PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| Kihwan Kim | 05/25/2011 |
| Jae Hoon Chung | 06/09/2011 |
| Yeong Hyeon Kwon | 05/29/2011 |

RECEIVING PARTY DATA

| Name: | LG Electronics Inc. | |
|-----------------|---------------------------------|--|
| Street Address: | 20 Yeouido-dong Yeongdeungpo-gu | |
| City: | Seoul | |
| State/Country: | REPUBLIC OF KOREA | |
| Postal Code: | 150-721 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13140980 |

CORRESPONDENCE DATA

Fax Number: (202)739-3001

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Email: adowney@morganlewis.com

Correspondent Name: Robert J. Gaybrick

Address Line 1: Morgan, Lewis & Bockius LLP Address Line 2: 1111 Pennsylvania Ave, NW

Address Line 4: Washington, DISTRICT OF COLUMBIA 20004

| ATTORNEY DOCKET NUMBER: | 001082-5054 |
|-------------------------|-------------|
| | |

NAME OF SUBMITTER: Robert J. Goodell

Total Attachments: 6

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PATENT REEL: 026481 FRAME: 0930 .H \$40.00 1314093

501570331

ATTORNEY DOCKET NO.: SOLE/JOINT INVENTION (U.S. Rights Only)

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

| invention entitled: | | |
|---|--|--|
| METHOD OF MAPPING TRANSPORT SEQ WIRELESS COMMUNICATION SYSTEM | UENCES TO COMPONENT CARRIERS | S IN A |
| for which I/WE executed an application for United application for United States Letters Patent on | | r filed an |
| WHEREAS, <u>LG ELECTRONICS INC.</u> , a <u>dong Yeongdeungpo-gu Seoul 150-721 Republic of</u> securing the entire right, title, and interest in and to this invention and the Letters Patent to be issue upon | this invention, the application for United State | is desirous of |
| NOW THEREFORE, be it known that, for assignee is hereby acknowledged, I/WE, as assignor sell, assign, transfer, and set over unto the assignee, and interest in and to this invention and this applical Patent of the United States which may be granted the request the Commissioner of Patents and Trademark invention to assignee, its successors and assigns, in | its lawful successors and assigns, MY/OUR etion, and all divisions, and continuations there ereon, and all reissues thereof; and I/WE here as of the United States to issue all Letters Pate | ver, and do hereby entire right, title, of, and all Letters by authorize and nt for this |
| AND, I/WE HEREBY further covenant and communicate with assignee, its successors and assign testify in any legal proceeding, sign all lawful paper may be necessary or desirable to perfect the title to the execute all divisional, continuation, and reissue applications possible to aid assignee, its successors and assigns, the United States, it being understood that any expectation of the united states are the assignee, its successors and assigns. | s when called upon to do so, execute and delive this invention in said assignee, its successors a lications, make all rightful oaths and generally to obtain and enforce proper patent protection | s invention and wer all papers that and assigns, do everything for this invention |
| AND, I/WE HEREBY authorize and requer Power of Attorney in this application, to insert here No, filed) the filing date and application IN TESTIMONY WHEREOF, I/WE have | on number of said application when known. | Declaration and |
| Full Name of Sole or First Assignor | | In . |
| | Assignor's Signature | Date |
| KIM, Kihwan | | |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang | | Republic of Korea |
| Full Name of Second Assignor | Assignor's Signature | Date |
| CHUNG, Jae Hoon | | |
| Address | | Citizenship |
| LG Institute Hoove I(il)-dong Dongan-gu Anyang | -si Gyeonggi-do 431-080 Korea | Republic of Korea |

ATTORNEY DOCKET NO.: SOLE/JOINT INVENTION (U.S. Rights Only)

| Full Name of Third Assignor | Assignor's Signature | , , | Date |
|---|----------------------|------|-------------------|
| | 1/ | 25th | 2011-05-29 |
| KWON, Yeong Hyeon | | -0. | |
| Address | | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do, 431-080, Korea | | rea | Republic of Korea |

ATTORNEY DOCKET NO.: SOLE/JOINT INVENTION (U.S. Rights Only)

