PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6273509

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HORIA C. SIMIONESCU	08/21/2020
CHUNG KUANG CHIN	08/20/2020
PAUL STONELAKE	08/25/2020
NARASIMHULU DHARANIKUMAR KOTTE	08/21/2020

RECEIVING PARTY DATA

Name:	MICRON TECHNOLOGY, INC.		
Street Address:	8000 SOUTH FEDERAL WAY		
City:	BOISE		
State/Country:	IDAHO		
Postal Code:	83716-9632		

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	62903202
Application Number:	17003336

CORRESPONDENCE DATA

Fax Number: (973)597-2400

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: 9735972500

Email: sricketts@lowenstein.com

Correspondent Name: LOWENSTEIN SANDLER LLP

Address Line 1: ONE LOWENSTEIN DRIVE

Address Line 4: ROSELAND, NEW JERSEY 07068

ATTORNEY DOCKET NUMBER:	34300.415 (L0268)		
NAME OF SUBMITTER:	KONSTANTIN CHAUS		
SIGNATURE:	/Konstantin Chaus/		
DATE SIGNED:	08/28/2020		

Total Attachments: 8

source=34300-415_L0268_Simionescu_Assignment#page1.tif

PATENT REEL: 053629 FRAME: 0685

506226765

source=34300-415_L0268_Simionescu_Assignment#page2.tif
source=34300-415_L0268_Chin_Assignment#page1.tif
source=34300-415_L0268_Chin_Assignment#page2.tif
source=34300-415_L0268_Stonelake_Assignment#page1.tif
source=34300-415_L0268_Stonelake_Assignment#page2.tif
source=34300-415_L0268_Kotte_Assignment#page1.tif
source=34300-415_L0268_Kotte_Assignment#page2.tif

Client Ref. No. 2019-1780.00/US Attorney Docket No.: 34300.415 (L0268)

ASSIGNMENT OF PATENT APPLICATION

For good and valuable consideration, the receipt and su	ıfficiency of which is hereby
acknowledged, I/we, the undersigned, Horia C. Simionescu, Ch	nung Kuang Chin, Paul Stonelake,
Narasimhulu Dharanikumar Kotte	
hereby sell, assign, and transfer to <u>Micron Technology, Inc.</u>	
a <u>corporation</u>	of <u>Delaware</u> ,
(Type of Assignee: e.g., corporation, company, partnership, university, etc.)	
having a principal place of business at 8000 South Federal W	/av_Boise_Idaho_83716-9632

having a principal place of business at <u>8000 South Federal Way, Boise, Idaho 83/16-96</u>

("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which may have a declaration executed by the undersigned prior hereto or concurrently herewith and is entitled

MANAGING DATA DEPENDENCIES IN A TRANSFER PIPELINE OF A HYBRID DIMM

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Provisional Patent Application Number 62/903,202 filed September 20, 2019 and United States Patent Application Number 17/003,336 filed August 26, 2020

and in and to said application (provisional or non-provisional) and all provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application and all rights to claim priority to said United States application:

agree that said Assignee may apply for and receive a patent or patents for said inventions or 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 provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said inventions or improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said inventions or improvements and for vesting title to said inventions or improvements, and all applications for patents and all patents on said inventions or improvements, in said Assignee, its successors, assigns, and legal representatives; and

Each In	ventor: Please	e <u>Sign and Date</u> Below:	
08/21/2		Horadi	_
Da	ate	Horia C. Simionescu	
Da	ate	Chung Kuang Chin	_
Da	ate	Paul Stonelake	_
Da	ate	Narasimhulu Dharanikumar Kotte	_

Client Ref. No. 2019-1780.00/US Attorney Docket No.: 34300.415 (L0268)

ASSIGNMENT OF PATENT APPLICATION

For good and valuable consideration, the receipt and	sufficiency of which is hereby
acknowledged, I/we, the undersigned, Horia C. Simionescu, C	Chung Kuang Chin, Paul Stonelake,
Narasimhulu Dharanikumar Kotte	
hereby sell, assign, and transfer to <u>Micron Technology, Inc.</u>	·
a <u>corporation</u>	of <u>Delaware</u> ,
(Type of Assignee: e.g., corporation, company, partnership, university, etc.)
having a principal place of business at 8000 South Federal	Way Boise Idaho 83716-9632

("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which may have a declaration executed by the undersigned prior hereto or concurrently herewith and is entitled

MANAGING DATA DEPENDENCIES IN A TRANSFER PIPELINE OF A HYBRID DIMM

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Provisional Patent Application Number 62/903,202 filed September 20, 2019 and United States Patent Application Number 17/003,336 filed August 26, 2020

and in and to said application (provisional or non-provisional) and all provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application and all rights to claim priority to said United States application;

agree that said Assignee may apply for and receive a patent or patents for said inventions or 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 provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said inventions or improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said inventions or improvements and for vesting title to said inventions or improvements, and all applications for patents and all patents on said inventions or improvements, in said Assignee, its successors, assigns, and legal representatives; and

Attorney Docket No.: 34300,415 (L0268)

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.

Date	Horia C. Simionescu
20/2020	alen 1000 Mas
Date	Chung Kuang Chin
Date	Paul Stonelake
Date	Narasimhulu Dharanikumar Kotte

ASSIGNMENT OF PATENT APPLICATION

· · · · · · · · · · · · · · · · · · ·	ned, <u>Horia C. Simionescu, Chung Kuang Chin, Paul Stonelake</u>
arasimhulu Dharanikumar Kotte	
ereby sell, assign, and transfer to	Micron Technology, Inc.
Corporation	of Delaware
ype of Assignee: e.g., corporation, con	ipany, partnership, university, etc.)

