508006566 07/12/2023

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT8053704

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PRANAV DAYAL	03/26/2021
KEE-BONG SONG	03/26/2021
HOU-SHIN CHEN	04/02/2021
SUNG-EN CHIU	03/30/2021
KARTHIK NAGARAJAN	03/26/2021

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
Postal Code:	16677

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17982504

CORRESPONDENCE DATA

Fax Number: (503)517-9919

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: 503-765-9090

Email: pto@renaissanceiplaw.com

Correspondent Name: RENAISSANCE IP LAW GROUP LLP (PIP)

Address Line 1: 17933 NW EVERGREEN PLACE, SUITE 121

Address Line 4: BEAVERTON, OREGON 97006

ATTORNEY DOCKET NUMBER:	1535-642CON
NAME OF SUBMITTER:	HOSOON LEE
SIGNATURE:	/Hosoon Lee/
DATE SIGNED:	07/12/2023
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 25

source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page1.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page2.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page3.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page4.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page5.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page6.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page7.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page8.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page9.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page10.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page11.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page12.tif source=1535-642CON WB-202011-004-1-US1_Declaration_Assignment_parent#page13.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page14.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page15.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page16.tif source=1535-642CON_WB-202011-004-1-US1_Declaration_Assignment_parent#page17.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page18.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page19.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page20.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page21.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page22.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page23.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page24.tif source=1535-642CON WB-202011-004-1-US1 Declaration Assignment parent#page25.tif

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY OR DESIGN PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title: SYSTEMS, METHODS, AND APPARATUS FOR COMBINED POWER CONTROL OF MULTIPLE TRANSMIT PATHS
for which Assignor is about to make or has made United States or International application for patent.
WHEREAS, as a below named inventor(s), I/(we) hereby declare that:
Section I. Declaration
This declaration is directed to:
The attached U.S. non-provisional patent application, or
U.S. non-provisional patent application number, filed on, or
PCT international patent application number, filed on
The above-identified application was made or authorized to be made by me (us).
I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.
I (we) hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
¹ This form requires the use of an Application Data Sheet.
SEC Ref No. WB-202011-004-1 Attorney Ref No. 1535-642 COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

Page 1 of 5

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

Section II. Assignment

In consideration of and according to the provisions of the Assignor's employment agreement(s), the undersigned hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention or design described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions or designs as described in the aforesaid application, to the aforesaid application itself, and to provisional application(s) Serial No. 63/091,287, filed October 13, 2020, and Serial No. 63/148,127, filed February 10, 2021, to which the aforesaid application claims priority, and to all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application or provisional, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

SEC Ref No.	WB-202011-004-1	Attorney Ref No.	1535-642
		- ·	

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of Renaissance IP Law Group LLP the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	DAYAL	Pranav	
SIGNATURE	/Pranav Dayal/	DATE	03/26/2021

SEC Ref No.	WB-202011-004-1	Attorney Ref No.	1535-642

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SECOND INVENTOR/ASSIGNOR	SONG	Kee-Bong	
SIGNATURE		DATE	
		_	
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	CHEN	Hou-Shin	
SIGNATURE		DATE	1
_			
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	СНІИ	Sung-En	
SIGNATURE		DATE	
SIGNATURE		_	
SEC Ref No. WB-2		Attorney Ref No.	1535-642

LEGAL NAME OF FIFTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	NAGARAJAN	Karthik	
SIGNATURE		DATE	

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 5 of 5

PATENT

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY OR DESIGN PATENT APPLICATION AND ASSIGNMENT FORM¹

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WHEREA	S, as a below named inventor(s), I/(we) hereby declare that:
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	PCT international patent application number, filed on
The abov	ve-identified application was made or authorized to be made by me (us).
	lieve that I am (we are) the original inventor (original joint inventors) of a claimed in the above-identified application.
	reby acknowledge that any willful false statement made in this declaration is ble under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or
¹ This for	m requires the use of an Application Data Sheet.
SEC Ref	No. WB-202011-004-1 Attorney Ref No. 1535-642
COMBII	NED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

Page 1 of 5

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Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention or design described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions or designs as described in the aforesaid application, to the aforesaid application itself, and to provisional application(s) Serial No. 63/091,287, filed October 13, 2020, and Serial No. 63/148,127, filed February 10, 2021, to which the aforesaid application claims priority, and to all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application or provisional, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

SEC Ref No.	WB-202011-004-1	Attorney Ref No.	1535-642
-			

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 2 of 5

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

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Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	DAYAL	Pranav	
SIGNATURE		DATE	

SEC Ref No.	WB-202011-004-1	Attorney Ref No.	1535-642

SEC Ref No W	B-202011-004-1	Attorney Ref No.	1535-642
SIGNATURE		DATE —	
INVENTOR/ASSIGNOR	CHIU	Sung-En	
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SIGNATURE		——————————————————————————————————————	
		DATE	
THIRD INVENTOR/ASSIGNOR	CHEN	Hou-Shin	
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SIGNATURE		_	
CICNATURE	/Kee-Bong Song/	DATE	3/26/2021
INVENTOR/ASSIGNOR	SONG	Kee-Bong	
LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name

