## PATENT ASSIGNMENT

## Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:		NEW ASSIGNMENT					
NATURE OF CONVEYANCE:			ASSIGNMENT				
CONVEYING PARTY DATA							
4			ame	Execution Date			
Chan-kyung KIM				02/23/2004			
RECEIVING PARTY DATA							
Name:	SAMSUNG EI	SAMSUNG ELECTRONICS CO., LTD.,					
Street Address:	416, Maetan-c	416, Maetan-dong, Yeongtong-gu					
City:	Suwon-si, Gye	Suwon-si, Gyeonggi-do					
State/Country:	KOREA, REP	KOREA, REPUBLIC OF					
Postal Code:	442-742						
PROPERTY NUMBERS Total: 1 Property Type Number							
		13/05					
Application Number: 1340		10400	703				
Application Number:     13405703     5020700       CORRESPONDENCE DATA     000000000000000000000000000000000000							
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ATTORNEY DOCKET NUMBER:			5568-04US				
NAME OF SUBMITTER:			Ronan O'Byrne				
Total Attachments: 2 source=Executed Assignment from Parent - Inventor to Samsung#page1.tif source=Executed Assignment from Parent - Inventor to Samsung#page2.tif							

VOLENTINE FRANCOS, P.L.L.C. (9/2001)

	ASSIGNMENT						
	In consideration of the sum of One Dollar (\$1.00) and other good and valuable						
Insert Name(s)	consideration paid to each of the undersigned						
	1. KIM, Chan-kyung						
Insert Name(s)	the undersigned hereby sell(s) and assign(s) to						
of Assignee(s)	Samsung Electronics Co., Ltd.						
	of 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea 442-742						
Title of Invention	(hereinafter designated as the Assignee) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as						
	DUTY CYCLE CORRECTION CIRCUIT OF DELAY LOCKED LOOP AND DELAY						
	LOCKED LOOP HAVING THE DUTY CYCLE CORRECTION CIRUCIT						
Date of Signing of	for which an application for patent in the United States of America has been executed by the undersigned on9 March 2004						
Application	The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.						
	The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference. The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.						
	The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.						
	The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.						
	Page 1 of 2						
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## PATENT REEL: 015086 FRAME: 0151

PATENT REEL: 028039 FRAME: 0712 VOLENTINE FRANCOS, P.L.L.C. (9/2001)

The undersigned hereby grant(s) to Adam C. Volentine, Reg. No. 33,289 and William S. Francos, Reg. No. 38,456, and the firm of VOLENTINE FRANCOS, P.L.L.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date Feb >3 - 2014	, Name of Inventor <u>Chan-kyung Kim</u> Chan-kyung KIM				
Date	, Name of Inventor				
Date	, Name of Inventor				
Date	, Name of Inventor				
Date	, Name of Inventor				
Date	, Name of Inventor				
(Note regarding Witnessing and/or Acknowledgment: Acknowledgment before a United States Consul is preferred but not required. If not acknowledged, then it is recommended that the execution by the Inventor(s) be witnessed by at least two witnesses who sign here. However, the current practice of the U.S. Patent and Trademark Office is to record an Assignment even it has not been acknowledged and/or witnessed.) Witness					
	ACKNOWLEDGMENT				
?					
	S-18763-US Atty Docket No, SEC.1122				
Page 2 of 2					

**RECORDED: 03/12/2004** 

## PATENT REEL: 015086 FRAME: 0152

PATENT REEL: 028039 FRAME: 0713

**RECORDED: 04/13/2012**