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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
JAN VAN HOUDT	10/30/2017
JULIEN RYCKAERT	10/25/2017
HYUNGROCK OH	10/27/2017

RECEIVING PARTY DATA

Name:	IMEC VZW
Street Address:	KAPELDREEF 75
City:	LEUVEN
State/Country:	BELGIUM
Postal Code:	3001

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15729532

CORRESPONDENCE DATA

Fax Number: (949)760-9502

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.

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 949-760-0404 **Email:** efiling@knobbe.com

Correspondent Name: KNOBBE MARTENS OLSON & BEAR, LLP

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ATTORNEY DOCKET NUMBER:	IMEC997.001AUS	
NAME OF SUBMITTER:	JOHN M. CARSON	
SIGNATURE:	/John M. Carson/	
DATE SIGNED: 07/15/2019		
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 4

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COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: IMEC997.001AUS Page 1 of 4

Title: A MEMORY DEVICE FOR A DYNAMIC RANDOM ACCESS MEMORY

Inventors: Jan Van Houdt, Julien Ryckaert, Hyungrock Oh

Declaration

This Declaration is directed to the application identified above that:

Was filed October 10, 2017 as U.S. or International Application No. 15/729532 and incorporating any amendments made thereto prior to the signature date of this Declaration.

As a named inventor, I declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

Assignment from Inventors

WHEREAS, above-identified inventors (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental designs, or discoveries, and hereby assign or are under an obligation to assign to the below identified Assignee the above-titled application (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States (identified above) has been prepared for filing with the United States Patent and Trademark Office (hereinafter the "Application").

AND WHEREAS, **IMEC VZW**, with its principal place of business at Kapeldreef 75, 3001 Leuven, Belgium (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 of which receipt 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 Patent Properties filed or issued upon the Application and the Work; where "Patent Properties" include, but are not limited to:

all provisional applications relating thereto (including but not limited to U.S. Provisional Application No(s)., filed (respectively if plural applications));

all nonprovisional applications claiming priority to aforementioned provisional(s) and/or the present Application, including, all divisions, continuations, continuations-in-part, and reissues, 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.

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: IMEC997.001AUS Page 2 of 4

Title: A MEMORY DEVICE FOR A DYNAMIC RANDOM ACCESS MEMORY

Inventors: Jan Van Houdt, Julien Ryckaert, Hyungrock Oh

ASSIGNOR hereby acknowledges the ASSIGNEE as the Applicant for all aforementioned Patent Properties, and 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 Patent Property relating to the Application and the Work or any improvements made thereto, sign/execute all lawful papers, authorize the filing of and 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.

Legal Name of inventor: Jan Van Houdt				
Signature: _	<u>O</u>		Date:	30/10/20n
	Witnessed by:	R. Pravez	Marian Marian Marian	· · · · · · · · · · · · · · · · · · ·
Wit	ness Name (printed):	PRAVEEN	RAC	SHAVAN

Application Data Sheet filed previ	ously or concurrently
Docket No.: IMEC997.001AUS	Page 3 of 4
Title: A MEMORY DEVICE FOR A DYNAMIC RANDOM AG	CCESS MEMORY
Inventors: Jan Van Houdt, Julien Ryckaert, Hyungrock Oh	
	anno vanno anno anno anno anno anno anno
Legal Name of inventor: Julien Ryckaert	
Signature:	Date: 25/10/2012
Witnessed by:	Representation of the second
Witness Name (printed):	TRONG HUNH RAY)

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

COMBIN	ED DECLARATION & AS Application Data Sheet filed p		
Docket No.: IMEC997.00	1AUS		Page 4 of 4
Title: A MEMORY DEVICE	CE FOR A DYNAMIC RANDON	ACCESS MEMORY	
Inventors: Jan Van Houd	lt, Julien Ryckaert, Hyungrock (Oh	
	A. W.		
Legal Name of inventor	: Hyungrock Oh		
Signature:	presp	Date:	27/10/2617
	Witnessed by:	erani	N
Witne	ss Name (printed): 📙 🖁 🖽	ZANI CHAL	/A

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RECORDED: 07/15/2019