507210735 03/31/2022

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CENTER OF HUMAN-CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION	09/24/2021

RECEIVING PARTY DATA

Name: KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY	
Street Address: BUILDING, 5, HWARANG-RO 14-GIL, SEONGBUK-GU,	
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	02792

PROPERTY NUMBERS Total: 1

Property Type	Number
Patent Number:	8938131

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	0159-0001
NAME OF SUBMITTER:	SANG CHUL KWON
SIGNATURE:	/Sang Chul Kwon/
DATE SIGNED:	03/31/2022

Total Attachments: 8

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PATENT 507210735 REEL: 059466 FRAME: 0208

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PATENT REEL: 059466 FRAME: 0209

PATENT ASSIGNMENT AGREEMENT

THIS AGREEMENT is made this 22th the day of September, 2021, by and between the following parties:

WHEREAS, CENTER OF HUMAN-CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION (hereinafter referred to as "ASSIGNOR"), having a place of business at: BUILDING, 5, HWARANG-RO 14-GIL, SEONGBUK-GU, SEOUL 02792 Republic of Korea, owns or co-owns all or portion right, title and interest in and to the patents and/or patent applications identified in Exhibit A attached hereto, including the inventions described therein and the patents issued and reissued thereon (collectively, the "Patents"), the renewals therefor and all claims for past or future infringement thereof.

WHEREAS, KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY (hereinafter referred to as "ASSIGNEE"), having a place of business at: BUILDING, 5, HWARANG-RO 14-GIL, SEONGBUK-GU, SEOUL 02792 Republic of Korea desires to purchase or acquire the Assignor's right, title, and interest in and to the Patents.

NOW THEREFORE, in consideration of the mutual promises, covenants, warranties, and for good and valuable consideration, and in accordance with applicable law, the Parties hereby agree as follows:

- 1. Assignment. Assignor does hereby sell, assign to Assignee, and its successors, representatives and assigns, all right, title and interest in the Patent including all reexaminations, extensions and reissues thereof. Assignor hereby requests the Commissioner of Patents of the United States to record this assignment of all right, title and interest in the Patent to Assignee.
- Assignor's Representations and Warranties. Assignor hereby represents and warrants

 i) that it has the legal right and authority to execute this Agreement, and to validly assign the entire interest in the Patent to Assignee,
 - ii) that it has not executed any other agreement that would conflict with the terms of this Agreement, nor shall it execute any such agreement in the future, and
 - iii) that to the best of Assignor's knowledge, the Patent is valid and enforceable as of the date of this Agreement. Assignor makes no representations or warranties as to the validity or enforceability of the Patent subsequent to the date of this Agreement.

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- 3. Patent Status. Assignee hereby acknowledges that any finding or ruling subsequent to the date of this Agreement that the Patent is invalid or unenforceable shall not give rise to a cause of action against Assignor under this Agreement, unless Assignor has committed fraud in executing this Agreement.
- 4. Further Actions. Assignor hereby agrees to execute any further agreements and to take any further actions necessary to aid Assignee in perfecting its interest in the Patent and in enforcing any and all protections or privileges deriving from the Patent.
- 5. Governing Law. This Agreement shall be construed in accordance with, and governed in all respects by, the laws of the Republic of Korea, without regard to conflicts of law principles.
- 6. *Counterparts*. This Agreement may be executed in several counterparts, each of which shall constitute an original and all of which, when taken together, shall constitute one agreement.
- 7. Severability. If any part or parts of this Agreement shall be held unenforceable for any reason, the remainder of this Agreement shall continue in full force and effect. If any provision of this Agreement is deemed invalid or unenforceable by any court of competent jurisdiction, and if limiting such provision would make the provision valid, then such provision shall be deemed to be construed as so limited.
- 8. *Headings*. The headings for section herein are for convenience only and shall not affect the meaning of the provisions of this Agreement.
- 9. Entire Agreement. This Agreement constitutes the entire agreement between Assignor and Assignce, and supersedes any prior understanding or representation of any kind preceding the date of this Agreement. There are no other promises, conditions, understandings or other agreements, whether oral or written, relating to the subject matter of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed the day and year first above written.

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Assignor:

CENTER OF HUMAN-CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL

Title: DIRECTOR

Assignee:

KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY

Name: Kim Tae Min
Title: General Managen

Exhibit A

List of Patents

Exhibit A

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No.	Туре	Patent Application No.	Patent No.	Title	Current Assignee
1	Utility Patent	15/664,188	10251556	IN VIVO BIOIMAGING METHOD AND SYSTEM USING NEAR-INFRARED LIGHT AND COMPLEMENTARY METAL-OXIDE- SEMICONDUCTOR IMAGE SENSOR	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
2	Utility Patent	15/015,330	9804677	METHOD AND APPARATUS FOR CREATING VIRTUAL JOINT SENSATION	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
3	Utility Patent	15/180,904	9838587	SYSTEM FOR REGISTRATION OF VIRTUAL SPACE AND REAL SPACE, METHOD FOR REGISTERING DISPLAY APPARATUS AND IMAGE SENSOR, AND ELECTRONIC DEVICE REGISTERED USING THE METHOD	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
4	Utility Patent	15/616,879	10331819	SYSTEM, METHOD AND READABLE RECORDING MEDIUM OF CONTROLLING VIRTUAL MODEL	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
5	Utility Patent	16/868,100	11150728	USER INTERFACE DEVICE AND CONTROL METHOD THEREOF FOR SUPPORTING EASY AND ACCURATE SELECTION OF OVERLAPPED VIRTUAL OBJECTS	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
6	Utility Patent	15/920,378	10331217	ACTUATOR	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION

