

**PATENT ASSIGNMENT**

Electronic Version v1.1  
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT								
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT								
<b>CONVEYING PARTY DATA</b>									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ryo Tsutsui</td> <td>04/13/2006</td> </tr> <tr> <td>Ivan Setiawan</td> <td>04/13/2006</td> </tr> <tr> <td>Yoshihide Iwata</td> <td>04/17/2006</td> </tr> </tbody> </table>		Name	Execution Date	Ryo Tsutsui	04/13/2006	Ivan Setiawan	04/13/2006	Yoshihide Iwata	04/17/2006
Name	Execution Date								
Ryo Tsutsui	04/13/2006								
Ivan Setiawan	04/13/2006								
Yoshihide Iwata	04/17/2006								
<b>RECEIVING PARTY DATA</b>									
<b>Name:</b>	Texas Instruments, Incorporated								
<b>Street Address:</b>	7839 Churchill Way								
<b>Internal Address:</b>	MS 3999								
<b>City:</b>	Dallas								
<b>State/Country:</b>	TEXAS								
<b>Postal Code:</b>	75251								
<b>PROPERTY NUMBERS Total: 1</b>									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>11364116</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	11364116				
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Application Number:	11364116								
<b>CORRESPONDENCE DATA</b>									
<b>Fax Number:</b>	(972)917-4418								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
<b>Email:</b>	s.trotter@ti.com								
<b>Correspondent Name:</b>	Carlton H Hoel								
<b>Address Line 1:</b>	7839 Churchill Way								
<b>Address Line 2:</b>	MS 3999								
<b>Address Line 4:</b>	Dallas, TEXAS 75251								
<b>ATTORNEY DOCKET NUMBER:</b>	TI-39577								
<b>NAME OF SUBMITTER:</b>	Carlton H Hoel								
<b>Total Attachments: 3</b> source=39577_Assignment#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 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;


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	<b>Audio Bandwidth Expansion</b>
SIGNATURE OF INVENTOR AND NAME	<i>Ryo Tsutsui</i> Ryo Tsutsui
DATE	<i>04/13/06</i>
RESIDENCE (CITY AND STATE)	Tsukuba, Ibaraki, Japan
DATE DECLARATION SIGNED	<i>04/13/06</i>

TITLE OF INVENTION	<b>Audio Bandwidth Expansion</b>
SIGNATURE OF INVENTOR AND NAME	 Ivan Setiawan
DATE	04/14/06
RESIDENCE (CITY AND STATE)	Tokyo, Japan
DATE DECLARATION SIGNED	04/14/06

TITLE OF INVENTION	<b>Audio Bandwidth Expansion</b>
SIGNATURE OF INVENTOR AND NAME	Yoshihide Iwata <i>Y. Iwata</i>
DATE	4/17/06
RESIDENCE (CITY AND STATE)	Tsukuba, Ibaraki, Japan
DATE DECLARATION SIGNED	4/17/06

After recording, return Assignment to:

Texas Instruments Incorporated  
PO Box 655474, M/S 3999  
Dallas, TX 75265