## 505883535 01/27/2020

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5930360

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
CHANDRA S. GURRAM	12/26/2019
GANG Y. CHEN	12/26/2019
SUBRAMANIAM MAIYURAN	12/30/2019
SUPRATIM PAL	01/02/2020
ASHUTOSH GARG	12/26/2019
JORGE E. PARRA	12/27/2019
DARIN M. STARKEY	12/26/2019
GUEI-YUAN LUEH	12/26/2019
WEI-YU CHEN	12/30/2019

#### **RECEIVING PARTY DATA**

Name:	INTEL CORPORATION
Street Address:	2200 MISSION COLLEGE BLVD
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16726659

#### **CORRESPONDENCE DATA**

Fax Number:

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:** (703) 424-0824

**Email:** annie@compassiplaw.com, bob@compassiplaw.com

Correspondent Name: GLEN B. CHOI

Address Line 1: 4804 NW BETHANY BLVD, STE. I-2 #237

Address Line 4: PORTLAND, OREGON 97229

ATTORNEY DOCKET NUMBER: AC3310-US

NAME OF SUBMITTER: ANNIE PEARSON

PATENT 505883535 REEL: 051629 FRAME: 0858

SIGNATURE:	/Annie Pearson/	
DATE SIGNED:	01/27/2020	
Total Attachments: 18		
source=AC3310-US_Signed_Assignme	nt#page1.tif	
source=AC3310-US_Signed_Assignment	nt#page2.tif	
source=AC3310-US_Signed_Assignment	nt#page3.tif	
source=AC3310-US_Signed_Assignment	nt#page4.tif	
source=AC3310-US_Signed_Assignment	nt#page5.tif	
source=AC3310-US_Signed_Assignme	nt#page6.tif	
source=AC3310-US_Signed_Assignment#page7.tif		
source=AC3310-US_Signed_Assignment#page8.tif		
source=AC3310-US_Signed_Assignment#page9.tif		
source=AC3310-US_Signed_Assignment#page10.tif		
source=AC3310-US_Signed_Assignment#page11.tif		
source=AC3310-US_Signed_Assignment#page12.tif		
source=AC3310-US_Signed_Assignment#page13.tif		
source=AC3310-US_Signed_Assignment#page14.tif		
source=AC3310-US_Signed_Assignment#page15.tif		
source=AC3310-US_Signed_Assignment#page16.tif		
source=AC3310-US_Signed_Assignment#page17.tif		
source=AC3310-US_Signed_Assignme	nt#page18.tif	

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

#### COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on	December 24, 2019		as	
US		Application Number	16/726,659	and
COUNTRY or Inte	rnational Office			

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof, and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Clandra Seklwi CHANDRAS. GURRAM	12/26/2019 Date signed
GANG Y, CHEN	Date signed
SUBRAMANIAM MAIYURAN	Date signed
SUPRATIM PAL	Date signed
ASHUTOSH GARG	Date signed
JORGE E. PARRA	Date signed
DARIN M. STARKEY	Date signed
GUEI-YUAN LUEH	Date signed
WELVITCHEN	Date signed

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

COUNTRY or International Office

## INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

## COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and req	puest any attorney having	appropriate authority fro	om the a:	ssignee to in	usert on the
designated lines below, the	filing date and application	number of said applicat	ion wher	1 known.)	
which was filed on	December 24, 2019		35		

Application Number

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

Page 1 of 2

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

	CHANDRA S. GURRAM	Date signed
	Sand Car.	12/26/2019
*******	GANGYZHEN	Date signed
	SUBRAMANIAM MAIYURAN	Date signed
	SUPRATIM PAL	Date signed
		takan kata Perina kata kata
	ASHUTOSH GARG	Date signed
		to the second to the second
:	JORGE E. PARRA	Date signed
	and the second of the second o	and the second s
*************	DARIN M. STARKEY	Date signed
·		
**********	GUEI-YUAN LUEH	Date signed
	WFL-VII CHEN	Data cionad

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

#### COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on	December 24,	ember 24, 2019		as
US		Application Number	16/726,659	and
COUNTRY or Inte	rnational Office	• •		_

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

CHANDRA S. GURRAM	Date signed
GANG Y. CHEN	Date signed
SUBRAMANIÀM MAIYURAN	12/30/19
SUBRAMANIÀM MAIYURAN	12) 30) 19 Date signed
SUPRATIM PAL	Date signed
ASHUTOSH GARG	Date signed
JORGE E. PARRA	Date signed
DARIN M. STARKEY	Date signed
GUEI-YUAN LUEH	Date signed
WEI-YU CHEN	Date signed

# ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

#### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

## COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed onDecember 24.	2019	as	_ <b>as</b> :	
US COUNTRY or International Office	Application Number	16/726,659	and	

