PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Execution Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guu Lin</td>
<td>07/08/2008</td>
</tr>
<tr>
<td>Yen-Fu Lin</td>
<td>07/08/2008</td>
</tr>
<tr>
<td>Stephanie T. Tran</td>
<td>07/08/2008</td>
</tr>
<tr>
<td>Pooyan Khoshkhoo</td>
<td>07/08/2008</td>
</tr>
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RECEIVING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Altera Corporation</th>
</tr>
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<tbody>
<tr>
<td>Street Address</td>
<td>101 Innovation Drive</td>
</tr>
<tr>
<td>City</td>
<td>San Jose</td>
</tr>
<tr>
<td>State/Country</td>
<td>CALIFORNIA</td>
</tr>
<tr>
<td>Postal Code</td>
<td>95134</td>
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PROPERTY NUMBERS Total: 1

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<tr>
<th>Property Type</th>
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<tbody>
<tr>
<td>Application Number</td>
<td>12172247</td>
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CORRESPONDENCE DATA

Fax Number: (650)321-2465
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.
Phone: 650-242-8300
Email: sjc@eecspatents.com
Correspondent Name: STEVEN J. CAHILL/ ALTERA CORP.
Address Line 1: P.O. Box 779
Address Line 4: MENLO PARK, CALIFORNIA 94026-0779

ATTORNEY DOCKET NUMBER: 101-03800US

NAME OF SUBMITTER: Steven Cahill

Total Attachments: 2
source=AssignmentA02989#page1.tif
ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Guo Lin, of 1071 Mountain Shadows Road, San Jose, CA 95120; Yen-Fu Lin, of 740 Hickory Way, San Jose, CA 95129; Stephanie T. Tran, of 1227 Washoe Drive, San Jose, CA 95120; and Pooyan Khoshkho, of 4061 Crandall Circle, Santa Clara, CA 95054; hereinafter referred to as "Assignors," are the inventors of any and all new and useful improvements described and set forth in the below-identified application for United States Letters Patent (hereinafter referred to as "Said Patent Application"): Title of Patent Application: Apparatus and Method for Input/Output Module That Optimizes Frequency Performance in a Circuit

Dates of execution of Declaration: 07/08/2008

Filing Date: 07/13/2008

Application No.: 12/172,247

WHEREAS, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Assignors, Assignors hereby sell, assign, and transfer to Altera Corporation, a corporation of Delaware, having a principal place of business at 101 Innovation Drive, San Jose, California, USA 95134, (hereinafter referred to as "Assignee"), the entire right, title and interest in and to Said Patent Application, any and all improvements that are disclosed in Said Patent Application, and all foreign counterparts to Said Patent Application (including patent, utility model and industrial designs). The Assignors further sell, transfer, and assign to Assignee the entire right, title, and interest in any and all continuation applications, divisional applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, registrations, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of Said Patent Application; and to the right to file foreign applications directly in the name of Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties or otherwise.

The Assignors further agree that the Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the Assignors will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all of said improvements; execute all rightful oaths, declarations, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives, all facts known to the Assignors relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee.

The Assignors covenant with the Assignee, its successors, and assigns that no assignment, grant, mortgage, license, lien, or other agreement effecting the rights and property herein conveyed has been made to others by the Assignors, and that full right to convey the same as herein expressed is possessed by the Assignors.
Assignment
Attorney Docket No.: 101-03800US

The Assignors hereby authorize and request the Officials of the United States Patent and Trademark Office and any and all foreign Patent Offices to issue any and all Letters Patents, when granted, to said Assignee as the assignee of the entire right, title, and interest in and to the same, for the sole use of said Assignee, its successors, and assigns, to the full end of the term for which said Letters Patents may be granted.

Assignors hereby authorize and request The Law Office of Steven J. Cahill to insert herein above the application number, the dates of execution of Declaration, and filing date of Said Patent Application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 7/8/08

[Signature]
Guu Lin

Dated: 7/8/08

[Signature]
Yen-Fu Lin

Dated: 7/8/08

[Signature]
Stephanie T. Tran

Dated: 7/8/08

[Signature]
Pooyan Khoshkhoo