505090719 09/12/2018

EPAS ID: PAT5137477

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
VYDHYANATHAN KALYANASUNDHARAM	09/11/2018
AMIT P. APTE	09/05/2018
GANESH BALAKRISHNAN	09/11/2018

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:	16129022

CORRESPONDENCE DATA

Fax Number: (512)853-8801

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: 512-853-8800

Email: gjimenez@intprop.com

MEYERTONS HOOD KIVLIN KOWERT & GOETZEL **Correspondent Name:**

Address Line 1: P.O. BOX 398

Address Line 4: AUSTIN, TEXAS 78767-0398

ATTORNEY DOCKET NUMBER:	5800-68800	
NAME OF SUBMITTER:	RORY D. RANKIN	
SIGNATURE:	/Rory D. Rankin/	
DATE SIGNED:	09/12/2018	

Total Attachments: 5

source=170302_Assignment_5800-68800#page1.tif source=170302_Assignment_5800-68800#page2.tif source=170302 Assignment 5800-68800#page3.tif source=170302 Assignment 5800-68800#page4.tif

PATENT REEL: 046854 FRAME: 0093 505090719

 $source = 170302_Assignment_5800\text{-}68800\#page5.tif$

PATENT REEL: 046854 FRAME: 0094

ASSIGNMENT OF PATENT RIGHTS

This is an assignment of patent rights between inventor(s) Vydhyanathan Kalyanasundharam, Amit P. Apte, Ganesh Balakrishnan (hereinafter referred to as the "Inventor(s)") and Advanced Micro Devices, Inc., having a place of business at 2485 Augustine Drive, Santa Clara, CA 95054 (hereinafter referred to as the "Assignee").

WHEREAS, Inventor(s) are named as inventors in the patent application filed concurrently herewith in the United States of America, entitled "<u>ACCELERATING ACCESSES TO PRIVATE REGIONS IN A REGION-BASED CACHE DIRECTORY SCHEME</u>", having a docket number of 5800-68800 (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, 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.

Page 1

- 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,
 - 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.

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

Inventor: Date: 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 On Spany N, 2018 [date], before me Cody Northway Public, personally appeared Vydhyanathan Kalyanasundharam, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/sate subscribed to the within instrument and acknowledged to me that the state executed the same in high hear/their authorized capacity(iss), and that by(fiis/her/thesir signature(s) on the instrument the person(s), or the entity upon behalf of which the person(e) 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. CINDY VANWASSENHOVE Notary Public - California Santa Ciara County Commission # 2246322 My Comm. Expires Jun 17, 2022

[SEAL]

Inventor:	
HOLE	Date: 09/05/2018
Amit P. Apte	
State of Texas	
County of Travis	
evidence to be the person(s) whose name(s) acknowledged to me that he/she/they ex	pte, who proved to me on the basis of satisfactory is/are subscribed to the within instrument and ecuted the same in his/her/their authorized re(s) on the instrument the person(s), or the entity
I certify under PENALTY OF PERJURY of foregoing paragraph is true and correct.	under the laws of the State of Texas, that the
WITNESS my hand and official seal.	
N.	ANGELA WITHROW Notary ID #129279984 My Commission Expires Jan 25, 7021
Comment of the Commen	William Management of the same
Notary Public	

[SEAL]

Inventor:	
	Date: 9/11/18
Ganesh Balakrishnan	
State of Texas	
County of Travis	
satisfactory evidence to be the person(s) winstrument and acknowledged to me that h	Balakrishnan, who proved to me on the basis of those name(s) is/are subscribed to the within the same in his/her/their their signature(s) on the instrument the person(s),
I certify under PENALTY OF PERJURY v foregoing paragraph is true and correct.	under the laws of the State of Texas, that the
WITNESS my hand and official seal.	DEBRA FABACHER MARTINEZ Notary Public, State of Texas Comm. Expires 03-05-2022 Notary ID 128044640
Delafabolle Hartin	
Notary Public	

[SEAL]

Customer Number 53806
Rory D. Rankin
Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398

Page 5

PATENT REEL: 046854 FRAME: 0099

RECORDED: 09/12/2018