## 506010348 04/10/2020

## 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 |
|------------------|----------------|
| SEUNG KWON BEACK | 07/01/2011     |
| TAE JIN LEE      | 07/01/2011     |
| MIN JE KIM       | 07/01/2011     |
| KYEONGOK KANG    | 07/01/2011     |
| DAE YOUNG JANG   | 07/04/2011     |
| JING WOO HONG    | 07/04/2011     |
| JEONGIL SEO      | 07/01/2011     |
| CHIETEUK AHN     | 07/01/2011     |
| HOCHONG PARK     | 07/04/2011     |
| YOUNG-CHEOL PARK | 07/04/2011     |

#### **RECEIVING PARTY DATA**

| Name:           | ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE           |
|-----------------|---|
| Street Address: | 218, GAJEONG-RO, YUSEONG-GU                                     |
| City:           | DAEJEON   |
| State/Country:  | KOREA, REPUBLIC OF  |
| Postal Code:    | 34129   |
| Name:           | KWANGWOON UNIVERSITY INDUSTRY-ACADEMIC COLLABORATION FOUNDATION |
| Street Address: | 447-1, WOLGYE-DONG, NOWON-GU                                    |
| City:           | SEOUL   |
| State/Country:  | KOREA, REPUBLIC OF  |
| Postal Code:    | 139-701   |

## **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 16846272 |

#### **CORRESPONDENCE DATA**

**Fax Number:** (202)408-0924

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

PATENT 506010348 REEL: 052373 FRAME: 0479

**Phone:** 202-371-8976

**Email:** firm@rabinberdo.com **Correspondent Name:** RABIN & BERDO, P.C.

**Address Line 1:** 1101 14TH ST., N.W., SUITE 500

Address Line 4: WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER: MUH-261C1 (LE)

NAME OF SUBMITTER: JUN-HWA JEONG

SIGNATURE: /Jun-Hwa Jeong/

**DATE SIGNED:** 04/10/2020

**Total Attachments: 5** 

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PATENT REEL: 052373 FRAME: 0480

IP20081229A 폭허범인 무한

#### ASSIGNMENT

I/We BEACK, Seung Kwon of Daejeon, Republic of Korea; LEE, Tae Jin of Daejeon, Republic of Korea; KIM, Min Je of Daejeon, Republic of Korea; KANG, Kyeongok of Daejeon, Republic of Korea; JANG, Dae Young of Daejeon, Republic of Korea; HONG, Jin Woo of Daejeon, Republic of Korea; SEO, Jeongil of Daejeon, Republic of Korea; AHN, Chieteuk of Daejeon, Republic of Korea; PARK, Hochong of Seoul, Republic of Korea; and PARK, Young-cheol of Gangwon-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

Kwangwoon University Industry-Academic Collaboration Foundation having its principal place of business at <u>447-1</u>, <u>Wolgye-dong</u>, <u>Nowon-Gu</u>, <u>Seoul 139-701</u>, <u>Republic of Korea</u>, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Electronics and Telecommunications Research Institute

Kwangwoon University Industry-Academic Collaboration Foundation

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

# LPC RESIDUAL SIGNAL ENCODING/DECODING APPARATUS OF MODIFIED DISCRETE COSINE TRANSFORM (MDCT)-BASED UNIFIED VOICE/AUDIO ENCODINC DEVICE

| described | in | an | application |
|-----------|----|----|-------------|
|           |    |    |             |

|            | executed by us of even date herewith | and about to be filed    |
|------------|--------------------------------------|--------------------------|
| <b>888</b> | serial No. 13/124,043                | , filed onApril 13, 2011 |

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

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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 02109-2127, the power to insert on this Assignment the filing date and/or application number of said application.

## IP20081229A 목처법인 무한

| By: BEACK, Seung Kwon |      |
|-----------------------|------|
| Date: 154, July, 2011 |      |
| Witnesses:            |      |
| Name                  | Date |
| By:                   |      |
| Date: July, 1st, 2011 |      |
| Witnesses:            |      |
| Name                  | Date |
| By: KIM, Min Je       |      |
| Date: July 14+, 2011  |      |
| Witnesses:            | ·    |
| Name                  | Date |
| By: KANG, Kyeongok    |      |
| Date: July 1, 2011    |      |
| Witnesses:            |      |
| NAME                  | Date |

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|------------------------------|-------|
| By:                          |       |
| JANG, Dae Young              |       |
| Date: Jul. 4. 2811           |       |
| Witnesses:                   |       |
|                              |       |
| Name                         | Date  |
| 0                            |       |
| Ву:                          |       |
| HONG, Jing Woo               |       |
|                              |       |
| Date: Jul. 4. >011           |       |
| Witnesses:                   |       |
| 17 (222/23/23)               |       |
| Name                         | 37.1. |
| 7.4893625-                   | Date  |
|                              |       |
| By: SEO, Jeongil             |       |
| _                            |       |
| Date: July 1, 2011           |       |
|                              |       |
| Witnesses:                   |       |
|                              | -     |
| Name                         | Date  |
| Mr. A                        |       |
| By:AHN, Chieteuk             |       |
|                              |       |
| Date: July 1, 2011           |       |
|                              |       |
| Witnesses:                   |       |
|                              |       |
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| By: PARK Hochong                   |      |   |
|------------------------------------|------|---|
| Date: July 04, 2011                |      |   |
| Witnesses:                         |      | • |
| Name                               | Date |   |
| By: Joyches Park PARK, Young-cheol |      |   |
| Date: July 4, 201/                 |      |   |
| Witnesses:                         |      |   |
| Name                               | Date |   |

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