

**PATENT ASSIGNMENT**

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
Tin H. Lai	04/27/2009
Sergey Shumarayev	04/28/2009
Tim Tri Hoang	04/27/2009

**RECEIVING PARTY DATA**

Name:	Altera Corporation
Street Address:	101 Innovation Drive
City:	San Jose
State/Country:	CALIFORNIA
Postal Code:	95134

**PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	12433310

**CORRESPONDENCE DATA**

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NAME OF SUBMITTER:	Ararat Kapouytian

Total Attachments: 2  
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**CH \$40.00 12433310**

**500848891**

**PATENT  
 REEL: 022622 FRAME: 0388**



**ASSIGNMENT  
JOINT**

THIS ASSIGNMENT, by Tin H. Lai, Sergey Shumarayev and Tim Tri Hoang respectively residing in San Jose, CA, Los Altos Hills, CA and San Jose, CA and (hereinafter referred to as the "assignors") witnesseth:

WHEREAS, said assignors have invented certain new and useful improvements in EQUALIZATION CIRCUITRY INCLUDING A DIGITAL-TO-ANALOG CONVERTER HAVING A VOLTAGE DIVIDER AND A MULTIPLEXER, set forth in an application for Letters Patent of the United States, having an oath or declaration executed on even date herewith; and

WHEREAS, Altera Corporation, a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 101 Innovation Drive, San Jose, CA 95134 (hereinafter referred to as the "assignee") is desirous of acquiring the entire right, title and interest in and to said inventions and said application for Letters Patent of the United States, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon:

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, said assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all divisions, continuations and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by said assignee, for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the assignors, had this sale and assignment not been made.

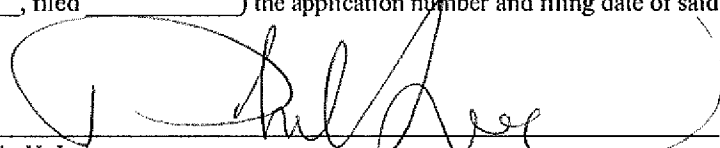
AND for the same consideration, said assignors hereby covenant and agree to and with said assignee its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, said assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and the application for Letters Patent above-mentioned, and that the same are unencumbered and that said assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

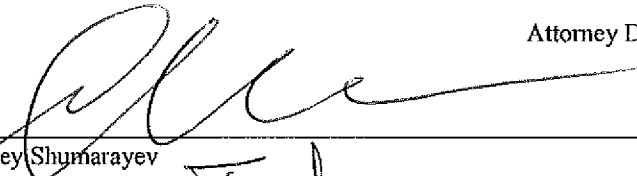
AND for the same consideration, said assignors hereby covenant and agree to and with said assignee, its successors, legal representatives and assigns, that said assignors will, whenever counsel of said assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said assignee, its successors, legal representatives and assigns, but at the cost and expense of said assignee, its successors, legal representatives and assigns.

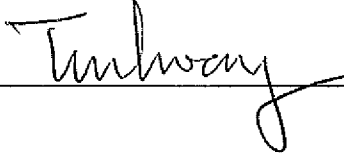
AND said assignors hereby request the Commissioner of Patents to issue said Letters Patent of the United States to said assignee as the assignee of said inventions and the Letters Patent to be issued thereon for the sole use of said assignee, its successors, legal representatives and assigns.

"I hereby authorize and request the assignee's attorney to insert here in parentheses (Application number \_\_\_\_\_, filed \_\_\_\_\_) the application number and filing date of said application when known."

04/27/09  
Date

  
\_\_\_\_\_  
Tin H. Lai

4/28/09   
Date \_\_\_\_\_ Sergey Shumarayev \_\_\_\_\_

04/27/2009   
Date \_\_\_\_\_ Tim Tri Hoang \_\_\_\_\_