MANAGING DATA DEPENDENCIES IN A TRANSFER PIPELINE OF A HYBRID DIMM

are disclosed in the application (provisional or non-provisional) for the United States patent which may have a declaration executed by the undersigned prior hereto or concurrently herewith and is entitled

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States	Provisional Patent	Application	Number	62/903,20	2filed	September	20, 2019	and
United States	Patent Application	Number 1	7/003,336	filed	August	26, 2020		3

and in and to said application (provisional or non-provisional) and all provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application and all rights to claim priority to said United States application:

agree that said Assignee may apply for and receive a patent or patents for said inventions or 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 provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said inventions or improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said inventions or improvements and for vesting title to said inventions or improvements, and all applications for patents and all patents on said inventions or improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assign assignment, grant, mortgage, license, or other agreement a conveyed has been made to others by the undersigned, and herein expressed is possessed by the undersigned.	s, and legal representatives that no ffecting the rights and property herein d that full right to convey the same as
Each Inventor: Please <u>Sign and Date</u> Below:	i beceby sett weign, and it meter to
	temment la boniq legionisci el grivest
- formatis hoù 1990 laga estipe est dessevates espectages bee sapp	
Particular description of accommon life box, you of long respectively and description of the control of the con	s agesot fie tene extract bestall est wa Panal parallocus ant al bezontato ess L'edigat fiereneva l'adestado e avad
<u>1.25/2020</u>	
Date Paul Stonelake	Selforos ober corpolicos Esparg bree
POSEDE, Lo estructed reservate as escaperativas subtracega so yearso	ette etta etta ettatiaan valtaan kaltii
	nikumar Kotte
Coo ista communica Communica	monta nouv
- 1976 <u>- 1970 178 hade askudā,</u> 1766 <u>1993, 1993) testensta eratu</u> ek 	Scribbed Street Provisional Patent Application in November 1
-non vasilioisuuse lanessavana ün teks (lanessavana makkakkakka on peesta myssekkunakkakkakkakkakkakkakkakkakka -tistioisuus vasilioisuus (kun teksakkakkakkakkakkakkakkakkakkakkakkakkak	gióga yttle jenélectiga teropaveg naptaget, portionad postage sometalisage les receptages portionad application of experiments a of each invection of experiments as categas are consort as sessons are
incitentan korkit belati bekad et yment adul et vinga fa	ing folsolisin radif fragit plas to
The accompanions of the property of the confidence and property of the confidence of	t Princing antito intercellati salatinasen bargagas: 💎
se capa regise map i krimilativieni en papi projek in grood falik liga jakad in. Gerginadigaren weli akandung elkanovinkanovin eti madakingan. Hans	ant cosemples A vidi to escuped ben.
nolls replant (#10.16colegs) densiansk perdiktrist egelegis (#2004) 1900-botes - Frankritze er pagt skiptiste (#2004)	s Militaria e ceso, teste abre de la engaga palacapa
isaga gygándála i meszerentettett, estatásák a teleplettett ellett ellett ellett ellett ellett ellett ellett e An erszertette er especialisátásák a ellettétt ellett ellett ellett ellett ellett ellett ellett ellett ellett	nii 84 ben gris die grafin Arges kenige
e de company de la company El company de la company d	
f used generally assist cord Assigner. Its successors, assigns, it	
ta sactian general periodical for table for table in every mapper of	nyaku kalan na liggin kawa asa asi kacamésagin aga dang ak
engergyennenger, et steld Akstignad, tin stadpostaden, tintigere stell	

Attorney Docket No.: 34300,415 (L0268)

ì	SSIGNMENT OF PATENT APPLICATION
•	For good and valuable consideration, the receipt and sufficiency of which is hereby
	acknowledged, I/we, the undersigned, Horia C. Simionescu, Chung Kuang Chin, Paul Stonelake
	Narasimhulu Dharanikumar Kotte
	hereby sell, assign, and transfer to <u>Micron Technology, Inc.</u>
	a <u>corporation</u> of <u>Delaware</u>
	(Type of Assignee: e.g., corporation, company, partnership, university, etc.)
	having a principal place of business at 8000 South Federal Way, Boise, Idaho 83716-9632.
	("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which may have a declaration executed by the undersigned prior hereto or concurrently herewith and is entitled
	MANAGING DATA DEPENDENCIES IN A TRANSFER PIPELINE OF A HYBRID DIMM
	said patent application also identified as follows (when known):
	[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]
	United States Provisional Patent Application Number <u>62/903,202</u> filed <u>September 20, 2019</u> and United States Patent Application Number <u>17/003,336</u> filed <u>August 26, 2020</u>
	and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application and all rights to claim priority to said United States application;
	32343 83

agree that said Assignee may apply for and receive a patent or patents for said inventions or 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 provisional applications, nonprovisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said inventions or improvements and the history thereof, and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said inventions or improvements and for vesting title to said inventions or improvements, and all applications for patents and all patents on said inventions or 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.

Date	Horia C. Simionescu
Date	Chung Kuang Chin
Date	Paul Stonelake
08/21/20 ²⁰	レッシムスー・レー Narasimhulu Dharanikumar Kotte

Each Inventor: Please Sign and Date Below: