502457043 08/13/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------|----------------|
| David Lewis | 08/13/2013 |

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: | 13966130 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | A03986 |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | Tiffany R. Ishihara |
| Signature: | /Tiffany R. Ishihara/ |
| Date: | 08/13/2013 |

Total Attachments: 3

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> PATENT REEL: 031002 FRAME: 0287

OP \$40,00 13966130

ASSIGNMENT

WHEREAS, I, David Lewis, residing in Toronto, Ontario, have made an invention entitled:

METASTABILITY PREDICTION AND AVOIDANCE IN MEMORY ARBITRATION CIRCUITRY

and

(1) am about to make an application for United States
Letters Patent therefor, the same having been executed by
me on even date herewith

OR

| (2) have made an application for United States Letters |
|--|
| Patent therefor, the same having been filed on |
| () under Application No. (), in |
| connection with which I hereby authorize and request the |
| assignee's attorneys associated with Customer Number 45851 |
| to insert within the foregoing parentheses the filing date |
| and Application No. of said application when known; and |

WHEREAS, ALTERA CORPORATION, a corporation organized and existing under the laws of the State of California and having an address of 101 Innovation Drive, San Jose, California 95134, is desirous of acquiring the entire interest in said invention, said United States patent application and in any Letters Patent which may issue thereon;

NOW, THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) paid, and

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other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I do hereby sell, assign and transfer unto the said ALTERA CORPORATION, its successors, assigns and legal representatives, all right, title and interest in and to said invention and any improvements thereon for all countries of the world, and in and to said United States patent application, including any continuations, continuations-in-part and divisions thereof, and any substitute applications therefor, and including the right to claim priority under the International Convention based on said patent application, and any patent which may issue thereon, and any reissues of the same; and all right, title and interest in and to every patent application filed or to be filed on said invention in any other country, including renewals, revivals, continuations and divisions thereof, and any substitute applications therefor, and any and all patents which may issue thereon, and any reissues and extensions of the same;

and I hereby authorize and request competent authorities to grant and issue any and all patents on said invention to the said ALTERA CORPORATION as the assignee of the entire interest therein; and I further agree to execute upon request of the assignee such additional documents, if any, as are necessary and proper to secure patent protection on said invention throughout all countries of the world, and to otherwise give full effect to and perfect the rights of the assignee under this Assignment.

A03986

IN TESTIMONY WHEREOF, I have hereunto signed my name on the date indicated hereinafter.

Jace David Lewis

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