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PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4879691

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ERIC CHRISTOPHER MORTON	03/06/2018
VYDHYANATHAN KALYANASUNDHARAM	03/20/2018
ELIZABETH COOPER	02/21/2018
WILLIAM L. WALKER	02/06/2018
DOUGLAS BENSON HUNT	02/06/2018
RICHARD MARTIN BORN	02/06/2018
RICHARD H. LEE	02/06/2018
PAUL C. MIRANDA	02/09/2018
PAUL MOYER	02/06/2018

RECEIVING PARTY DATA

Name:	Advanced Micro Devices, Inc.
Street Address:	2485 Augustine Drive
City:	Santa Clara
State/Country:	CALIFORNIA
Postal Code:	95054

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15826065

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ATTORNEY DOCKET NUMBER:	1458-170308
NAME OF SUBMITTER:	EMILY STALDER

/Emily Stalder/		
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AMD Reference No. 170308

ASSIGNMENT OF PATENT RIGHTS

This is an assignment of patent rights between inventor(s) Eric Christopher MORTON, Vydhyanathan KALYANASUNDHARAM, Elizabeth COOPER, William L. WALKER, Douglas Benson HUNT, Richard Martin BORN, Richard H. LEE, Paul C. MIRANDA, and Paul MOYER (hereinafter referred to as the "Inventor(s)") and Advanced Micro Devices, Inc., having a place of business at 2485 Augustine Drive, Santa Clara, California, USA (hereinafter referred to as the "Assignee").

WHEREAS, Inventor(s) are named as inventors in the patent application filed in the United States Of America on **November 29, 2017**, entitled **I/O WRITES WITH CACHE STEERING**, having application no. **15/826,065**, and having a docket number of **1458-170308** (hereinafter referred to as the "Application"); and

WHEREAS, Assignee has a desire to acquire all rights, title, and interest in the invention(s) disclosed in the Application (hereinafter referred to as the "Invention(s)"), including any rights, title, and interest in the Invention(s) not previously transferred to Assignee through prior agreement.

NOW, THEREFORE, the parties agree as follows:

- 1. To the extent that Inventor(s) are subject to a prior agreement transferring rights, title, and/or interest in the Invention(s) to the Assignee, Inventor(s) hereby confirm such transfer.
- 2. To the extent that Inventor(s) retain any rights, title, or interest in the Invention(s) not vested in the Assignee on the date(s) of execution of this Assignment, Inventor(s) hereby assign and otherwise transfer to the Assignee their entire right, title, and interest, throughout the world, in and to: the Invention(s), including any patent applications, patents, invention registrations, and equivalents thereof (including any and all provisional, international, regional, and national patents and patent applications, and all divisions, continuations, continuations-in-part, renewals, reissues, reexams, substitutes and extensions thereof), for the Invention(s) and all rights to claim priority thereto. Inventor(s) further assign and otherwise transfer to Assignee all causes of action and remedies arising under any patent or patent application for the Invention(s) prior to, on,

AMD Reference No. 170308

or after the date(s) of execution of this Assignment. Inventor(s) shall not be entitled to an accounting for any causes of action or remedies pursued by Assignee.

- 3. The transfers set forth in Paragraphs 1 and 2 above are in consideration for the sum of at least one U.S. dollar (US\$1) (or its equivalent) and/or other consideration for which both parties acknowledge to be valuable. Such consideration includes but is not limited to at least one of the following: employment, an independent contractor agreement, monetary payment, or other benefit hereby acknowledged as received.
- 4. Inventor(s) hereby authorize and request the Commissioner of Patents and Trademarks, or equivalent thereof, to issue the patent for the Invention, and all resulting patents therefrom, insofar as the Inventor(s)' interest is concerned, to the Assignee.
- 5. Inventor(s) further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect Assignee's rights, title, and interest in the Invention(s).
- 6. Inventor(s) hereby authorize Assignee, its successors and assigns, its legal representatives, or anyone the Assignee may properly designate, to insert in this Assignment of Patent Rights the filing date and/or application number of the Application when ascertained.
- 7. Inventor(s) hereby further agree to, with respect to any patent application or patent for the Invention(s), at the expense of the Assignee:
 - i) testify in any legal proceedings,
 - ii) sign all lawful papers,
 - iii) execute all divisional, continuation, continuation-in-part, reissue, reexamination, and substitute applications,
 - iv) make all lawful oaths, and assist in vesting title in the Assignee and to aid the Assignee to obtain and enforce proper protection for the subject matter of the Invention(s) in all countries and regions, and
 - v) notify Assignee promptly (by facsimile or first class mail) of any subpoena or contact by any person other than Assignee or its agents regarding the Invention or resultant patent(s) issuing therefrom, and in any event at least one week prior to any deposition, legal inquiry or legal proceeding relating to the above identified invention.

