502368999 06/03/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Taiwan Semiconductor Manufacturing Co., Ltd.	06/03/2013

RECEIVING PARTY DATA

Name:	National Taiwan University	
Street Address:	No. 1, Sec. 4, Roosevelt Road	
City:	Taipei	
State/Country:	TAIWAN	
Postal Code:	10617	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12813620

CORRESPONDENCE DATA

Fax Number: 2156892744

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 2159791250

Email: lambriodes@duanemorris.com

Correspondent Name: Steven E. Koffs, Duane Morris LLP

Address Line 1: 30 South 17th Street

Address Line 2: 10th Floor

Address Line 4: Philadelphia, PENNSYLVANIA 19103-4196

ATTORNEY DOCKET NUMBER:	N1085-00683
NAME OF SUBMITTER:	Steven E. Koffs
Signature:	/Steven E. Koffs/
Date:	06/03/2013

Total Attachments: 2

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PATENT REEL: 030531 FRAME: 0784 H \$40.00 128136

ASSIGNMENT

WHEREAS, **Taiwan Semiconductor Manufacturing Co., Ltd.,** a corporation of **Taiwan**, having a principal place of business at No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China, (hereinafter "ASSIGNOR") is the owner by assignment dated June 2, 2010, June 4, 2010, June 5, 2010, June 2, 2010 and June 9, 2010, from the inventors, You-Jen Wang, Shen-luan Liu, Feng Wei Kuo, Chewn-Pu Jou and Fu-Lung Hsueh, of certain inventions or improvements for METHOD AND APPARATUS FOR AMPLIFYING A TIME DIFFERENCE, disclosed and claimed in pending U.S. Patent Application Number 12/813,620, filed June 11, 2010, which assignment from the inventors was recorded on July 26, 2010 at Reel/Frame 024737/0907 of the Patent Office Records;

WHEREAS, **National Taiwan University**, a University of **Taiwan**, having a principal place of business at No. 1, Sec. 4, Roosevelt Road, Taipei 10617, Taiwan, Republic of China, (hereinafter "ASSIGNEE") is hereby to acquire Fifty Percent (50%) of the entire right, title and interest in and to the said invention or improvements and in and to said application for patent in the United States, and in, to and under any and all Letters Patent which may be granted on or as a result thereof;

NOW, THEREFORE, for valuable consideration, the receipt and sufficiency of which are acknowledged, ASSIGNOR has sold, assigned, transferred and set over, and does by these presents hereby sell, assign, transfer and set over to said ASSIGNEE, Fifty Percent (50%) of the entire right, title and interest in and to said invention or improvements and said application and any and all parent applications, continuations, divisions, and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and its possessions and territories, and any reissue or reissues or extension or extensions of said Letters Patent, the same to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, sale and transfer not been made.

PATENT REEL: 030531 FRAME: 0785 IN WITNESS WHEREOF, ASSIGNOR has executed this Assignment by its authorized officer as of the date shown, intending to be legally bound.

ASSIGNOR: Taiwan Semiconductor Manufacturing Co., Ltd.

Date: June 3, 2013

Signature:

Typed Name:

Position/Title:

Address:

Billie Chen

Director, Intellectual Property Division

Legal

TSMC FAB 12

Science-Based Industrial Park

No. 8, Li-Hsin Rd., 6

Hsin-Chu, '

Taiwan 300-77, R.O.C.