

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT																
NATURE OF CONVEYANCE:	Corrective Assignment to correct the typographical error in the 3rd inventor's name in the original assignment document and replace the original assignment document previously recorded on Reel 024665 Frame 0070. Assignor(s) hereby confirms the assignment to Samsung Electronics Co., Ltd.																
CONVEYING PARTY DATA																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Jea Shik SHIN</td> <td>06/30/2010</td> </tr> <tr> <td>Dal AHN</td> <td>06/30/2010</td> </tr> <tr> <td>Duck Hwan KIM</td> <td>06/30/2010</td> </tr> <tr> <td>In Sang SONG</td> <td>06/30/2010</td> </tr> <tr> <td>Chul Soo KIM</td> <td>06/30/2010</td> </tr> <tr> <td>Yun Kwon PARK</td> <td>06/30/2010</td> </tr> <tr> <td>Hyung Rak KIM</td> <td>06/30/2010</td> </tr> </tbody> </table>		Name	Execution Date	Jea Shik SHIN	06/30/2010	Dal AHN	06/30/2010	Duck Hwan KIM	06/30/2010	In Sang SONG	06/30/2010	Chul Soo KIM	06/30/2010	Yun Kwon PARK	06/30/2010	Hyung Rak KIM	06/30/2010
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CORRESPONDENCE DATA																	
Fax Number:	2023153758																
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																	
Phone:	2024290020																
Email:	info@nsiplaw.com																
Correspondent Name:	Randall Svihla																
Address Line 1:	NSIP Law																
Address Line 2:	P.O. Box 65745																
Address Line 4:	Washington, DISTRICT OF COLUMBIA 20035																

OP \$40.00 12834130

ATTORNEY DOCKET NUMBER:	012052.0352
NAME OF SUBMITTER:	Randall Svihla
<p>Total Attachments: 11</p> <p>source=NOA20121210_0120520352_Assignment#page1.tif</p> <p>source=NOA20121210_0120520352_Assignment#page2.tif</p> <p>source=NOA20121210_0120520352_Assignment#page3.tif</p> <p>source=NOA20121210_0120520352_Assignment#page4.tif</p> <p>source=NOA20121210_0120520352_Assignment#page5.tif</p> <p>source=NOA20121210_0120520352_Assignment#page6.tif</p> <p>source=NOA20121210_0120520352_Assignment#page7.tif</p> <p>source=NOA20121210_0120520352_Assignment#page8.tif</p> <p>source=NOA20121210_0120520352_Assignment#page9.tif</p> <p>source=NOA20121210_0120520352_CoverSheet#page1.tif</p> <p>source=NOA20121210_0120520352_CoverSheet#page2.tif</p>	

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT																
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Fax Number: (202)315-3758 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 202-429-0020 Email: info@nsiplaw.com Correspondent Name: North Star Intellectual Property Law, PC Address Line 1: P.O. Box 34688 Address Line 4: Washington, DISTRICT OF COLUMBIA 20043																	
ATTORNEY DOCKET NUMBER:	12000.SMG.0668																
NAME OF SUBMITTER:	Rachael Lea Leventhal																

