PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Thomas Casimir Murphy	03/26/2009
Jingcheng Zhuang	03/26/2009
Khurram Waheed	03/27/2009
Roman Staszewski	03/26/2009

RECEIVING PARTY DATA

Name:	Texas Instruments Incorporated
Street Address:	P.O. Box 655474
Internal Address:	MS 3999
City:	Dallas
State/Country:	TEXAS
Postal Code:	75265

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12411482

CORRESPONDENCE DATA

Fax Number: (713)937-1587

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 7139378823

Email: gerald@lawspatents.com

Correspondent Name: Texas Instruments Incorporated

Address Line 1: P.O. Box 655474

Address Line 2: MS 3999

Address Line 4: Dallas, TEXAS 75265

ATTORNEY DOCKET NUMBER:	TI-66748
NAME OF SUBMITTER:	Gerald F. Laws

PATENT 500820314 REEL: 022465 FRAME: 0822 P \$40.00 124114

Total Attachments: 4

source=TI-66748-ASG_executed#page1.tif

source=TI-66748-ASG_executed#page2.tif

source=TI-66748-ASG_executed#page3.tif

source=TI-66748-ASG_executed#page4.tif

PATENT

REEL: 022465 FRAME: 0823

PAGE 1 OF 2

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 75261, 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	Fractional Interpolative Timing Advance and Retard Control in a Transcaiver		
SIGNATURE OF INVENTOR AND NAME	Harris Casumiu 174 oy fry Thomas Casimir Muminy	(2) Jingcheng Zhuang	(3) Khuram Waheed
DATE	3/26/69		
RESIDENCE (City, State)	6N486 Pinto Lane St Charles, IL 60176 US	910 Redbird Lane Allen, TX 75013 US	3625 Mistygten Or Plano, TX 75025 US
DATE Declaration signed	3/46/09		

After recordation, please return Assignment to:

Ronald Neerings Texas Instruments Incorporated P.O. Box 655474, MS 3999 Dallas, TX 75265

PATENT REEL: 022465 FRAME: 0824

ATTORNEY DOCKET NO.
TI-66748

PAGE 2 of 2

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Fractional Interpolative Timing Advance and Retard Control in a Transceiver		
SIGNATURE OF INVENTOR AND NAME	(4) Fomma Sto-szewski Roman Staszewski		
DATE	03/25/2009		
RESIDENCE (City, State)	112 Peregrine Dr McKinney, TX 75070 US		
DATE Declaration signed	03/26/2009		

After recordation, please return Assignment to:

Ronald Neerings
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, TX. 75265

PATENT REEL: 022465 FRAME: 0825 PAGE 1 OF 2

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, 76251, 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 assignes 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	Fractional Interpolative Timing Advance and Retard Control in a Transceiver		
SIGNATURE OF INVENTOR AND NAME	(1) Thomas Casimir Murphy	Jingcheng Zhuang	(i Khurram Wahead
DATE		3/26/2001	
RESIDENCE (City, State)	6N486 Pinto Lane St Charles, IL 60175 US	910 Redakd Lane Allen, TX 75013 US	3625 Mistyglen Or Plano, TX 75026 US
DATE Declaration signed	***************************************	3/26/2009	***************************************

After recordation, please return Assignment to:

Ronald Neerings
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, TX 75265

PATENT REEL: 022465 FRAME: 0826

	ATTORNEY DOCKET NO.
ĺ	
ĺ	T1-66748

PAGE 1 OF 2

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 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	Fractional Interpolati	Fractional Interpolative Timing Advance and Retard Control in a Transceiver		
SIGNATURE OF INVENTOR AND NAME	(1) Thomas Casimir Murphy	(2) Jingcheng Zhuang	Khurram Waheeg	
DATE			03/27/4009	
RESIDENCE (City, State)	6N486 Pinto Lane St Charles, IL 60175 US	910 Redbird Lane Allen, TX 75013 US	3625 Mistyglen Dr Plano, TX 75025 US	
DATE Declaration signed			03/27/2009	

After recordation, please return Assignment to:

RECORDED: 03/29/2009

Ronald Neerings
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, TX 75265

PATENT

REEL: 022465 FRAME: 0827