PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5432502

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZAO LIU	03/14/2019
YANG LIU	03/11/2019
ZHAOYIN D. WU	03/08/2019
GEOFFREY ZHANG	03/08/2019
YU XU	03/13/2019
ALAN C. WONG	03/11/2019

RECEIVING PARTY DATA

Name:	XILINX, INC.
Street Address:	2100 LOGIC DRIVE
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95124

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16359921

CORRESPONDENCE DATA

Fax Number: (408)377-6137

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: 408-879-4185 xilinxipl@xilinx.com Email:

XILINX, INC ATTN: LEGAL DEPARTMENT **Correspondent Name:**

2100 LOGIC DR Address Line 1:

Address Line 4: SAN JOSE, CALIFORNIA 95124

ATTORNEY DOCKET NUMBER:	X-5581 US
NAME OF SUBMITTER:	KATHERINE STOFER
SIGNATURE:	/Katherine Stofer/
DATE SIGNED: 03/20/2019	

Total Attachments: 4

PATENT REEL: 048654 FRAME: 0328

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PATENT REEL: 048654 FRAME: 0329

ASSIGNMENT

For good and valuable consideration, receipt of which is hereby acknowledged, I/we

Zao Liu	of 2250 Monroe Street, No. 332, Santa Clara, CA 95050
Yang Liu	of <u>638 Obsidian Drive, San Jose, CA 95133</u>
Zhaoyin D. Wu	of <u>7096 Coronado Drive, San Jose, CA 95129</u>
Geoffrey Zhang	of <u>5943 Garlough Drive, San Jose, CA 95123</u>
Yu Xu	of 4149 Willmar Drive, Palo Alto, CA 94306
Alan C. Wong	of <u>1911 Sycamore Creek, San Jose, CA 95120</u>

hereby sell, assign and transfer to Xilinx, Inc., a Delaware corporation, having a place of business at 2100 Logic Drive, San Jose, California 95124, its successors and assigns, the entire right, title and interest throughout the world in my/our invention

AN ADAPTIVE METHOD TO REDUCE TRAINING TIME OF RECEIVERS

for which I/we will execute a United States patent application on or about the date of this assignment, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; I/we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from me/us; I/we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, its successors, assigns and nominees, at its request and expense, in obtaining and enforcing patents for said invention in all countries; and I/we request the Commissioner of Patents and Trademarks to issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed on	03/14/2019		
	, ,	Tao In	
		Zao Liu	

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Santa Clara)

CAPACITY CLAIMED BY SIGNER (X) individual signing for oneself

On March 14, 2019, before me, Katherine G. Stofer, Notary Public, personally appeared Zao Liu, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

KATHERINE G. STOFER
Commission # 2111248
Notary Public - California
Santa Clara County
My Comm. Expires Jun 2, 2019

Executed on $03/11/2019$.	by la
	Yang Liu
A notary public or other officer completing this certificate ver document to which this certificate is attached, and not the tr	rifies only the identity of the individual who signed the uthfulness, accuracy, or validity of that document.
State of California) County of Santa Clara)	CAPACITY CLAIMED BY SIGNER (X) individual signing for oneself
on <u>frog Liu</u> , who proved to me on the basis on name(s) is/are subscribed to the within instrument executed the same in his/her/their authorized capathe instrument the person(s), or the entity upon be instrument.	ent and acknowledged to me that he/she/they acity(ies) and that by his/her/their signature(s) on
I certify under PENALTY OF PERJURY under the laparagraph is true and correct.	aws of the State of California that the foregoing
WITNESS my hand and official seal. Signature of Notary Public	KATHERINE G. STOFER Commission # 2111248 Notary Public - California Santa Clara County My Comm. Expires Jun 2, 2019
Executed on $03/08/>010$.	Zhaoyin D. Wu
A notary public or other officer completing this certificate ver document to which this certificate is attached, and not the tr	
State of California) County of Santa Clara)	CAPACITY CLAIMED BY SIGNER (X) individual signing for oneself
on March 8, 2019, before mappeared Zhaoyin D. Wu, who proved to me on the whose name(s) is/are subscribed to the within instrescented the same in his/her/their authorized capathe instrument the person(s), or the entity upon b instrument.	rument and acknowledged to me that he/she/they acity(ies) and that by his/her/their signature(s) on
I certify under PENALTY OF PERJURY under the laparagraph is true and correct.	aws of the State of California that the foregoing
WITNESS my hand and official seal. Signature of Notary Public	KATHERINE G. STOFER Commission # 2111248 Notary Public - California Santa Clara County My Comm. Expires Jun 2, 2019

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	- ACV Cy
	Geoffrey Zhang
A notary public or other officer completing this certificate verifi document to which this certificate is attached, and not the trut	es only the identity of the individual who signed the hfulness, accuracy, or validity of that document.
State of California) County of Santa Clara)	CAPACITY CLAIMED BY SIGNER (X) individual signing for oneself
On March 8, 2019, before me appeared <u>Geoffrey Zhang</u> , who proved to me on the lawhose name(s) is/are subscribed to the within instrument the person(s), or the entity upon belinstrument.	ment and acknowledged to me that he/she/they ity(ies) and that by his/her/their signature(s) on
I certify under PENALTY OF PERJURY under the law paragraph is true and correct. WITNESS my hand and official seal. Signature of Notary Public	KATHERINE G. STOFER Commission # 2111248 Notary Public - California Eanta Clara County My Comm. Expires Jun 2, 2019
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A notary public or other officer completing this certificate verificate is attached, and not the true.	ies only the identity of the individual who signed the thinless, accuracy, or validity of that document.
State of California) County of Santa Clara)	CAPACITY CLAIMED BY SIGNER (X) individual signing for oneself
On <u>March 13, 2019</u> , before me appeared <u>Yu Xu</u> , who proved to me on the basis of name(s) is/are subscribed to the within instrument executed the same in his/her/their authorized capacithe instrument the person(s), or the entity upon be instrument.	nt and acknowledged to me that he/she/they city(ies) and that by his/her/their signature(s) on
I certify under PENALTY OF PERJURY under the law paragraph is true and correct.	.
WITNESS my hand and official soal	KATHERINE G. STOFER

Signature of Notary Public

WITNESS my hand and official seal.

Commission # 2111248
Notary Public - California
Santa Clara County
My Comm. Expires Jun 2, 2019

Executed on 3/11/2019	My Ch: har Alan C. Wong
A notary public or other officer completing this of document to which this certificate is attached, a	ertificate verifies only the identity of the individual who signed the nd not the truthfulness, accuracy, or validity of that document.
State of California) County of Santa Clara)	CAPACITY CLAIMED BY SIGNER (X) individual signing for oneself
whose name(s) is/are subscribed to the versus at the same in his/ber/their authors	, before me, Katherine G. Stofer, Notary Public, personally me on the basis of satisfactory evidence to be the person(s) within instrument and acknowledged to me that he/she/they orized capacity(ies) and that by his/her/their signature(s) on tity upon behalf of which the person(s) acted, executed the
I certify under PENALTY OF PERJURY upparagraph is true and correct.	nder the laws of the State of California that the foregoing
WITNESS my hand and official sea	KATHERINE G. STOFER Commission # 2111248 Notary Public - California Santa Clara County My Comm. Expires Jun 2, 2019