503513989 10/07/2015

PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| CHANG SOON PARK | 10/06/2015 |
| JOONSEONG KANG | 10/06/2015 |
| YOUNG JUN HONG | 10/06/2015 |

RECEIVING PARTY DATA

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| City: | SUWON-SI | |
| State/Country: | KOREA, REPUBLIC OF | |
| Postal Code: | 443-742 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14877455 |

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| ATTORNEY DOCKET NUMBER: | 012052.1259 | |
|-------------------------|--|--|
| NAME OF SUBMITTER: | JONATHAN D. SCHLAIFER | |
| SIGNATURE: | /Jonathan D. Schlaifer/ | |
| DATE SIGNED: | 10/07/2015 | |
| | This document serves as an Oath/Declaration (37 CFR 1.63). | |

Total Attachments: 3

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PATENT REEL: 036751 FRAME: 0192 503513989

Attorney Docket No.: 012052.1259

COMBINED DECLARATION AND ASSIGNMENT UNDER 37 CFR 1.63(e)

DECLARATION

| As a below-named inventor, I hereby declare that this declarate | ion is directed to the application attached |
|--|---|
| hereto, or to United States Application Number or PCT Interns | ational Application Number |
| filed on | (if applicable), entitled: |
| PACKET DETECTION METHOD BASED ON NOIS ORTHOGONAL SEQUENCE, TRANSMIT | |
| The above-identified application was made or authorized to be | made by me. |
| I believe I am the original inventor or an original joint inventor identified application. | of a claimed invention in the above- |
| I hereby acknowledge that any willful false statement made in USC 1001 by fine or imprisonment of not more than five (5) ye | |
| I have reviewed and understand the contents of the above-ident | tified application, including the claims. |
| I am aware of the duty to disclose to the United States Patent at known to me to be material to patentability as defined in 37 CF applications, material information that became available between and the national or PCT international filing date of the continua- | R 1.56, including for continuation-in-part on the filing date of the prior application |
| ASSIGNMENT | |
| For valuable consideration, I, as a below-named assignor, beret | py assign to: |
| Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu Suwon-si, Gyeonggi-do, 443-742 Republic of Korea | |
| and its successors and assigns (collectively hereinafter called "t | he Assignee"), the entire right, title, and |
| interest throughout the world in the inventions and improvemen | its that are the subject of the application |
| identified in the above declaration, which is United States Appl. | ication Number or PCT International |
| Application Number 14/877,455 filed on | October 7, 2015 |
| I authorize and request the attorneys appointed in the above-identitis Assignment by inserting above the application number and | |

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Attorney Docket No.: 012052.1259

application when known, and to correct any typographical errors that may be discovered in this Assignment.

This Assignment includes the above-identified application, any and all United States and foreign patents, utility models, and design registrations granted for any of the inventions and improvements that are the subject of the above-identified application, and the right to claim priority based on the filing date of the above-identified 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 I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations, like rights of exclusion, and inventors' certificates for any of the inventions and improvements that are the subject of the above-identified application; and I agree for myself and my 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, as a below-named inventor and assignor, intending to be legally bound, have hereunto affixed my signature on the date indicated below next to my signature.

| Inventor's Legal Name | Chang Soon PARK | | |
|------------------------------|---|------|-----------------|
| Inventor's Signature | J. | Date | October 6, 2015 |
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| Inventor's Legal Name | Joonseong KANG | *************************************** | |
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| Inventor's Legal Name | Young Jun HONG | •••••••••••••••• | |
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