

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Jun Haeng LEE</td> <td>07/19/2012</td> </tr> <tr> <td>Chang-Woo SHIN</td> <td>07/19/2012</td> </tr> <tr> <td>Hyun Surk RYU</td> <td>07/19/2012</td> </tr> <tr> <td>Keun Joo PARK</td> <td>07/19/2012</td> </tr> </tbody> </table>	Name	Execution Date	Jun Haeng LEE	07/19/2012	Chang-Woo SHIN	07/19/2012	Hyun Surk RYU	07/19/2012	Keun Joo PARK	07/19/2012	
Name	Execution Date										
Jun Haeng LEE	07/19/2012										
Chang-Woo SHIN	07/19/2012										
Hyun Surk RYU	07/19/2012										
Keun Joo PARK	07/19/2012										
RECEIVING PARTY DATA											
Name:	Samsung Electronics Co., Ltd.										
Street Address:	416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742										
City:	Suwon-si										
State/Country:	KOREA, REPUBLIC OF										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13555382</td> </tr> </tbody> </table>	Property Type	Number	Application Number:	13555382							
Property Type	Number										
Application Number:	13555382										
CORRESPONDENCE DATA											
Fax Number:	2023153758										
Phone:	202-429-0020										
Email:	info@nsiplaw.com										
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
Correspondent Name:	NSIP LAW										
Address Line 1:	P.O. Box 34688										
Address Line 4:	Washington, DISTRICT OF COLUMBIA 20043										
ATTORNEY DOCKET NUMBER:	012052.0090										
NAME OF SUBMITTER:	Christopher R. Monday										
Total Attachments: 2 source=NewApp_0120520090_Assignment#page1.tif source=NewApp_0120520090_Assignment#page2.tif											

OP \$40.00 13555382

ASSIGNMENT

For valuable consideration, we,

Jun Haeng LEE	#354-801 Sibeom Daeun Maeul Unam Firstvill Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do 445-734, Republic of Korea
Chang Woo SHIN	#421-103 Solbit Maeul Seoheagrangbl Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do 445-758, Republic of Korea
Hyun Surk RYU	# 102-2501 Dongyang Paragon 1-Cha Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do 445-160, Republic of Korea
Keun Joo PARK	728-4, Irwonbon-dong, Gangnam-gu, Seoul 135-942, Republic of Korea

hereby assign to:

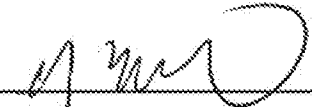
SAMSUNG ELECTRONICS CO., LTD., a Republic of Korea

corporation/institution/foundation/institute having principal executive office(s) or place
of business at: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742,
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 which are subject of U.S. Patent Application Number 13/555,382 filed July 23, 2012 at the U.S. Patent & Trademark Office signed by us, with title **NEURAL WORKING MEMORY DEVICE**, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and application serial number of said application when known; this Assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said 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 we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective 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 TESTIMONY/WITNESS WHEREOF, we, undersigned inventors (Assignors) intending to be legally bound, have hereto affixed our signatures.

This 19th day of July, 2012


Signature: **Jun Haeng LEE**


This 19th day of July, 2012


Signature: **Chang-Woo SHIN**

This 19th day of July, 2012


Signature: **Hyun Surk RYU**

This 19th day of July, 2012


Signature: **Keun Joo PARK**