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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

Docket: 174/364

1029500	D47 Express Mail No. EV625769113US
To the Honorable Commission of Patents and Trademarks: Plea	ase record the attached original documents or copy thereof.
 Name of conveying party(ies): Hugh Sungki O Chih-Ching Shih Cheng-Hsiung Huang Yow-Juang Bill Liu Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No 	2. Name and address of receiving party(ies) Name: Altera Corporation Internal Address:
3. Nature of conveyance:	Street Address: 101 Innovation Drive
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the 1. February 9, 2005; 2. February 8, 2005; 3. February 8, 2005; 4. Feta. A. Patent Application No.(s)	he execution dates of the application are: ebruary 9, 2005 B. Patent No.(s)
Additional numbers atta	ched? ☐ Yes ☒ No
Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1
Name: Robert R. Jackson, Esq, Internal Address: Fish & Neave IP Group Ropes & Gray LLP Street Address: 1251 Avenue of the Americas City: New York State: NY ZIP: 10020 2/28/2005 ECCOPER 00000208 061075 11059280	 7. Total Fee (37 CFR 3.41) \$40.00 ☐ Enclosed ☐ Authorized to be charged to deposit account ☐ Deficiencies Authorized to be charged to deposit account 8. Deposit Account number: ☐ 06-1075 [Attach duplicate copy of this page if paying by deposit account)
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original document. Robert R. Jackson Name of Person Signing Signature	January 16, 2005 ature Date ncluding cover sheet, attachments, and

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ASSIGNMENT

Whereas we,

- (1) Hugh Sungki O,
- (2) Chih-Ching Shih,
- (3) Cheng-Hsiung Huang, and
- (4) Yow-Juang Bill Liu,

residing, respectively, at

- (1) 117 King Avenue,
 Fremont, California 94536,
- (2) 5831 Sterling Greens Circle, Pleasanton, California 94566,
- (3) 7915 Belknap Drive, Cupertino, California 95014, and
- (4) 1213 Tivoli Way, San Jose, California 95120,

have made an invention in:

METHODS AND APPARATUS FOR DECREASING SOFT ERRORS AND CELL LEAKAGE IN INTEGRATED CIRCUIT STRUCTURES

and are about to make application for United States Letters Patent therefor, the same being executed by us on even date or dates herewith; and

WHEREAS, ALTERA CORPORATION, a corporation organized and existing under the laws of Delaware and having an office and place of business at 101 Innovation Drive, San Jose, California 95134-1941 is desirous of acquiring the entire interest in said invention, said

PATENT REEL: 016321 FRAME: 0165 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) to each of us paid, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we 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 and divisions thereof, and any substitute applications therefor, and any patents which may issue thereon, and any reissues of the same, and including the right to claim priority under the International Convention based on said patent application; 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 we 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 we 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

> PATENT REEL: 016321 FRAME: 0166

give full effect to and perfect the rights of the assignee under this Assignment.

IN TESTIMONY WHEREOF, we have hereunto signed our names on the date(s) indicated hereinafter.

2/9/2005 Date

Feb 8, 2005

2/8/05 Date

2/9/05 Date (1) Hugh Sungki

(2) Chih-Ching Shih

(3) Theng-History Huang

Yov-Juang Bill Liu

PATENT REEL: 016321 FRAME: 0167

RECORDED: 02/16/2005