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an

invention entitled: METHOD OF MAPPING TRANSPORT SEOUENCES TO COMPONENT CARRIERS IN A WIRELESS COMMUNICATION SYSTEM for which I/WE executed an application for United States Letters Patent concurrently herewith; or filed an application for United States Letters Patent on _____, (Application No. _____); and WHEREAS, LG ELECTRONICS INC., a corporation of Korea, whose post office address is 20 Yeouido dong Yeongdeungpo-gu Seoul 150-721 Republic of Korea, (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to be issue upon this application; NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from

assignee is hereby acknowledged, I/WE, as assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, MY/OUR entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof; and I/WE hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY further covenant and agree that I/WE will, without further consideration, communicate with assignee, its successors and assigns, any facts known to ME/US respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors and assigns. execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

| AND, I/WE HEREBY authorize and request the attorneys I/WE have empowered in the Declaration an |
|--|
| Power of Attorney in this application, to insert here in parentheses (Application |
| No, filed) the filing date and application number of said application when known. |

IN TESTIMONY WHEREOF, I/WE have hereunto set our hand(s).

| Full Name of Sole or First Assignor | Assignor's Signature | Date |
|---|-----------------------------------|-------------------|
| KIM, Kihwan | | |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do, 431-080, Korea | | Republic of Korea |
| Full Name of Second Assignor | Assignor's Signature | Date |
| CHUNG, Jae Hoon | fre Hoon Clug | PJune, 2011 |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang | g-si, Gyeonggi-do, 431-080, Korea | Republic of Korea |

ATTORNEY DOCKET NO.:

SOLE/JOINT INVENTION
(U.S. Rights Only)

| Full Name of Third Assignor | Assignor's Signature | Date |
|---|----------------------|-------------------|
| KWON, Yeong Hyeon | | |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do, 431-080, Korea | | Republic of Korea |

ATTORNEY DOCKET NO.: SOLE/JOINT INVENTION (U.S. Rights Only)

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

METHOD OF MAPPING TRANSPORT SEQUENCES TO COMPONENT CARRIERS IN A WIRELESS COMMUNICATION SYSTEM

for which I/WE executed an application for United States Letters Patent concurrently herewith; or filed an application for United States Letters Patent on ______, (Application No. _____); and

WHEREAS, <u>LG ELECTRONICS INC.</u>, a corporation of <u>Korea</u>, whose post office address is <u>20 Yeouido</u> dong <u>Yeongdeungpo-gu Seoul 150-721 Republic of Korea</u>, (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to be issue upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from assignee is hereby acknowledged, I/WE, as assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, MY/OUR entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof; and I/WE hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND LIWE HEREBY further covenant and agree that I/WE will, without further consideration, communicate with assignee, its successors and assigns, any facts known to ME/US respecting this invention and testify in any legal-proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

| AND, I/WE HEREBY authorize and request the attorneys I/WE have empowered in the Declaration and |
|---|
| Power of Attorney in this application, to insert here in parentheses (Application |
| No, filed) the filing date and application number of said application when known. |

IN TESTIMONY WHEREOF, I/WE have hereunto set our hand(s).

| Full Name of Sole or First Assignor | Assignor's Signature | Date |
|---|----------------------|-------------------|
| KIM, Kihwan | | MAY 25, 2011 |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do, 431-080, Korea | | Republic of Korea |
| Full Name of Second Assignor | Assignor's Signature | Date |
| _ | - | |
| CHUNG, Jae Hoon | | |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang-si, Gyconggi-do, 431-080, Korea | | Republic of Korea |

REEL: 026481 FRAME: 0935

ATTORNEY DOCKET NO.:

SOLE/JOINT INVENTION (U.S. Rights Only)

| Full Name of Third Assignor | Assignor's Signature | Date |
|---|----------------------|-------------------|
| KWON, Yeong Hyeon | | |
| Address | | Citizenship |
| LG Institute, Hogye 1(il)-dong, Dongan-gu, Anyang-si, Gyeonggi-do, 431-080, Korea | | Republic of Korea |

PATENT REEL: 026481 FRAME: 0936

RECORDED: 06/20/2011