505122090 10/02/2018

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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NATHANIEL AZUELOS	10/02/2018
ALEX SHOT	10/02/2018
DANIEL GEIST	08/23/2018

RECEIVING PARTY DATA

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State/Country:	CALIFORNIA	
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16010264

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ATTORNEY DOCKET NUMBER: 063787/511366 (031110US) **NAME OF SUBMITTER:** LAURA SOUTHAM SIGNATURE: /Laura Southam/ **DATE SIGNED:** 10/02/2018

Total Attachments: 2

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> **PATENT REEL: 047036 FRAME: 0276** 505122090

ASSIGNMENT

WHEREAS Nathaniel Azuelos, a citizen of Israel, residing in Modiin, Israel; Alex Shot, a citizen of Israel, residing in Herzelia, Israel; and Daniel Geist, a citizen of Israel, residing in Haifa, Israel, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified patent application(s):

Title of Invention: ADDING DELAY ELEMENTS TO ENABLE MAPPING

A TIME DIVISION MULTIPLEXING CIRCUIT ON AN

FPGA OF A HARDWARE EMULATOR

U.S. Application No.: 16/010,264

Filing Date: June 15, 2018

WHEREAS, Synopsys, Inc., a corporation incorporated under and pursuant to the laws of Delaware, and having its principal place of business at 690 East Middlefield Road, Mountain View, CA 94043, hereinafter referred to as "Assignee," is desirous of acquiring all of Assignors' right, title, and interest in and to said invention, the right to file applications on said invention, and the right, title and interest in and to any applications, including provisional applications, for Letters Patent of the United States or other countries claiming priority to said applications, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefore and thereon;

NOW, THEREFORE, for good and valuable consideration, receipt of which are hereby acknowledged by Assignors, Assignors have assigned, transferred and set over, and by these presents does assign, transfer and set over unto Assignee, and Assignee's successors, legal representatives, and assigns, all of Assignors' right, title and interest in and to the above-mentioned invention and application, the right to file applications on said invention, and the right, title and interest in and to any such applications, including provisional applications, and any applications claiming priority from said applications for Letters Patent of the United States or other countries (including patent, utility model and industrial designs), and in and to any Letters Patent or Patents of the United States of America and all foreign countries that have been or may be granted therefor and thereon, and in and to any and all divisions, renewals, substitutions, conversions, continuations, and continuations-in-part of said applications, and reissues, prolongations and extensions of said Letters Patent or Patents, and all rights under the Paris Convention for the Protection of Industrial Property, including the right to claim priority, the same to be held and enjoyed by Assignee, for its own use and behalf and the use and behalf of Assignee's 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 Assignors had this Assignment not been made;

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives, and assigns, that Assignor shall, whenever counsel of Assignee, or the counsel of its successors, legal representatives, and assigns, advises that any proceeding in connection with said invention or said applications for Letters Patent or Patents, or

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any proceeding in connection with Letters Patent or Patents for said invention in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, continuation-in-part, substitution or conversion of any applications for Letters Patent or Patents, or any reissue, prolongation or extension of any Letters Patent or Patents 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 or Patents for said invention, without charge to Assignee, its successors, legal representatives, and assigns, but at the cost and expense of Assignee, its successors, legal representatives, and assigns;

AND Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent or Patents of the United States to Assignee as the assignee of said invention and the Letters Patent or Patents issued and to be issued thereon for the use and behalf of Assignee, its successors, legal representatives, and assigns;

AND the undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

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

> PATENT REEL: 047036 FRAME: 0278

RECORDED: 10/02/2018