Inventor: (Signature) <u>March 6 2018</u> (Date) **Eric Christopher MORTON** State of <u>TEXAS</u> County of TRAVIS (insert name and title of the notarizing officer) personally appeared ERIC CHRISTORICA MORTOR 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 _that the foregoing paragraph is true and correct. WITNESS my hand and official seal. LOUIS N CASTRO Notary Public, State of Texas My Commission Expires November 11, 2018 Signature: (NOTARY SEAL)

This assignment is executed on the date(s) of which the Inventor(s) have signed.

__(Signature) 3 \frac{20 \langle 20 \langle 8 \tag{Date}}{}

VYUHYAHAHIAH NALTARASURUNANAM
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
On merch 20, 2018 before me.
On Thereby 20, 2018 before me, (insert date)
Justen P. Flores - Notory Public
(insert name and title of the notarizing officer)
personally appeared VYO ITYPNATETTIN KALYFTUR SUNDTHAR BOX.
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.
certify under PENALTY OF PERJURY under the laws of the State of the Control of the State of the
WITNESS my hand and official seal. SUSAN P. FLORES Notary Public - California Santa Clara County Commission # 2183446 My Comm. Expires Mar 15, 2021
(NOTARY SEAL) Signature:

Inventor: (Signature) $\frac{2/31/18}{}$ (Date)
Elizabeth COOPER
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 SONTA CLARA)
On Feb. 21, 2018 before me, (insert date) SUSON P. FLORES -NOTONY PUBLIC
(insert name and title of the notarizing officer)
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 that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.
SUSAN P. FLORES Notary Public - California Sarita Clara County Commission # 2183446 My Comm. Expires Mar 15, 2021
(NOTARY SEAL) Signature:

Inventor:	(Signature)	6 Feb. 2018 (Date)
William L. WALKER		
Witness # 1: Letin Dittains	(Signature) (Print Name)	<u> 2/6/ (</u> 8(Date)
Witness # 2		
Bill Josep	(Signature)	<u> </u>
Bill Joney	(Print Name)	

Invertor: Jan Bon Shill	(Signature)	6 Feb 20	/ § (Date)
Douglas Benson HUNT	•		
Witness #1: A A A A A A A A A A A A A A A A A A A	(Signature) (Print Name)	2/6/18	(Date)
Witness # 2:			
Bill Jones Bill Jones	(Signature) (Print Name)	2/48	(Date)

Inventor: No. 19 Process of the Control of the Con	(Signature)	2/6/18 (Date)
Witness # 1: Action Dittmining	(Signature) (Print Name)	<u>2/6∫(</u> 8(Date)
Witness # 2:		
Bill Jones	(Signature) (Print Name)	<u> </u>

Inventor: Rubulla	(Signature)	2/6/2018 (Date)
Richard H. LEE		
Witness # 1:		
David Rapp	(Signature) (Print Name)	2/6/20/8 (Date)
Witness # 2:		
Willow Hohn	(Signature)	2/6/18 (Date)
William Horn	(Print Name)	ℓ

Inventor:	(Signature)	2/9/2018 (Date)
Paul C. MIRANDA		
Witness # 1:		
<u> </u>	(Signature)	<u> </u>
GAGANDEER S SACHOEV	(Print Name)	<i>t</i>
Witness # 2:		
V. Aloggen	(Signature)	<u>02/09/2018</u> (Date)
ALAGAPPAN VALLI APPAN	(Print Name)	, .

Inventor: Pullul	(Signature)	2/ <u>///</u> (Date)
Paul MOYER		
Witness # 1: The Control of Matthew D. Schoenwold	(Signature) (Print Name)	<u>2 /6/18</u> (Date)
Witness # 2:		
Bill Jones	(Signature)	(Date)
Oill Jones	(Print Name)	···

RECORDED: 03/22/2018