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PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| SUNG OK CHOI | 06/03/2019 |
| YOUNG IN PARK | 06/03/2019 |
| SANG GYOO SIM | 06/03/2019 |
| DUK SOO KIM | 06/03/2019 |
| SEOK WOO LEE | 06/03/2019 |

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16432770 |

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| ATTORNEY DOCKET NUMBER: | 0061-0007 |
|-------------------------|------------------|
| NAME OF SUBMITTER: | SANG CHUL KWON |
| SIGNATURE: | /sang chul kwon/ |
| DATE SIGNED: | 06/06/2019 |

Total Attachments: 2

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PATENT REEL: 049392 FRAME: 0439 $source = Assignment - 0061 - 0007_as - filed \# page 2.tif$

PATENT REEL: 049392 FRAME: 0440

Docket No.: 0061-0007

ASSIGNMENT OF PATENT APPLICATION

WHEREAS I/We, the below named inventor(s) has made an invention entitled:

METHOD OF AND DEVICE FOR PERFORMING AUTHENTICATION USING HARDWARE SECURITY MODULE IN ONEM2M ENVIRONMENT

| For | which I/We | executed an applica | ation for Letters | Patent of the Unit | ted States concurrer | atly herewith; and/or |
|-----|------------|----------------------|-------------------|--------------------|----------------------|-----------------------|
| For | which I/We | filed an application | for Letters Pate | nt of the United S | itates on | (Application |
| No. | | | |), | | |

BE IT KNOWN that, for good and valuable consideration, the receipt of which 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

Penta Security Systems Inc. of 25, Guligeeumyung-ro 2-gil, Yeongdeungpo-gu, Seoul 07327, Republic of Korea (hereinafter referred to as Assignee(s)), its lawful successors and assigns my/our entire right, title, and interest in and to this application and the invention(s) and improvement(s) set forth therein; and any and all continuations, continuations-in-part, divisionals, and renewals of and substitutes for said application for said Letters Patent and any and all Letters Patent of the United States thereto, which may be granted thereon or therefore; and any reissues, reexaminations, or extensions of all such Letters Patent.

I/WE HEREBY authorize the Assignee(s), its lawful successors and assigns to apply for Letters Patent in all countries foreign to the United States directly in its own name, and to claim priority of the filing date of any of the above-mentioned applications for Letters Patent of the United States and of countries foreign thereto under the provisions of any and all international conventions and treaties.

I/WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States and official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as foresaid, to issue all Letters Patent for this invention to the Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with said Assignes(s), 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 any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee(s), its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid said Assignee(s), its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and in countries foreign thereto, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee(s), its successors and assigns.

Authorization To Permit Access to Application by Participating Offices

The undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h).

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In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above- identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above- identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

AND, I/WE HEREBY authorize and request the attorneys or agents of record to insert the serial number and filing date of said application now identified by the docket number and/or title set forth above as soon as the same shall have been known to them by the United States Patent and Trademark Office.

| IN TESTIMONY WHEREOF, I | We have hereunto set our hands. |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Signature of first assignor: Name of first assignor: Address: | Date JUM€, 3. J. of P Sung Ok CHOI 402, 18, Yangjaecheon-ro 15-gil, Seocho-gu, Seoul 06754, Republic of Korea |
| Signature of first assignor: | My Date jun 3.2019 |
| Name of third assignor Address: | Young In PARK 103-1201, 222, Seonghok 1-ro, Suji-gu, Yongin-si, Gyeonggi-do 16807, Republic of Korea |
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| Signature of fourth assignor: Name of third assignor Address: | Duk Soo KIM Date Jan, 07, 2019 302, 22, Bugahyeon-ro 22ma-gil, Seodaemun-gu, Seoul 03747, |
| Signature of fifth assignor: Name of third assignor | Republic of Korea A A Date 3 June 2019 Seok Woo LEE |

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