PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4989976

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHANGHUN YU	04/26/2018
WONJIN KIM	04/26/2018
HYUNSIK KIM	04/30/2018
SUNHO MOON	05/25/2018
MINWOOK AHN	05/18/2018
RAKIE KIM	04/26/2018
KYOUNGSOO CHO	04/26/2018
PARICHAY KAPOOR	04/30/2018
WON-SUB KIM	05/18/2018
JIN-HYO KIM	04/26/2018
HYUNGHOON KIM	04/26/2018
JISU OH	04/30/2018
KEONGHO LEE	04/26/2018
SEUNG-BEOM LEE	04/26/2018
JINSEOK LEE	04/26/2018
DONG-GI JANG	05/11/2018
SUBIN JO	04/26/2018

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU
City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15781316

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.

504943230 REEL: 046290 FRAME: 0914

Phone: 202-293-0804

Email: usdocketing@jeffersonip.com
Correspondent Name: JEFFERSON IP LAW, LLP

Address Line 1: 1130 CONNECTICUT AVE., NW, SUITE 420

Address Line 4: WASHINGTON, D.C. 20036

ATTORNEY DOCKET NUMBER:	0202-1446
NAME OF SUBMITTER:	JAMES G POHLMAN
SIGNATURE:	/James G POHLMAN/
DATE SIGNED:	06/04/2018

Total Attachments: 47

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PATENT REEL: 046290 FRAME: 0916

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Assignment

WHEREAS, the following inventors, namely 1) Changhun YU, 2) Wonjin KIM, 3) Hyunsik KIM, 4) Sunho MOON, 5) Minwook AHN, 6) Rakie KIM, 7) Kyoungsoo CHO, 8) Nikunj SAUNSHI, 9) Parichay KAPOOR, 10) Pankaj AGARWAL, 11) Won-Sub KIM, 12) Jin-Hyo KIM, 13) Hyunghoon KIM, 14) Jisu OH, 15) Keongho LEE, 16) Seung-Beom LEE, 17) Jinseok LEE, 18) Dong-Gi JANG, 19) Subin JO, and 20) Apoorv KANSAL (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

METHOD AND APPARATUS FOR SYSTEM RESOURCE MANAGEMENT.

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on June 4, 2018 and assigned Serial No. 15/781,316; and,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-10, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors do hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and all other foreign countries, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any other foreign country application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignors if this safe, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignee's expense:

- a. to execute:
 - all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
 - all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional,

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CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignors hereby authorize and request the United States Patent and Trademark Office or any other issuing authority to issue any and all Leiters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignors each hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

The provisions of this Assignment are hinding upon Assignors' heirs, legal representatives and/or administrators and assigns.

Assignors hereby grant to the law firm of Jefferson IP Law, LLP of Washington, DC and its attorneys and agents as associated with Customer No. 68103 the authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

Signature of Inventor:	Chouzhor YV	2018, 04, 26
	Changhun YU	Date
Signature of Inventor:	Wanjin KIM	2018,04,26
	Wonjin KIM	Date
Signature of Inventor:		
	Hyunsik KIM	Date
v ,		
Signature of Inventor:		
	Sunho MOON	Date
		e de la companya de l
Signature of Inventor:		
	Minwook AHN	Date
Signature of Inventor:	KIM RAKIE	2018-4-26
	Rakie KIM	Date
Signature of Inventor:	CHO Kyoung Goo	2018-4-26
•	Kyoungsoo CHO	Date
4.		
Signature of Inventor:		
	Nikunj SAUNSHI	Date
Signature of Inventor:		
	Parichay KAPOOR	Date

Signature of Inventor:		
	Pankaj AGARWAL	Date
Signature of Inventor:		
	Won-Sub KIM	Date
Signature of Inventor:		
	Jin-Hyo KIM	Date
Signature of Inventor:		
	Hyunghoon KIM	Date
Signature of Inventor:		
	Jisu OH	Date
Signature of Inventor:	Keongho LEE	
	Keongho LEE	Date
Signature of Inventor:	Seung-Beom LEE	
Signatura of Inventor	•	
Signature of Inventor:	Jinseok LEE	Date
Signature of Inventor:		
Signature of inventor.	Dong-Gi JANG	

Signature of Inventor:			
	Subin JO	Date	
Signature of Inventor:			

