td><td>10/10/2008</td></tr><tr><td>Zukang Shen</td><td>10/10/2008</td></tr><tr><td>Pierre Bertrand</td><td>09/30/2008</td></tr></tbody></table>		Name	Execution Date	Tarik Muharemovic	10/10/2008	Zukang Shen	10/10/2008	Pierre Bertrand	09/30/2008				
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RECEIVING PARTY DATA													
<table border="1"><tr><td>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>MS 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:	MS 3999	City:	Dallas	State/Country:	TEXAS	Postal Code:	75251
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PROPERTY NUMBERS Total: 1													
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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: 972-917-4371													
Email: uspto@ti.com													
Correspondent Name: TEXAS INSTRUMENTS INCORPORATED													
Address Line 1: P O BOX 655474, M/S 3999													
Address Line 4: DALLAS, TEXAS 75265													
ATTORNEY DOCKET NUMBER:	TI-64930												
NAME OF SUBMITTER:	Robert D. Marshall, Jr.												
Total Attachments: 3 source=64930_Asgn#page1.tif													

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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

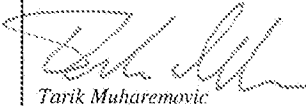

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a principal office at P.O. Box 655474, MS 3999, Dallas, Texas 75265, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application 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 for Patents 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 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 my hand and seal this day and year;

TITLE OF INVENTION	Time-Sharing of Sounding Resources		
SIGNATURE OF INVENTOR AND NAME	(1)  Tarik Muharemovic	(2)  Zukang Shen	(3)  Pierre Bertrand
DATE	10/10/2008	10/10/2008	
RESIDENCE (City, State)	7601 Churchill Way, #1706 Dallas, TX 75251 US	707 Kindred Lane Richardson, TX 75080 US	Le Hameau des Roses, 1261 chemin de Fontmerle Antibes, 06600 France
DATE APPLICATION EXECUTED	10/10/2008	10/10/2008	

After recordation, please return Assignment to:

Robert D. Marshall, Jr.  
Texas Instruments Incorporated  
P.O. Box 655474, MS 3999  
Dallas, TX 75265

## ASSIGNMENT

TI-64930

### PARTIES:

1. **TEXAS INSTRUMENTS FRANCE (ASSIGNOR)** a company organised and existing under the laws of France, with its principal place of business at 821 Avenue Jack Kilby, B.P.5, 06271 Villeneuve-Loubet, FRANCE;
2. **TEXAS INSTRUMENTS INCORPORATED (ASSIGNEE)** a company organised and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, Dallas, Texas 75251, United States of America;

### RECITALS:

- A. **ASSIGNOR** is jointly entitled with **ASSIGNEE** to the full and exclusive right, title and interest in and to certain inventions in respect of which at least one application for letters patent ("the Application") has been filed as set forth in the Schedule to this Assignment;
- B. **ASSIGNOR** has agreed to assign to the **ASSIGNEE** the full and exclusive right, title and interest in and to the inventions and the Application in respect of all states except FRANCE upon the terms and conditions set forth below;

### OPERATIVE PROVISIONS:

In pursuance of an earlier agreement, and in consideration of the sum payable in respect thereof (receipt of which is hereby acknowledged) the **ASSIGNOR** hereby:

- (i) **ASSIGNS** unto the **ASSIGNEE**, its successors and assigns, the full and exclusive right, title and interest in and to the inventions in all states except FRANCE, and in and to the Application in respect of all states except FRANCE, and to all letters patents that may issue from the Application or be issued in respect of the inventions, and in and to all divisions, reissues, substitutions, continuations, and extensions of the Application or any application for letters patent filed in respect of said inventions; and the right to file applications for, and obtain letters patent, and to claim priority under the terms of the Paris Convention for the Protection of Industrial Property or any other relevant convention;
- (ii) authorises and requests that the national authorities of each state (except FRANCE) issue the Application, and any and all letters patent issued in respect of the inventions, or any and all letters patent resulting from the Application, insofar as Assignor's interest is concerned to the said **ASSIGNEE**, as assignee of the full and exclusive right, title and interest in and to the Application and the inventions. **ASSIGNOR** further agrees to execute any and all applications for letters patent, assignments, affidavits, and any other papers in connection therewith necessary to perfect patent rights, and generally to do everything possible to aid said **ASSIGNEE**, its successors, assigns and nominees to obtain and enforce proper patent protection for said inventions in all countries.

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### SCHEDULE THE APPLICATION(S)

Serial No.:		Filed:	
U.S. Application Serial No.:	60/944,950 (TI-64930PS)	Filed:	June 19, 2007
U.S. Application Serial No.:	12/142,235	Filed:	June 19, 2008

IN WITNESS WHEREOF this Assignment has been executed as set forth below:

Executed for and on behalf of TEXAS INSTRUMENTS FRANCE

By: Christian TORDO  
Name: [Signature]  
Title: Managing Director  
Date: October 1<sup>st</sup>, 2008

#### ACKNOWLEDGEMENT

We/I, Pierre Bertrand, a co-inventors of certain new and useful improvements in the above entitled invention for which an application for letters patent is about to be made, acknowledge that we were each employees of TEXAS INSTRUMENTS FRANCE on the date on which said invention was conceived and reduced to practise, that our invention was made in the course of our normal or specifically assigned duties as employees of TEXAS INSTRUMENTS FRANCE and that under French National Law our invention and all rights in it belong to TEXAS INSTRUMENTS FRANCE.

We each hereby further agree that we will communicate to TEXAS INSTRUMENTS FRANCE or to its successors, assigns and legal representatives, any facts known to us respecting said invention, and at the expense of TEXAS INSTRUMENTS FRANCE, will 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 FRANCE, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, the each inventor has hereto set his hand and seal;

[Signature]  
Pierre Bertrand

September 30<sup>th</sup> 2008

Date

[Signature]

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