Page 4 of 5 **PATENT**

LEGAL NAME OF FIFTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	NAGARAJAN	Karthik	
SIGNATURE		DATE	

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
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PATENT

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SEC Ref	No. WB-202011-004-1 Attorney Ref No. 1535-642			
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COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

Page 2 of 5

PATENT

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Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	DAYAL	Pranav	
SIGNATURE		DATE -	

SEC Ref No. _____ **WB-202011-004-1** Attorney Ref No. _____ **1535-642**

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 3 of 5

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SECOND INVENTOR/ASSIGNOR	SONG	Kee-Bong	
1		DATE	
SIGNATURE _		_	
150AL NAME OF	5 11 N	F: + C: N	c to N
LEGAL NAME OF THIRD	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	CHEN	Hou-Shin	
	/Hou-Shin Chen/		
SIGNATURE _		DATE	04/02/2021
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	CHIU	Sung-En	
		DATE	
SIGNATURE _		_	

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIFTH INVENTOR/ASSIGNOR	NAGARAJAN	Karthik	
SIGNATURE		DATE	

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 5 of 5

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Section I	. Declaration	on			
This decl	aration is di	rected to:			
	The a	attached U.S. non-provisio	onal patent application, or		
		U.S. non-provisional patent application number, filed on, or			
		nternational patent applic	ation number	, filed on	
The abov	ve-identified	l application was made or	authorized to be made by	me (us).	
		am (we are) the original ir ve-identified application.	nventor (original joint inver	ntors) of a claimed	
	•	•	se statement made in this or prisonment of not more th		
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		WB-202011-004-1	Attorney Ref No		

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INVENTOR/ASSIGNOR	DAYAL	Pranav	
SIGNATURE _		DATE	

SEC Ref No.	WB-202011-004-1	Attorney Ref No.	1535-642

SEC Ref No. WI	202011 004 1	Attorney Ref No.	1535-642
SIGNATURE	/Sung-En Chiu/	DATE —	03.30.2021
FOURTH INVENTOR/ASSIGNOR	CHIU	Sung-En	
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SIGNATURE		——————————————————————————————————————	
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THIRD INVENTOR/ASSIGNOR	CHEN	Hou-Shin	
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SIGNATURE		_	
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LEGAL NAME OF	Family Name	First Given Name	Second Given Name

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LEGAL NAME OF FIFTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	NAGARAJAN	Karthik	
SIGNATURE		DATE	

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
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COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY OR DESIGN PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title:	SYSTEMS, METHODS, AND APPARATUS FOR COMBINED POWER CONTROL OF MULTIPLE TRANSMIT PATHS				
for which	h Assig	nor is about to make or has mad	le United States or Intern	ational application for	
WHEREA	AS, as a	below named inventor(s), I/(we	e) hereby declare that:		
Section	l. Dec	aration			
This dec	laratio	n is directed to:			
	\boxtimes	The attached U.S. non-provision	nal patent application, or		
	U.S. non-provisional patent application number, filed on, or				
		PCT international patent applica	tion number	, filed on	
The abov	ve-idei	ntified application was made or a	authorized to be made by	me (us).	
		hat I am (we are) the original inversion and the constitution and the constitution are the constitution.	rentor (original joint inve	ntors) of a claimed	
	•	cknowledge that any willful false Ier 18 U.S.C. 1001 by fine or imp			
¹ This for	m requi	res the use of an Application Data Shee	et.		
SEC Ref	No	WB-202011-004-1	Attorney Ref No.	1535-642	

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I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

Section II. Assignment

In consideration of and according to the provisions of the Assignor's employment agreement(s), the undersigned hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention or design described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions or designs as described in the aforesaid application, to the aforesaid application itself, and to provisional application(s) Serial No. 63/091,287, filed October 13, 2020, and Serial No. 63/148,127, filed February 10, 2021, to which the aforesaid application claims priority, and to all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application or provisional, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

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Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of **Renaissance IP Law Group LLP** the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	DAYAL	Pranav	
SIGNATURE		DATE	

SEC Ref No. _____ **WB-202011-004-1** Attorney Ref No. _____ **1535-642**

SEC Ref No.	WB-2	202011-004-1	Attorney Ref No.	1535-642
SIGNAT	URE		DATE —	E
FOURTH INVENTOR/ASSIGI	NOR	СНІИ	Sung-En	
LEGAL NAME O)F	Family Name	First Given Name	Second Given Name
SIGNAT	URE		DATE —	:
INVENTOR/ASSIGI	NOR	CHEN	Hou-Shin	
LEGAL NAME O)F	Family Name	First Given Name	Second Given Name
SIGNAT				
SICNIAT	TIDE		DATE	<u> </u>
INVENTOR/ASSIG	NOR	SONG	Kee-Bong	
LEGAL NAME O SECOND)F	Family Name	First Given Name	Second Given Name

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LEGAL NAME OF FIFTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	NAGARAJAN	Karthik	
SIGNATURE	/Karthik Nagarajan/	DATE	03/26/2021

SEC Ref No. WB-202011-004-1 Attorney Ref No. 1535-642

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