PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5126198

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALEXANDER JOHN WAKEFIELD	03/02/2017
JEFFERRY PHUONG VO	03/02/2017
JOERG HORST RICHTER	08/18/2017
KAI THORSTEN SCHUETZ	08/18/2017

RECEIVING PARTY DATA

Name:	SYNOPSYS, INC.
Street Address:	690 EAST MIDDLEFIELD ROAD
City:	MOUNTAIN VIEW
State/Country:	CALIFORNIA
Postal Code:	94043

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16102452

CORRESPONDENCE DATA

Fax Number: (650)938-5200

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 6503357858

Email:dchevalier@fenwick.comCorrespondent Name:CAROLINE GREENWOODAddress Line 1:801 CALIFORNIA STREET

Address Line 4: MOUNTAIN VIEW, CALIFORNIA 94041

ATTORNEY DOCKET NUMBER:	22524-41280/US
NAME OF SUBMITTER:	CAROLINE GREENWOOD
SIGNATURE:	/CAROLINE GREENWOOD/
DATE SIGNED:	09/05/2018

Total Attachments: 5

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PATENT REEL: 047020 FRAME: 0951

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transfer to Synopsys, Inc., a Delaware corporation, having a place of business at 690 East Middlefield Road, Mountain View, California, 94043 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the totlowing

- The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional or non-provisional application filed under 35 U.S.C. § 111, design application filed under 35 U.S.C. § 171, Registered Community Designs, international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):
 - Application No. 15/449,877 entitled "Capturing Time-Slice of Emulation Data for Offline Embedded Software Debug," filed on March 3, 2017 which claims priority from a provisional application, filed on March 4, 2016, now bearing U.S. Application No. 62/304,044.
- The entire worldwide right, title, and interest in and to:

 (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION;
 (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto that have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) that may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully scare to ASSIGNEE the rights, titles and interests herein conveyed: (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not

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This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Name and Signature 22/2/2/2 Alexander John Wakefield	Date of Signature 3 /2 / 2017
Name and Signature	Date of Signature
Jefferry Phuong Vo	
Name and Signature	Date of Signature
Joerg Horst Richter	
Name and Signature	Date of Signature
Kai Thorston Schootz	

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Title:		Capturing	Time-Slice	of Emulati	on Data for (Miline Embed	ded Software	Debug
Filed:		3 f 3	0.0019			Attorney	Docket#:	22524-
	}	March	3, 2017					35816/US
Application #:		15/449,	877			Client Re	£#:	2818US02

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Jefferry Phnong Vo	
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Joerg Horst Richter	
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Kai Thomasay Calimata	

2 of 2

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- 1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional or non-provisional application filed under 35 U.S.C. § 111, design application filed under 35 U.S.C. § 171, Registered Community Designs, international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):
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Title:	Capturing Time-Slice of Emulation Data for Offl	ine Embedded Software L	Pebug
Filed:	March 3, 2017	Attorney Docket #:	22524-
			35816/US
 Application #:	15/449,877	Client Ref#:	2818US02

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