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

GANG Y. CHEN  SUBRAMANIAM MAIYURAN  Jupratum Pal  SUPRATIM PAL  ASHUTOSH GARG  JORGE E. PARRA  DARIN M. STARKEY	Date signed
SUBRAMANIAM MAIYURAN  SUPRATIM PAL  ASHUTOSH GARG  JORGE E. PARRA	
SUPRATIM PAL  ASHUTOSH GARG  JORGE E. PARRA	Date signed
SUPRATIM PAL  ASHUTOSH GARG  JORGE E. PARRA	Data da 1
ASHUTOSH GARG  JORGE E. PARRA	Date signed
ASHUTOSH GARG  JORGE E. PARRA	Jan 2nd 2020
JORGE E. PARRA	Date signed
JORGE E. PARRA	
	Date signed
DARIN M. STARKEY	Date signed
	Date signed
GUEI-YUAN LUEH	Date signed
WEI-YU CHEN	Date signed

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

#### COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on	December 24,	2019	as	
US		Application Number	16/726,659	anc
COUNTRY or Inte	rnational Office			

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Committee of the Commit	
CHANDRA S. GURRAM	Date signed
GANG Y. CHEN	Date signed
SUBRAMANIAM MAIYURAN	
30DRAMANIAN MAITURAN	Date signed
SUPRATIM PAL	Date signed
Ashte	12/21/2019
ASHUTOSH GARG	Date signed
JORGE E. PARRA	Date signed
DARIN M. STARKEY	Date signed
GUEI-YUAN LUEH	Date signed
WEI-YU CHEN	Date signed

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

## INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

# COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I bereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed onDecember 24_	2019	25	
US COUNTRY or International Office	Application Number	16/726,659	anc

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below.

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

CHANDRA S. GURRAM	Date signed
GANG Y. CHEN	Date signed
SUBRAMANIAM MAIYURAN	Date signed
SUPRATIM PAL	Date signed
ASHUTOSH GARG	Date signed
Joye Eduadolant	12/27/2019
JORGE E. PARRA	Date signed
DARIN M. STARKEY	Date signed
GUEI-YUAN LUEH	Date signed
WEI-YU CHEN	Date signed

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH: WEI-YU CHEN

hereby sell, assign, and transfer to:

### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

# COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on <u>December 24.</u>	2019	aš	
US COUNTRY or International Office	Application Number	16/776.659	3d

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below.

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

CHANDRA S. GURRAM	Date signed
GANG Y. CHEN	Date signed
SUBRAMANIAM MAIYURAN	Date signed
SUPRATIM PAL	Date signed
ASHUTOSH GARG	Date signed
JORGE E. PARRA	Date signed
7) - 241-	32/2/17/19
DARIN M. STARKEY	Date signed
GUEI-YUAN LUEH	Date signed
WEI-YU CHEN	Date signed

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

COUNTRY or International Office

### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

### COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

hereby authorize and request any attorney having appropriate authority from the assignee to insert on the esignated lines below, the filing date and application number of said application when known.)		
which was filed onDecember 24, 2019as	ş	
US Application Number 16/726,659	and	

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

REPRESENTAL SAN SALAMINE CAMPANINE.

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

CHANDRA S. GURRAM	Date signed
GANG Y. CHEN	Date signed
SUBRAMANIAM MAIYURAN	Date signed
SUPRATIM PAL	Date signed
en de la companya de	
ASHUTOSH GARG	Date signed
and green and see the first of the second and the s	and the state of t
JORGE E. PARRA	Date signed
	ション ※1.1.25 (1.4.4)
DARIN M. STARKEY	Date signed
	12/26/2019
GUEI-ÝNÁN LUEH	Date signed
WEI-YU CHEN	Date signed

# **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

CHANDRA S. GURRAM; GANG Y. CHEN; SUBRAMANIAM MAIYURAN; SUPRATIM PAL; ASHUTOSH GARG; JORGE E. PARRA; DARIN M. STARKEY; GUEI-YUAN LUEH; WEI-YU CHEN

hereby sell, assign, and transfer to:

### INTEL CORPORATION

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

#### COMPILER ASSISTED REGISTER FILE WRITE REDUCTION

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on	December 24,	2019	as	
US		Application Number	16/726,659	anc
COUNTRY or Inte	rnational Office			

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and

the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

CHANDRA S. GURRAM	Date signed
GANG Y. CHEN	Date signed
SUBRAMANIAM MAIYURAN	Date signed
SUPRATIM PAL	Date signed
ASHUTOSH GARG	Date signed
JORGE E, PARRA	Date signed
DARIN M. STARKEY	Date signed
GUEI-YUAN LUEH	- Date signed
10.4C_	12/30/19
WEI-YU CHEN	Date signed