

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7716218

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC.	12/05/2022
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: 17	
Property Type	Number
Application Number:	16758046
Application Number:	17672880
Application Number:	16964967
Application Number:	16964949
Application Number:	17875411
Application Number:	17185683
Application Number:	17697811
Application Number:	17223419
Application Number:	17885506
Application Number:	17282745
Application Number:	17870809
Application Number:	17333887
Application Number:	17244083
Application Number:	17348260
Application Number:	17868724
Application Number:	17088110
Application Number:	17716956
CORRESPONDENCE DATA	
Fax Number:	(202)293-7860
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent</i>	
PATENT	

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2022937060
Email: sughrue@sughrue.com,tbyars@sughrue.com
Correspondent Name: SUGHRUE MION, PLLC
Address Line 1: 2000 PENNSYLVANIA AVENUE, NW
Address Line 2: SUITE 9000
Address Line 4: WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER:	Q283454
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NAME OF SUBMITTER:	TONNIE L. BYARS
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SIGNATURE:	/Tonnie L. Byars/
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DATE SIGNED:	12/28/2022
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Total Attachments: 4

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ASSIGNMENT OF PATENT RIGHTS

For good and valuable consideration, the receipt of which is hereby acknowledged, WILUS Institute of Standards and Technology Inc., a Korean corporation, with a principal place of business at 5th Fl., 216 Hwangsaek-ro Bundang-gu, Seongnam-si, Gyeonggi-do, 13595, the Republic of Korea ("Assignor"), does hereby sell, assign, transfer, and convey unto Samsung Electronics Co. Ltd., a corporation organized under the laws of Korea, having its registered office at 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677, the Republic of Korea (the "Assignee"), all right, title, and interest that exist today and may exist in the future in and to any of the following (collectively, the "Assigned Patent Rights"):

- (a) all patents and patent applications listed in the table below in Schedule I (each a "Listed Patent", collectively the "Listed Patents");
- (b) all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of such Listed Patents (whether pending, issued, abandoned or filed prior to, on or after the execution date of this Assignment of Patent Rights);
- (c) all patents and patent applications (i) to which any Listed Patent directly or indirectly claims priority to, or the benefit of, the filing date, and/or (ii) for which any Listed Patent directly or indirectly forms a basis for priority or otherwise provides the benefit of an earlier filing date; and all foreign counterparts to any or all of the foregoing;
- (d) inventions, invention disclosures, and discoveries claimed in any of the Listed Patents and/or any item in the foregoing categories (b) through (c);
- (e) all rights to apply in any or all countries of the world for patents, certificates of invention, utility models, or other governmental grants or issuances of any type related to any item in any of the foregoing categories (a) through (e), including, without limitation, under the Paris Convention for the Protection of Industrial Property, the International Patent Cooperation Treaty, or any other convention, treaty, agreement, or understanding; and
- (f) causes of action and enforcement rights of any kind under, or on account of, any of the Listed Patents and/or any of the items described in either of the foregoing categories (b) to (e), including but not limited to, all causes of action, enforcement rights and all other rights to seek and obtain any other remedies of any kind for past, current, and future infringement.

Assignor hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all future patents, certificates of invention, utility models or other governmental grants or issuances that may be granted upon any of the Assigned Patent Rights in the name of Assignee, as the assignee to the entire interest therein.

Assignor will, at the reasonable request of Assignee, take all reasonable steps necessary and proper, to confirm the assignment to Assignee of the Assigned Patent Rights pursuant to this

Assignment of Patent Rights, including but not limited to, the execution, acknowledgement, and recordation of specific assignments, oaths, declarations, and other documents on a country-by-country basis, to assist Assignee in obtaining and perfecting the Assigned Patent Rights.

The terms and conditions of this Assignment will inure to the benefit of Assignee, its successors, assigns, and other legal representatives and will be binding upon Assignor, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF, each of the parties has caused this Assignment of Patent Rights to be executed by its duly authorized representatives as of December 5, 2022.

ASSIGNOR:

WILUS Institute of Standards and Technology Inc.

By: _____

Name: _____

Title: _____

ASSIGNEE:

Samsung Electronics Co., Ltd.

By: _____

Name: _____

Title: _____

Schedule 1

List of Assigned Patents

#	Country	Filing No.	Filing Date	Publication No.	Patent No.	Inventor	Status
1	US	US16/758046	2020.4.22	US20210037259	US11284108	G.J.Ko, D.C.Kim, J.H.Son, J.H.Jung, J.S.Kwak	Issued
2	US	US17/672880	2022.2.16	US20220174315		G.J.Ko, D.C.Kim, J.H.Son, J.H.Jung, J.S.Kwak	Filed
3	US	US16/964967	2020.7.24	US20210051329		G.J.Ko, J.H.Son, D.C.Kim, J.S.Kwak	NOA
4	US	US16/964949	2020.7.24	US20210044808	US11451791	D.C.Kim, G.J.Ko, J.H.Jung, J.H.Son, J.S.Kwak	Issued
5	US	US17/875411	2022.7.28			D.C.Kim, G.J.Ko, J.H.Jung, J.H.Son, J.S.Kwak	Filed
6	US	US17/185683	2021.2.25	US20210185358	US11317118	J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	Issued
7	US	US17/697811	2022.3.17	US20220210474		J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	NOA
8	US	US17/223419	2021.4.6	US20210227213	US11470306	D.C.Kim, G.J.Ko, J.H.Jung, J.H.Son, J.S.Kwak	Issued
9	US	US17/885506	2022.8.10			D.C.Kim, G.J.Ko, J.H.Jung, J.H.Son, J.S.Kwak	Filed
10	US	US17/282745	2021.4.2	US20220007027	US11438596	D.C.Kim, G.J.Ko, J.H.Jung, J.H.Son, J.S.Kwak	Issued

#	Country	Filing No.	Filing Date	Publication No.	Patent No.	Inventor	Status
11	US	US17/870809	2022.7.21	US20220360786		D.C.Kim, G.J.Ko, J.H.Jung, J.H.Son, J.S.Kwak	Filed
12	US	US17/333887	2021.5.28	US20210289197		G.J.Ko, D.C.Kim, J.H.Son, J.H.Jung, J.S.Kwak	NOA
13	US	US17/244083	2021.4.29	US20210250622		J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	NOA
14	US	US17/348260	2021.6.15	US20210321136	US11432013	J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	Issued
15	US	US17/868724	2022.7.19			J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	Filed
16	US	US17/088110	2020.11.3	US20210076070	US11330302	J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	Issued
17	US	US17/716956	2022.4.8	US20220239948		J.H.Jung, J.H.Son, D.C.Kim, G.J.Ko, J.S.Kwak	Filed