

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4319120

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JOSHUA TSENG	02/26/2010
YASUTOSHI OKUNO	03/02/2010
LARS-AKE RAGNARSSON	02/22/2010
TOM SCHRAM	02/23/2010
STEFAN KUBICEK	04/06/2010
THOMAS Y HOFFMANN	02/22/2010
NAOHISA SENGOKU	03/02/2010
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	IMEC
<b>Street Address:</b>	KAPELDREEF 75
<b>City:</b>	LEUVEN
<b>State/Country:</b>	BELGIUM
<b>Postal Code:</b>	3001
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	8, LI-HSIN ROAD 6
<b>City:</b>	HSINCHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>Name:</b>	PANASONIC CORPORATION
<b>Street Address:</b>	1006, OAZA KADOMA, KADOMA-SHI
<b>City:</b>	OSAKA
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	571-8501
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15180313
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(214)200-0853

***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:** 214-651-5000  
**Email:** ipdocketing@haynesboone.com  
**Correspondent Name:** HAYNES AND BOONE, LLP IP SECTION  
**Address Line 1:** 2323 VICTORY AVENUE  
**Address Line 2:** SUITE 700  
**Address Line 4:** DALLAS, TEXAS 75219

<b>ATTORNEY DOCKET NUMBER:</b>	24061.3394US02
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<b>NAME OF SUBMITTER:</b>	LINDA INGRAM
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<b>SIGNATURE:</b>	/Linda Ingram/
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<b>DATE SIGNED:</b>	03/15/2017
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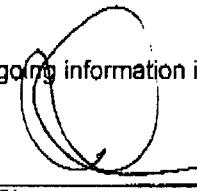
**Total Attachments: 9**

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source=3394US02\_Assignment\_INV\_Co\_Applicants#page9.tif

Client Code: IMEC609.001AUS

**RECORDATION FORM COVER SHEET - PATENTS ONLY**

To the Director, U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

<b>1. Name of conveying parties: (List using letters or numbers for multiple parties)</b> 1) Joshua Tseng      5) Stefan Kubicek 2) Yasutoshi Okuno      6) Thomas Y. Hoffmann 3) Lars-Ake Ragnarsson      7) Naohisa Sengoku 4) Tom Schram Additional name(s) of conveying party(ies) attached? ( ) Yes (X) No	<b>2. Name and address of receiving parties:</b> <b>I) Name:</b> IMEC <b>Street Address:</b> Kapeldreef 75 <b>City:</b> Leuven <b>State:</b> BELGIUM <b>ZIP:</b> 3001 <b>II) Name:</b> Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC) <b>Street Address:</b> 8, Li-Hsin Road 6 <b>City:</b> HsinChu <b>State:</b> TAIWAN <b>ZIP:</b> 300-077 <b>III) Name:</b> Panasonic Corporation <b>Street Address:</b> 1006, Oaza Kadoma, Kadoma-shi <b>City:</b> Osaka <b>State:</b> JAPAN <b>ZIP:</b> 571-8501 Additional name(s) of receiving party(ies) attached? ( ) Yes (X) No
<b>3. Nature of conveyance:</b> (X) Assignment      ( ) Security Agreement ( ) Merger      ( ) Change of Name ( ) Other: Execution Date: (List as in section 1 if multiple signatures) 1) February 26, 2010      5) April 6, 2010 2) March 2, 2010      6) February 22, 2010 3) February 22, 2010      7) March 2, 2010 4) February 23, 2010	<b>4. US or PCT Application number(s) or US Patent number(s):</b> (X) Patent Application No.: 12/684,803 Filing Date: January 8, 2010 Additional numbers attached? ( ) Yes (X) No
<b>5. Party to whom correspondence concerning document should be mailed:</b> <b>Customer No.</b> 20,995 <b>Address:</b> Knobbe, Martens, Olson & Bear, LLP 2040 Main Street, 14 <sup>th</sup> Floor Irvine, CA 92614 <b>Return Fax:</b> (949) 760-9502 <b>Attorney's Docket No.:</b> IMEC609.001AUS	<b>6. Total number of applications and patents involved:</b> 1
<b>7. Total fee (37 CFR 1.21(h)):</b> \$40 (X) Authorized to be charged to deposit account	<b>8. Deposit account number:</b> 11-1410 Please charge this account for any additional fees which may be required, or credit any overpayment to this account.
<b>9. Statement and signature.</b> To the best of my knowledge and belief, the foregoing information is true and correct, and any attached copy is a true copy of the original document. <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <u>John M. Carson</u>            Name of Person Signing            34,303            Registration No.         </div> <div style="text-align: center;">             Signature         </div> <div style="text-align: center;"> <u>5/14/10</u>            Date         </div> </div> Total number of pages including cover sheet, attachments and document: 9	

