PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| Kyu Min KANG | 05/02/2013 |
| Sang In CHO | 05/02/2013 |
| Jae Cheol PARK | 05/10/2013 |
| Byung Jang JEONG | 05/10/2013 |

RECEIVING PARTY DATA

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| State/Country: | KOREA, REPUBLIC OF |
| Postal Code: | 305-700 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13898863 |

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| ATTORNEY DOCKET NUMBER: | WO7-062 (38303.09062) |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | EuiHoon Lee |
| Signature: | /EuiHoon Lee/ |
| | PATENT |

REEL: 030457 FRAME: 0968

PATENT

| Date: | 05/21/2013 |
|--|------------|
| Total Attachments: 2 source=WO7062_assignment#page1.tif source=WO7062_assignment#page2.tif | |

PATENT REEL: 030457 FRAME: 0969 described in an application

ASSIGNMENT

| I/V | We, Kyu Min KANG, Sang In CHO, and Byung Jang JEONG, residents of |
|----------|--|
| Daejeon, | Republic of Korea and Jae Cheol PARK, a resident of Gyeonggi-do, Republic of |
| Korea_ | , in consideration of One Dollar and other valuable consideration paid to |
| me/us by | |

Electronics and Telecommunications Research Institute

having its principal place of business at 161, Gajeong-dong, Yuseong-gu, Daejeon 305-700, Republic of Korea, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

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its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

APPARATUS AND METHOD OF CALCULATING AVAILABLE CHANNELS CONSIDERING PRIORITY IN TVWS

| | executed by me/us of even date herewith and about to be filed |
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| or | |
| | serial No, filed on |

in the United States Patent and Trademark Office, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon.

And I/we agree, for myself/ourselves and my/our executor(s) and administrator(s), with said assignee and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said assignee, with specifications and claims in such form as shall be approved by the counsel of said assignee and to vest and confirm in said assignee, its successors and assigns, the legal title to all such patents.

And I/we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said assignee, its successors and assigns.

And I/we do further hereby grant the attorneys/agents of Nelson Mullins Riley and Scarborough LLP, One Post Office Square, Boston, Massachusetts 02109, the power to insert on this Assignment the filing date and/or application number of said application.

PATENT REEL: 030457 FRAME: 0970

| By: | 116 |
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| | Kyu Min KANG |

Date: 20(3/05/02

By: Sany In CHO

Date: 2013. 05. 02

By: Jae Cheol PARK

Date: May 10, 2013

By: Byung Jang JEONG

Date: May 10, 2013.