

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4793522

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SUMAN BASU	01/08/2018
KRISHNAN S. HARIHARAN	01/08/2018
TAE WON SONG	01/19/2018
RECEIVING PARTY DATA	
Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU, GYEONGGI-DO, 16677
City:	SUWON-SI
State/Country:	KOREA, REPUBLIC OF
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15879833
CORRESPONDENCE DATA	
Fax Number:	(202)315-3758
<i>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.</i>	
Phone:	202-429-0020
Email:	pto@nsiplaw.com
Correspondent Name:	NSIP LAW
Address Line 1:	P.O. BOX 65745
Address Line 4:	WASHINGTON, D.C. 20035
ATTORNEY DOCKET NUMBER:	012052.1561
NAME OF SUBMITTER:	S. MAHMOOD AHMAD
SIGNATURE:	/S. Mahmood Ahmad/
DATE SIGNED:	01/25/2018
Total Attachments: 4	
source=NewApp_0120521561_AssignmentExecuted#page1.tif	
source=NewApp_0120521561_AssignmentExecuted#page2.tif	
source=NewApp_0120521561_AssignmentExecuted#page3.tif	
source=NewApp_0120521561_AssignmentExecuted#page4.tif	

COMBINED DECLARATION AND ASSIGNMENT UNDER 37 CFR 1.63(e)

DECLARATION

As a below-named inventor, I hereby declare that this declaration is directed to the application attached hereto, or to United States Application Number or PCT International Application Number _____ filed on _____ (if applicable), entitled:

METHOD AND APPARATUS TO PREDICT CAPACITY FADE RATE OF BATTERY

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the above-identified application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information that became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

ASSIGNMENT

For valuable consideration, I, as a below-named assignor, hereby assign to:

Samsung Electronics Co., Ltd.
129, Samsung-ro, Yeongtong-gu
Suwon-si, Gyeonggi-do, 16677
Republic of Korea

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title, and interest throughout the world in the inventions and improvements that are the subject of the application identified in the above declaration, which is United States Application Number or PCT International Application Number 15/879,833 filed on January 25, 2018.

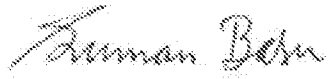
I authorize and request the attorneys appointed in the above-identified application to hereafter complete this Assignment by inserting above the application number and the filing date of the above-identified application when known, and to correct any typographical errors that may be discovered in this Assignment.

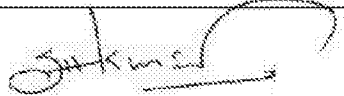
This Assignment includes the above-identified application, any and all United States and foreign patents, utility models, and design registrations granted for any of the inventions and improvements that are the subject of the above-identified application, and the right to claim priority based on the filing date of the above-identified application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations, like rights of exclusion, and inventors' certificates for any of the inventions and improvements that are the subject of the above-

COMBINED DECLARATION AND ASSIGNMENT UNDER 37 CFR 1.63(e)

identified application; and I agree for myself and my heirs, legal representatives, and assigns without further compensation to perform such lawful acts and to sign such further applications, Assignments, preliminary statements, and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

In witness whereof, I, as a below-named inventor and assignor, intending to be legally bound, have hereunto affixed my signature on the date indicated below next to my signature.

Inventor's Legal Name	Suman BASU		
Inventor's Signature		Date	08-January-2018
Residence (City, Country)	Bangalore, India		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

Inventor's Legal Name	Krishnan S HARIHARAN		
Inventor's Signature		Date	08 Jan 2018
Residence (City, Country)	Bangalore, India		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

Inventor's Legal Name	Tae Won SONG		
Inventor's Signature		Date	
Residence (City, Country)	Gyeonggi-do, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

COMBINED DECLARATION AND ASSIGNMENT UNDER 37 CFR 1.63(e)

DECLARATION

As a below-named inventor, I hereby declare that this declaration is directed to the application attached hereto, or to United States Application Number or PCT International Application Number _____ filed on _____ (if applicable), entitled:

METHOD AND APPARATUS TO PREDICT CAPACITY FADE RATE OF BATTERY

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the above-identified application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information that became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

ASSIGNMENT

For valuable consideration, I, as a below-named assignor, hereby assign to:

Samsung Electronics Co., Ltd.
129, Samsung-ro, Yeongtong-gu
Suwon-si, Gyeonggi-do, 16677
Republic of Korea

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title, and interest throughout the world in the inventions and improvements that are the subject of the application identified in the above declaration, which is United States Application Number or PCT International Application Number _____ filed on _____.

I authorize and request the attorneys appointed in the above-identified application to hereafter complete this Assignment by inserting above the application number and the filing date of the above-identified application when known, and to correct any typographical errors that may be discovered in this Assignment.

This Assignment includes the above-identified application, any and all United States and foreign patents, utility models, and design registrations granted for any of the inventions and improvements that are the subject of the above-identified application, and the right to claim priority based on the filing date of the above-identified application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations, like rights of exclusion, and inventors' certificates for any of the inventions and improvements that are the subject of the above-

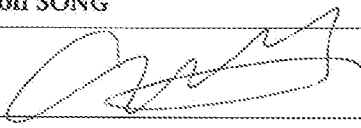
COMBINED DECLARATION AND ASSIGNMENT UNDER 37 CFR 1.63(e)

identified application; and I agree for myself and my heirs, legal representatives, and assigns without further compensation to perform such lawful acts and to sign such further applications, Assignments, preliminary statements, and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

In witness whereof, I, as a below-named inventor and assignor, intending to be legally bound, have hereunto affixed my signature on the date indicated below next to my signature.

Inventor's Legal Name	Suman BASU		
Inventor's Signature		Date	
Residence (City, Country)	Bangalore, India		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

Inventor's Legal Name	Krishnan S HARIHARAN		
Inventor's Signature		Date	
Residence (City, Country)	Bangalore, India		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

Inventor's Legal Name	Tae Won SONG		
Inventor's Signature		Date	Jan. 19th. 2018.
Residence (City, Country)	Gyeonggi-do, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		