CH \$40.00 111410 12684803

Documents transmitted via Facsimile to be recorded with required cover sheet information to:

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Alexandria, VA 22313-1450

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PATENT 9045317 cmt 051310

REEL: 024419 FRAME: 0037

PATENT

REEL: 041579 FRAME: 0833

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Serial No.: 12/684,803  
Filing Date: January 8, 2010

Docket Number: IMEC609.001AUS  
Assignment - Page 1 of 8

### ASSIGNMENT

WHEREAS, Joshua Tseng, a Taiwanese citizen, residing at Trevuren, Belgium; Yasutoshi Okuno, a Japanese citizen, residing at Osaka, Japan; Lars-Ake Ragnarsson, a Swedish citizen, residing at Leuven, Belgium; Tom Schram, a Belgian citizen, residing at Rixensart, Belgium; Stefan Kubicek, a Slovakian citizen, residing at Pellenberg, Belgium; Thomas Y. Hoffmann, a French citizen, residing at Leuven, Belgium; and Nachisa Sengoku, a Japanese citizen, residing at Osaka, Japan, (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas or discoveries related to METHOD FOR MANUFACTURING A DUAL WORK FUNCTION SEMICONDUCTOR DEVICE AND THE SEMICONDUCTOR DEVICE MADE THEREOF (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States has been prepared for filing with the United States Patent and Trademark Office (hereinafter the "Application");

AND WHEREAS, IMEC, a foreign corporation, with its principal place of business at Kapeldreef 75, 3001 Leuven, Belgium; and Taiwan Semiconductor Manufacturing Company, Ltd., a foreign corporation, with its principal place of business at 8, Li-Hsin Road 6, 300-077 HsinChu, Taiwan; and Panasonic Corporation, a foreign corporation, with its principal place of business at 1006 Oaza Kadoma, Kadoma-shi, Osaka 571-8501, Japan; (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in THE APPLICATION and THE WORK, including all provisional applications relating thereto (including but not limited to U.S. Provisional Application No(s). 61/143,696, filed January 9, 2009 (respectively if plural applications)), and all divisions, continuations, continuations-in-part, reissues, and reexaminations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, Assist in the preparation of any other provisional or non-provisional applications relating to the Application and the Work or any improvements made thereto, sign all lawful papers, execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

PATENT  
REEL: 024419 FRAME: 0038  
PATENT  
REEL: 041579 FRAME: 0834

Serial No.: 12/684,803

Docket Number: IMEC609.001AUS

Filing Date: January 8, 2010

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This 26th day of February, 2010.

Joshua Tseng  
Joshua Tseng

Serial No.: 12/684,803  
Filing Date: January 8, 2010

Docket Number: IMEC609.001AUS  
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This 2nd day of March, 2010, Yasutoshi Okuno  
Yasutoshi Okuno

PATENT  
REEL: 024419 FRAME: 0040  
PATENT  
REEL: 041579 FRAME: 0836

Serial No.: 12/684,803  
Filing Date: January 8, 2010

Docket Number: IMEC609.001AUS  
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This 22 day of February, 2010.

  
Lars-Ake Ragnarsson

PATENT  
REEL: 024419 FRAME: 0041  
PATENT  
REEL: 041579 FRAME: 0837

Serial No.: 12/684,803  
Filing Date: January 8, 2010

Docket Number: IMEC609.001AUS  
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This 23 day of February, 2010, Tom Schram  
Tom Schram



Serial No.: 12/684,803  
Filing Date: January 8, 2010

Docket Number: IMEC609.001AUS  
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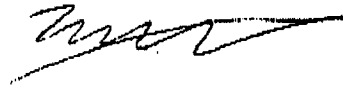
This 6<sup>th</sup> day of April, 2010

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Stefan Kubicek

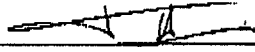


Witnessed by: Tom Sebrum



Serial No.: 12/684,803  
Filing Date: January 8, 2010

Docket Number: IMEC609.001AUS  
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This 22<sup>nd</sup> day of February, 2010.   
Thomas Y. Hoffmann

PATENT  
REEL: 024419 FRAME: 0044  
PATENT  
REEL: 041579 FRAME: 0840

Serial No.: 12/884,803  
Filing Date: January 8, 2010

Docket Number: IMEC809.001AUS  
Assignment - Page 8 of 8

This 2nd day of March, 2010, Naohisa Sengoku  
Naohisa Sengoku

8547641 cml

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RECORDED: 05/20/2010

RECORDED: 03/15/2017

PATENT  
REEL: 024419 FRAME: 0045  
PATENT  
REEL: 041579 FRAME: 0841