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Assignment

WHEREAS, the following inventors, namely 1) Changhun YU, 2) Wonjin KIM, 3) Hyunsik KIM, 4) Sunho MOON, 5) Minwook AHN, 6) Rakie KIM, 7) Kyoungsoo CHO, 8) Nikunj SAUNSHI, 9) Parichay KAPOOR, 10) Pankaj AGARWAL, 11) Won-Sub KIM, 12) Jin-Hyo KIM, 13) Hyunghoon KIM, 14) Jisu OH, 15) Keongho LEE, 16) Seung-Beom LEE, 17) Jinseok LEE, 18) Dong-Gi JANG, 19) Subin JO, and 20) Apoorv KANSAL (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

METHOD AND APPARATUS FOR SYSTEM RESOURCE MANAGEMENT,

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on __June 4, 2018 _____, and assigned Serial No. _15/781,316 ___; and,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors do hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and all other foreign countries, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any other foreign country application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignors if this sale, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignee's expense:

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 - ii. all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional,

1

PATENT REEL: 046290 FRAME: 0922

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- c. to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
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Assignors each hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

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Signature of Inventor:		
	Changhun YU	Date
Signature of Inventor:		
	Wonjin KIM	Date.
Signature of Inventor:	L	2018,4,30
	Hyunsik KIM	Date
Signature of Inventor:		
	Sunho MOON	Date
Signature of Inventor:		
	Minwook AHN	Date
Signature of Inventor:		
	Rakie KIM	Date
Signature of Inventor:		
	Kyoungsoo CHO	Date
Signature of Inventor:		
	Nikunj SAUNSIII	Date
Signature of Inventor:	- trainer or g	2018-04-30
	Parichav KAPOOR	Date

Signature of Inventor:		
	Pankaj AGARWAL	Date
Signature of Inventor:		
	Won-Sub KIM	Date
Signature of Inventor:		
	Jin-Hyo KIM	Date
Signature of Inventor:		
	Hyunghoon KIM	Date
Signature of Inventor:		
	Jisu OH	Date
Signature of Inventor:	V LEE	Data
	Keongho LEE	Date
Signature of Inventor:	Seung-Beom LEE	
	Scung-Beom EEE	Bute
Signature of Inventor:	Jinseok LEE	
	Gambur 11111	Date
Signature of Inventor:	Dong-Gi JANG	<u></u>

Signature of Inventor:			
	Subin JO	Date	
Signature of Inventor:			

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Assignment

WHEREAS, the following inventors, namely 1) Changhun YU, 2) Wonjin KIM, 3) Hyunsik KIM, 4) Sunho MOON, 5) Minwook AHN, 6) Rakie KIM, 7) Kyoungsoo CHO, 8) Nikunj SAUNSHI, 9) Parichay KAPOOR, 10) Pankaj AGARWAL, 11) Won-Sub KIM, 12) Jin-Hyo KIM, 13) Hyunghoon KIM, 14) Jisu OH, 15) Keongho LEE, 16) Seung-Beom LEE, 17) Jinseok LEE, 18) Dong-Gi JANG, 19) Subin JO, and 20) Apoorv KANSAL (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

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1

PATENT REEL: 046290 FRAME: 0927

CLIENT REF.: **SP16387-PCT/US_DMC** SAMSUNG REF.: **MK-201510-002-1-US0**

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
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Signature of Inventor:		
	Changhun YU	Date
Signature of Inventor:		
	Wonjin KIM	Date
Signature of Inventor:		
	Hyunsik KIM	Date
Signature of Inventor:		7018.5.25
Signature of Inventor:	Sunho MOON	Date
	Minwook AHN	Date
Signature of Inventor:		
	Rakie KIM	Date
Signature of Inventor:		
	Kyoungsoo CHO	Date
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Signature of Inventor:		
	Hyunghoon KIM	Date
Signature of Inventor:		
	Jisu OH	Date
Signature of Inventor:		
	Keongho LEE	Date
Signature of Inventor:	Comp. Doors I EE	
	Seung-Beom LEE	Date
Signature of Inventor:	ELEE	
	Jinseok LEE	Date
Signature of Inventor:	Dong-Gi JANG	
	DITAL ID-ZIIVA	Dail

Signature of Inventor:	Subin JO	 Date
Signature of Inventor:		