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TO:NORTH STAR INTELLECTUAL PROPERTY LAW, PC COMPANY:P.O. BOX 34688

**Total Attachments: 9**

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## ASSIGNMENT

For valuable consideration, We,

- (1)    Name:                **Jea Shik SHIN**  
      Address:            No. 304-904, Bandalmaeul Purugio Apt., Banwol-dong,  
                                  Hwaseong-si, Gyeonggi-do, Republic of Korea  
      Nationality:        Republic of Korea
- (2)    Name:                **Dal AHN**  
      Address:            No. 646, Eupnae-ri, Sinchang-myeon, Asan-si,  
                                  Chungcheongnam-do, Republic of Korea  
      Nationality:        Republic of Korea
- (3)    Name:                **Duck Hwan KIM**  
      Address:            No. 303-1601, Yuwon Apt., Hosumaeul 3-danji, Janghang  
                                  2-dong, Ilsandong-gu, Goyang-si, Gyeonggi-do,  
                                  Republic of Korea  
      Nationality:        Republic of Korea
- (4)    Name:                **In Sang SONG**  
      Address:            No. 912-701, Manhyeonmaeul 9-danji LG jai, Sanghyeon  
                                  2-dong, Suji-gu, Yongin-si, Gyeonggi-do,  
                                  Republic of Korea  
      Nationality:        Republic of Korea
- (5)    Name:                **Chul Soo KIM**  
      Address:            No. 206-1101, Sinchang-bibafamily 2-cha, Byeongjeom-  
                                  dong, Hwaseong-si, Gyeonggi-do, Republic of Korea  
      Nationality:        Republic of Korea
- (6)    Name:                **Yun Kwon PARK**  
      Address:            No. 105-1105, Hyeonjin-evervill Apt., Jihaeng-dong,  
                                  Dongducheon-si, Gyeonggi-do, Republic of Korea  
      Nationality:        Republic of Korea
- (7)    Name:                **Hyung Rak KIM**  
      Address:            No. 203-801, Sadang Lotte-castle Apt., Sadang-dong,  
                                  Dongjak-gu, Seoul, Republic of Korea  
      Nationality:        Republic of Korea

hereby assign to:

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


having principal executive offices 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 12/834.130 filed July 12, 2010 at the U.S. Patent & Trademark Office signed by us, with title **PHASE SHIFTER USING BULK ACOUSTIC WAVE RESONATOR**, 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 WITNESS WHEREOF, I hereto set my hand and seal this 20<sup>th</sup> day of  
June, 2010

Signature:   
Jea Shik SHIN

City of Hwaseong -si :

Country of Republic of Korea

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2009, personally appeared  
known to me to be the person whose name is subscribed to the foregoing Assignment and  
acknowledged that they executed the same as his free act and deed for the purposes therein  
contained.

\_\_\_\_\_  
Witness or Notary Public

IN WITNESS WHEREOF, I hereto set my hand and seal this 30<sup>th</sup> day of  
June, 2010

Signature: Dalshin  
Dal AHN

City of Asan - Si :

Country of Republic of Korea

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2009, personally appeared  
known to me to be the person whose name is subscribed to the foregoing Assignment and  
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contained.

\_\_\_\_\_  
Witness or Notary Public



IN WITNESS WHEREOF, I hereto set my hand and seal this 30<sup>th</sup> day of

June, 2010

Signature: \_\_\_\_\_

Duk Hwan KIM  
Duck

City of Goyang - Si :


Country of Republic of Korea

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2009, personally appeared known to me to be the person whose name is subscribed to the foregoing Assignment and acknowledged that they executed the same as his free act and deed for the purposes therein contained.

\_\_\_\_\_  
Witness or Notary Public

RSS  
01/29/13  
Reg. No.  
56,273

IN WITNESS WHEREOF, I hereto set my hand and seal this 20<sup>th</sup> day of  
June, 2010

Signature:   
In Sang SONG

City of Yongin-Si :

Country of Republic of Korea

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 2009, personally appeared  
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\_\_\_\_\_  
Witness or Notary Public


June, 2010

City of Hwaseong - Si :

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IN WITNESS WHEREOF, I hereto set my hand and seal this 30th day of  
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Signature:   
Yun Kwon PARK

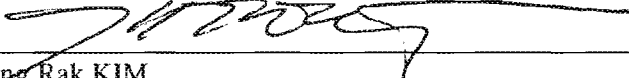
City of Dongducheon-si :

Country of Republic of Korea

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\_\_\_\_\_  
Witness or Notary Public

IN WITNESS WHEREOF, I hereto set my hand and seal this 20<sup>th</sup> day of  
June, 2010

Signature:   
Hyung Rak KIM

City of Seoul :

Country of Republic of Korea

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Witness or Notary Public