7	Utility Patent	16/170,202	10635163	SYSTEM AND METHOD FOR INTERACTION ANALYSIS OF VIRTUAL SPACE	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
8	Utility Patent	16/502,253	11036297	TACTILE FEEDBACK DEVICE	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
9	Utility Patent	16/199,708	10990177	TACTILE TRANSMISSION DEVICE AND USER INTERFACE SYSTEM INCLUDING THE SAME	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
10	Utility Patent	14/293,189	8938131	APPARATUS AND METHOD FOR REGISTRATION OF FLAT PANEL DISPLAY DEVICE AND IMAGING SENSOR, AND ELECTRONIC DEVICE HAVING FLAT PANEL DISPLAY DEVICE AND IMAGING SENSOR WHICH ARE REGISTERED USING THE METHOD	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
11	Utility Patent	15/612,958	10524701	MOTION CAPTURE SYSTEM USING FBG SENSOR	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
12	Utility Patent	16/698,590	11129553	MOTION CAPTURE SYSTEM USING FBG SENSOR	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
13	Utility Patent	17/259,636		FBG-BASED TORSION SENSOR DEVICE	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION

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14	Utility Patent	16/309,484	10551927	FORCE REFLECTING SYSTEM	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION / UNIST (ULSAN NATIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY)
15	Utility Patent	14/437,444	9332219	TELEPRESENCE DEVICE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
16	Utility Patent	14/349,063	9524031	APPARATUS AND METHOD FOR RECOGNIZING SPATIAL GESTURE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
17	Utility Patent	14/285,807	9265974	APPARATUS, METHOD, AND COMPUTER- READABLE RECORDING MEDIUM FOR GENERATING TACTILE SENSATION THROUGH NON-INVASIVE BRAIN STIMULATION USING ULTRASONIC WAVES	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION / KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CATHOLIC UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION
18	Utility Patent	15/171,054	10032313	HEAD-MOUNTED DEVICE AND METHOD OF ENABLING NON-STATIONARY USER TO PERFORM 3D DRAWING INTERACTION IN MIXED-REALITY SPACE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
19	Utility Patent	15/210,132	10038759	METHOD, MANAGEMENT SERVER, AND COMPUTER-READABLE STORAGE MEDIUM FOR SUPPORTING PROVISION OF SERVICE DESIRED BY CLIENT TERMINAL BY ADAPTIVELY MODIFYING NETWORK TOPOLOGY DEPENDING ON PROPERTIES OF SERVICE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
20	Utility Patent	15/233,571	10019064	USER INTERFACE DEVICE FOR PROVIDING FORCE FEEDBACK ACCORDING TO INTERACTION WITH VIRTUAL OBJECT OR USER AT REMOTE PLACE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
21	Utility Patent	15/233,710	10129076	PARALLEL FIELDBUS NETWORK-BASED MOTOR CONTROL SYSTEM	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
22	Utility Patent	16/086,980	10940506	HAPTIC ACTUATOR WITH LINEAR AND ROTATIONAL MOVEMENT	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION

23	Utility Patent	15/620,170	9927869	APPARATUS FOR OUTPUTTING VIRTUAL KEYBOARD AND METHOD OF CONTROLLING THE SAME	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
24	Utility Patent	16/335,507	11022999	CLIENT DEVICE AND LOCAL CLOCK SKEW COMPENSATION METHOD THEREOF	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
25	Utility Patent	16/093,860	10650602	APPARATUS AND METHOD FOR THREE- DIMENSIONAL INFORMATION AUGMENTED VIDEO SEE-THROUGH DISPLAY, AND RECTIFICATION APPARATUS	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
26	Utility Patent	16/073,587	10901530	THREE-DIMENSIONAL MAGNETIC SENSOR BASED FINGER MOTION CAPTURE INTERFACE DEVICE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
27	Utility Patent	16/695,545	10884497	METHOD AND APPARATUS FOR MOTION CAPTURE INTERFACE USING MULTIPLE FINGERS	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
28	Utility Patent	13/885,998	9077974	3D VIDEO-TELECONFERENCING APPARATUS CAPABLE OF EYE CONTACT AND METHOD USING THE SAME	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
29	Utility Patent	14/252,837	9123180	METHOD, SYSTEM AND COMPUTER- READABLE RECORDING MEDIUM FOR DISPLAYING SHADOW OF 3D VIRTUAL OBJECT	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
30	Utility Patent	14/580,208	9007422	METHOD AND SYSTEM FOR MUTUAL INTERACTION USING SPACE BASED AUGMENTATION	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
31	Utility Patent	14/252,922	8884746	APPARATUS FOR GENERATING TACTILE SENSATION BY USING MAGNETIC FIELD	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
32	Utility Patent	14/573,440	9189008	APPARATUS FOR INTERACTING WITH EXTERNAL DEVICE BY USING PEDAL MODULE	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
33	Utility Patent	14/574,367	9030307	APPARATUS FOR GENERATING HAPTIC FEEDBACK	CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION

34	Utility Patent	16/868,506	INTE	METHOD FOR CONTROLLING RACTION INTERFACE AND DEVICE FOR SUPPORTING THE SAME	KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY / CENTER OF HUMAN- CENTERED INTERACTION FOR COEXISTENCE INTERNATIONAL COOPERATION
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