## PATENT ASSIGNMENT

# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
Kyung-Mo PARK	08/19/2011
Chul-Keun KIM	08/19/2011
Doug-Young SUH	08/19/2011
Jae-Yeon SONG	08/19/2011
Yong-Hun LEE	08/19/2011

### **RECEIVING PARTY DATA**

Name:	Samsung Electronics Co., Ltd.	
Street Address:	416, Maetan-dong, Yeongtong-gu	
City:	Suwon-si, Gyeonggi-do	
State/Country:	REPUBLIC OF KOREA	

Name:	University-Industry Cooperation Group of Kyung Hee University	
Street Address:	Kyung Hee University Global Campus, 1, Seocheon-dong, Giheung-gu	
City:	Yongin-si, Gyeonggi-do	
State/Country:	REPUBLIC OF KOREA	

#### PROPERTY NUMBERS Total: 1

Prop	erty Type	Number
Application Nu	mber:	13213680

### **CORRESPONDENCE DATA**

 Fax Number:
 (516)228-8475

 Phone:
 5162283565

 Email:
 jk@farrelliplaw.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: Paul J. Farrell

Address Line 1: 290 Broadhollow Road, Suite 210E

**PATENT** 

REEL: 026925 FRAME: 0785

OF \$40.00 13213680

501662023

Address Line 4: Melville, NEW YORK 11747	
ATTORNEY DOCKET NUMBER:	678-4264
NAME OF SUBMITTER:	Paul J. Farrell
Total Attachments: 6 source=ASSIGNMENT#page1.tif source=ASSIGNMENT#page2.tif source=ASSIGNMENT#page3.tif source=ASSIGNMENT#page4.tif source=ASSIGNMENT#page5.tif source=ASSIGNMENT#page6.tif	

PATENT REEL: 026925 FRAME: 0786 AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea

ASSIGNEE: University-Industry Cooperation Group of Kyung Hee University

ADDRESS: Kyunghee Univ. Global Campus, 1, Seocheon-dong, Giheung-gu, Yongin-si,

Gyeonggi-do, Republic of Korea

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

TITLE: METHOD AND APPARATUS FOR REDUCING DETERIORATION OF A QUALITY OF EXPERIENCE OF A MULTIMEDIA SERVICE IN A MULTIMEDIA SYSTEM

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 678-4264 (P18656-US/DMC), or is more particularly identified as:

x	executed on even date herewith, or		August 19, 2011
	Serial No. 13/213,680 filed in the U.S. Patent & Trader	nark Office or	), OI
	executed on		<del>-</del>

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said SAMSUNG ELECTRONICS CO., LTD. And UNIVERSITY-INDUSTRY COOPERATION GROUP OF KYUNG HEE UNIVERSITY., my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request Paul J. Farrell, Reg. No. 33,494, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Page 1 of 2

And I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(S)	<b>Date Signed</b>	Witness(es)
Kyung-Ho PARK  Kyung-Mo PARK	2011, 8. 19	Hanna, Kun
Kyung-Mo PARK	,	
2) Chul-Keun KIM	1 2011, 8.19	Hanna. Kan
Chul-Keun KIM	• •	
3) Doug-Young SUH	(Seal)	
•	1/	Hanna, Kim
4) Jae-Year SONG Jae-Yeon SONG	MAR 2011, P. 19	Manna, 1977
	•	
5) Yong-Hun LEE	(Seal)	

AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea

ASSIGNEE: University-Industry Cooperation Group of Kyung Hee University

ADDRESS: Kyunghee Univ. Global Campus, 1, Seocheon-dong, Giheung-gu, Yongin-si,

Gyeonggi-do, Republic of Korea

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

TITLE: METHOD AND APPARATUS FOR REDUCING DETERIORATION OF A QUALITY OF EXPERIENCE OF A MULTIMEDIA SERVICE IN A MULTIMEDIA SYSTEM

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 678-4264 (P18656-US/DMC), or is more particularly identified as:

X	executed on even date herewith, or		August 19, 2011
	Serial No. 13/213,680	_filed in the U.S. Patent & Trademark Office on	, or
	executed on		·

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said SAMSUNG ELECTRONICS CO., LTD. And UNIVERSITY-INDUSTRY COOPERATION GROUP OF KYUNG HEE UNIVERSITY., my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request Paul J. Farrell, Reg. No. 33,494, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Page 1 of 2

And I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(S)	Date Signed	Witness(es)
1) Kyung-Mo PARK	(Seal)	
2) Chul-Keun KIM  3) Doug Young Luh  Doug-Young SUH	(Seal)(Seal)	Hanna, Kim
	(Seal)	
5) Yong-Hun LEE	(Seal)	

AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea

ASS/GNEE: University-Industry Cooperation Group of Kyung Hee University

ADDRESS: Kyunghee Univ. Global Campus, 1, Seocheon-dong, Giheung-gu, Yongin-si,

Gyeonggi-do, Republic of Korea

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

TITLE: METHOD AND APPARATUS FOR REDUCING DETERIORATION OF A QUALITY OF EXPERIENCE OF A MULTIMEDIA SERVICE IN A MULTIMEDIA SYSTEM

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 678-4264 (P18656-US/DMC), or is more particularly identified as:

x	executed on even date herev	ith, or August 19, 2011
_	Serial Nofiled	in the U.S. Patent & Trademark Office on, or
п	executed on	

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said SAMSUNG ELECTRONICS CO., LTD. And UNIVERSITY-INDUSTRY COOPERATION GROUP OF KYUNG HEE UNIVERSITY-, my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request Paul J. Farrell, Reg. No. 33,494, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Page 1 of 2

And I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(S)	<u>Date Signed</u>	Witness(es)
1) Kyung-Mo PARK	(Seal)	
2) Chul-Keun KIM	(Seal)	
3) Doug-Young SUH	(Seal)	<del></del>
	(Seal)	
5) Your - Hun LEE Yong-Hun LEE	(15/31) 19.08.2011	Demin Dear

Page 2 of 2