PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Chan-Ho MIN	03/25/2008
Jong-Hyung KWUN	03/25/2008
Ju-Yeop KIM	03/25/2008
Dong-Ho CHO	03/25/2008
Chul-Kee HONG	03/25/2008
Hyu-Dae KIM	03/25/2008
Hun-Joo LEE	03/25/2008
Sik CHOI	03/25/2008
Ho-Won LEE	03/25/2008
Woong-Sup LEE	03/25/2008
Se-Young YUN	03/25/2008

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:	KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY	
Street Address:	373-1, Guseong-dong, Yuseong-gu	
City:	Daejeon	
State/Country:	REPUBLIC OF KOREA	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12055146

CORRESPONDENCE DATA

PATENT REEL: 020699 FRAME: 0954

500496301

Fax Number: (202)403-3587

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Address Line 2: Suite 807

Address Line 4: Washington, DISTRICT OF COLUMBIA 20036

ATTORNEY DOCKET NUMBER: 0201-0127

NAME OF SUBMITTER: Raymond B. Persino

Total Attachments: 5

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PATENT

REEL: 020699 FRAME: 0955

OMB No. 0651-0027 (exp. 6/30/2008)	United States Patent and Trademark Offic			
	ORM COVER SHEET S ONLY			
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.				
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)			
1) Chan-Ho MIN, 2) Jong-Hyung KWUN, 3) Ju-Yeop KIM, 4) Dong-Ho CHO, 5) Chul-Kee HONG, 6) Hyu-Dae KIM,	Name: Samsung Electronics Co., Ltd.			
7) Hun-Joo LEE, 8) Sik CHOI, 9) Ho-Won LEE, 10) Woong-Sup LEE, and 11) Se-Young YUN	Internal Address:			
Additional name(s) of conveying party(ies) attached? Yes 🗸 No				
3. Nature of conveyance/Execution Date(s):	Street Address: 416, Maetan-dong, Yeongtong-gu			
Execution Date(s) March 25, 2008				
Assignment Merger				
Security Agreement Change of Name	City: Suwon-si			
Joint Research Agreement	State: Gyeonggi-do			
Government Interest Assignment				
Executive Order 9424, Confirmatory License	Country: Republic of Korea Zip:			
Other	Additional name(s) & address(es) attached? Yes No			
A. Patent Application No.(s) 12/055,146 Additional numbers at	B. Patent No.(s) tached? ☐ Yes ✓ No			
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: One			
Name: Jefferson IP Law, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$			
Internal Address: Raymond B. Persino	Authorized to be charged by credit card			
	Authorized to be charged to deposit account			
Street Address: 1730 M Street, NW, Suite 807	Enclosed			
	None required (government interest not affecting title)			
City: Washington	8. Payment Information			
State: DC Zip:20036	a. Credit Card Last 4 Numbers			
Phone Number: 202-293-0804	Expiration Date			
Fax Number: 202-403-3587	b. Deposit Account NumberAuthorized User Name			
Email Address: usdocketing@jeffersonip.com				
9. Signature: /Raymond B. PERSINO/ Reg. N	No. 58,082 March 25, 2008 Date			
Signature	Total number of pages including cover			
Raymond B. Persino Name of Person Signing	sheet, attachments, and documents:			

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

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Additional name and address of receiving parties:

Name: Korea Advanced Institute of Science and Technology

Address: 373-1, Guseong-dong, Yuseong-gu, Deajeon, Republic of Korea

PATENT REEL: 020699 FRAME: 0957 Attorney Docket No.: 0201-0127 Client Docket No.: P16059-US/ST