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

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1

PATENT REEL: 046290 FRAME: 0932

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
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Signature of inventor:		
	Chaughun YU	Date
Signature of Inventor:		
	Wonjin KIM	Date
Signature of Inventor:		
	Hyunsik KIM	Date

Signature of Inventor:		
	Sanho MOON	Date
Signature of Inventor:	対する十と Minwook AHN	>>\l8 \$ 18
	Minwook AHN	Date
Signature of Inventor:		
	Rakie KIM	Date
Signature of Inventor:		
	Kyoungsoo CHO	Date
Signature of Inventor:		
	Nikunj SAUNSIII	Date
Signature of Inventor:		
	Parichay KAPOOR	Date

Signature of Inventor:		
	Pankaj AGARWAL	Date
Signature of Inventor:		
	Won-Sub KIM	Date
Signature of Inventor:		
	Jin-Hyo KIM	Date
Signature of Inventor:		
	Hyunghoon KIM	Date
Signature of Inventor:		
	Jisu OH	Date
Signature of Inventor:	V LEE	Data
	Keongho LEE	Date
Signature of Inventor:	Seung-Beom LEE	
	Scung-Beom EEE	Bute
Signature of Inventor:	Jinseok LEE	
	Gambur 11111	Date
Signature of Inventor:	Dong-Gi JANG	<u></u>

Signature of Inventor:			
	Subin JO	Date	
Signature of Inventor:			

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Assignment

WHEREAS, the following inventors, namely 1) Changhun YU, 2) Wonjin KIM, 3) Hyunsik KIM, 4) Sunho MOON, 5) Minwook AHN, 6) Rakie KIM, 7) Kyoungsoo CHO, 8) Nikunj SAUNSHI, 9) Parichay KAPOOR, 10) Pankaj AGARWAL, 11) Won-Sub KIM, 12) Jin-Hyo KIM, 13) Hyunghoon KIM, 14) Jisu OH, 15) Keongho LEE, 16) Seung-Beom LEE, 17) Jinseok LEE, 18) Dong-Gi JANG, 19) Subin JO, and 20) Apoorv KANSAL (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

METHOD AND APPARATUS FOR SYSTEM RESOURCE MANAGEMENT,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors do hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and all other foreign countries, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any other foreign country application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignors if this sale, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignee's expense:

- a. to execute:
 - all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
 - ii. all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional,

1

PATENT REEL: 046290 FRAME: 0937

CLIENT REF.: **SP16387-PCT/US_DMC** SAMSUNG REF.: **MK-201510-002-1-US0**

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- c. to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignors hereby authorize and request the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignors each hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

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Signature of Inventor:		
	Pankaj AGARWAL	Date
Signature of Inventor:	M24	2018 .05 , 18
	Won-Sub KIM	Date
Signature of Inventor:		
	Jin-Hyo KIM	Date
Signature of Inventor:		
	Hyunghoon KIM	Date
Signature of Inventor:		
	Jisu OH	Date
Signature of Inventor:		
	Keongho LEE	Date
Signature of Inventor.		
	Seung-Beom LEE	Date
Signature of Inventor:		
	Jinseok LEE	Date
Signature of Inventor.		
	Dong-Gi JANG	Date

Signature of Inventor:			
	Subin JO	Date	
Signature of Inventor:			

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

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METHOD AND APPARATUS FOR SYSTEM RESOURCE MANAGEMENT.

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on ______, and assigned Serial No. 15/781,316____; and,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

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1

PATENT REEL: 046290 FRAME: 0942

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- c. to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignors hereby authorize and request the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

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Signature of Inventor:		
	Changhun YU	Date
Signature of Inventor:		
	Wonjin KIM	Date
Signature of Inventor:		
	Hyunsik KIM	Date
Signature of Inventor:		
	Sunho MOON	Date
Signature of Inventor:		
	Minwook AHN	Date
Signature of Inventor:		
	Rakie KIM	Date
Signature of Inventor:		
	Kyoungsoo CHO	Date
Signature of Inventor:		
	Nikunj SAUNSHI	Date
Signature of Inventor:		
	Parichay KAPOOR	Date