Assignment

WHEREAS, the following inventors, namely 1) Chan-Ho MIN, 2) Jong-Hyung KWUN, 3) Ju-Yeop KIM, 4) Dong-Ho CHO, 5) Chul-Kee HONG, 6) Hyu-Dae KIM, 7) Hun-Joo LEE, 8) Sik CHOI, 9) Ho-Won LEE, 10) Woong-Sup LEE, and 11) Se-Young YUN, all citizens of the Republic of Korea and residing respectfully at 1) #154-1601, Kumho Bestville APT., Sanghyeondong, Suji-gu, Yongin-si, Gyeonggi-do, Republic of Korea, 2) #911, LG Bundang Eclat, 251-3, Seohyeon-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea, 3) #120-1702, Saemmaeul APT., 1121, Hogye-dong, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea, 4) #A-1502, Hyundai Superville, 1446-11, Seocho 3-dong, Seocho-gu, Seoul, Republic of Korea, 5) 616, Jung-ri, Dongtan-myeon, Hwaseong-si, Gyeonggi-do, Republic of Korea, 6) Korea Advanced Institute of Science and Technology, 373-1, Guseong-dong, Yuseong-gu, Daejeon, Republic of Korea, 7) #103-205, Seohan 2-cha APT., Igok-dong, Dalseo-gu, Daegu, Republic of Korea, 8) #110, CHIPS, Korea Advanced Institute of Science and Technology, Guseong-dong, Yuseong-gu, Daejeon, Republic of Korea, 9) #103-913, Bugang APT., Gyoheon 2-dong, Chungju-si, Chungcheongbuk-do, Republic of Korea, 10) #1306, Huimang Bldg., Korea Advanced Institute of Science and Technology, 373-1, Guseong-dong, Yuseong-gu, Daejeon, Republic of Korea, and 11) #107-106, Hyundai Industrial APT., Cheongjeon-dong, Jecheon-si, Chungcheongbuk-do, Republic of Korea, (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

SYSTEM AND METHOD FOR DATA TRANSMISSION/RECEPTION IN A COMMUNICATION SYSTEM,

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on March 25,2008, and assigned Serial No. 12/055,146; and,

RBP 3125108

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggido, Republic of Korea, and Korea Advanced Institute of Science and Technology, located at 373-1, Guseong-dong, Yuseong-gu, Daejeon, Republic of Korea (hereinafter called "Assignees"), are desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors do hereby sell, assign and transfer unto said Assignees the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any foreign application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignors if this sale, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignees' expense:

a. to execute:

PATENT REEL: 020699 FRAME: 0958 Attorney Docket No.: Client Docket No.:

- all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
- all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional, continuing, substitute or reissue application thereof, as may be necessary or expedient;
- to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignors hereby authorize and request the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignors each hereby represent, covenant and warrant that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

The provisions of this Assignment are binding upon each Assignor's heirs, legal representatives and/or administrators and assigns.

Assignors hereby grant to the law firm of JEFFERSON IP Law, LLP of Washington, DC and its attorneys and agents as associated with Customer No. 68103 the authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

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Attorney Docket No.: Client Docket No.:

Signature of First Inventor:	及家长. Chan-Ho MIN	March 15, 2008 Date
Signature of Second Inventor:	Tonghyung Kwun Jong-Hyung KWUN	Norch 15, 2008 Date
Signature of Third Inventor:	Ju-Yeop KIM	March 15, 2008 Date
Signature of Fourth Inventor:	Dong-Ho CHO	March 25, 2008 Date
Signature of Fifth Inventor:	Chul-Kee HONG	March 2ts, 2008 Date
Signature of Sixth Inventor:	Hyu-Dae KIM	March 25,2008 Date
Signature of Seventh Inventor:	Hun-Joo LEE	March 25, 2008
Signature of Eighth Inventor:	Sik CHOI	March 15, 2008
Signature of Ninth Inventor:	Ho-Won LEE	March 15, 2008
Signature of Tenth Inventor:	Woong-Sup LEE	March 15, 2008
Signature of Eleventh Inventor:	Se-Young YUN	March 15, 2009

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민관총시스템연구 Lab.(용상연) 20080310103710