DOCKET NO.: 8:	202-1446
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CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Signature of Inventor:		
•	Pankaj AGARWAL	Date
Signature of Inventor:		
	Won-Sub KIM	Date
Signature of Inventor:	Jon-Hyo KIM	2018,04,26
•	Jin-Hyo KIM	Date
Signature of Inventor:	Hyunghoon KIM	2018-4,26
	Hyunghoon KIM	Date
Signature of Inventor:		
	Jisu OH	Date
Signature of Inventor:	LECKEOND HO	2018. 15.26
* * * * * * * * * * * * * * * * * * *	Keongho LEE	Date
Signature of Inventor:	LEE SEUNCY THOM	3= (8 4 16
,	Seong-Beom LEE	Date
Signature of Inventor:	LEE, 7245 EOK	2016.4.76.
	Jinseok LEE	Date
Signature of Inventor:		
	Dong-Gi JANG	Date

4

Signature of Inventor:				
	Subin JO	Date		
Signature of Inventor:				

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

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METHOD AND APPARATUS FOR SYSTEM RESOURCE MANAGEMENT,

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on __June 4, 2018 _____, and assigned Serial No. _15/781,316 __; and,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

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1

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
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Changhun YU	Date
Wonjin KIM	Date
Hyunsik KIM	Date
Sunho MOON	Date
Minwook AHN	Date
D.P. KIM	
Rakie Kivi	Date
Kyoungsoo CHO	
Kyoungsoo CHO	Duic
Nikuni SAUNSHI	
rmanj bisoribini	Duic
Parichay KAPOOR	
	Wonjin KIM

CLIENT REF.: SP16387-PC1/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Signature of Inventor:			
	Pankaj AGARWAL		Etot
	z museril (44 21, 227 44 1, 277)		Date
Signature of Inventor			
	Won-Sub KIM		Date
Signature of Inventor:			
	Jin-Hyo KIM	***************************************	Date
			L. C. C.
Signature of Inventor:			
			es
	Hyunghoon KIM		Date
Signature of Inventor:	Jisu OH		04/30/2018
	Jisu OH		Date
Signature of Inventor:			
	Keongho LEE		Date
Signature of Inventor:	· · · · · · · · · · · · · · · · · · ·		
	Seung-Beom LEE		Date
Signature of Inventor:			
	Jinscok LEE		Date
Signature of Inventor:			
	Dong-Gi JANG		Date

PATENT

Signature of Inventor:			
	Subin JO	Date	_
Signature of Inventor:			

Apoorv KANSAL

DOCKET NO.: 0202-1446

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Date

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METHOD AND APPARATUS FOR SYSTEM RESOURCE MANAGEMENT.

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CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Signature of Inventor:		
	Changhun YU	Date
Signature of Inventor:		
	Wonjin KIM	Date
Signature of Inventor:		
	Hyunsik KIM	Date
Signature of Inventor:		
	Sunho MOON	Date
Signature of Inventor:	W. LATO	
	Minwook AHN	Date
Signature of Inventor:	Rakie KIM	
	Name Mill	Date
Signature of Inventor:	Kyoungsoo CHO	
Circustum of Louisides.	v	
Signature of Inventor:	Nikunj SAUNSHI	Date
Signature of Inventor:		
organical or inventor.	Parichay KAPOOR	

CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

Signature of Inventor:		
	Pankaj AGARWAL	Date
Signature of Inventor:		
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	Jin-Hyo KIM	Date
Signature of Inventor:		
	Hyunghoon KIM	Date
Signature of Inventor:		
Signature of Inventor:	Jisu OH	Date
	Keongho LEE	Date
Signature of Inventor.		
	Seung-Beom LEE	Date
Signature of Inventor:		
	Jinseok LEE	Date
Signature of Inventor:	MM)	May 11, 2018
	Dava Ci IANC	Date

Signature of Inventor:			
	Subin JO	Date	_
Signature of Inventor:			

Apoorv KANSAL

DOCKET NO.: 0202-1446

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CLIENT REF.: SP16387-PCT/US_DMC SAMSUNG REF.: MK-201510-002-1-US0

continuing, substitute or reissue application thereof, as may be necessary or expedient;

- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- c. to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignors hereby authorize and request the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignors each hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

The provisions of this Assignment are binding upon Assignors' heirs, legal representatives and/or administrators and assigns.

Assignors hereby grant to the law firm of Jefferson IP Law, LLP of Washington, DC and its attorneys and agents as associated with **Customer No. 68103** the authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

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