

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2019/016912

## A. CLASSIFICATION OF SUBJECT MATTER

*G07C 9/00(2006.01)i, G06F 21/32(2013.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G07C 9/00; B60R 25/01; B60R 25/24; E05B 47/00; G06F 21/30; G06F 21/62; G06K 9/00; H04L 29/06; H04L 9/14; G06F 21/32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models: IPC as above

Japanese utility models and applications for utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) &amp; Keywords: FIDO, authentication, lock, insert

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2018-0089982 A (LG UPLUS CORP.) 10 August 2018 See paragraphs [0004]-[0030].	1-4
Y	KR 10-2002-0075530 A (KIM, Young Je) 05 October 2002 See claim 1 and figure 1.	1-4
Y	KR 10-2008-0000070 A (HYUNDAI MOTOR COMPANY) 02 January 2008 See claim 1.	2
Y	KR 10-2018-0065241 A (S-WINNUS CO., LTD.) 18 June 2018 See paragraphs [0042], [0062].	3,4
A	KR 10-2018-0082703 A (ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE) 19 July 2018 See paragraphs [0031]-[0052] and figures 1, 2.	1-4
A	US 9935953 B1 (BEHAVIOMETRICS) 03 April 2018 See claim 1 and figures 1, 2.	1-4



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

30 MARCH 2020 (30.03.2020)

Date of mailing of the international search report

31 MARCH 2020 (31.03.2020)

Name and mailing address of the ISA/KR

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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.

**PCT/KR2019/016912**

Patent document cited in search report	Publication date	Patent family member	Publication date
KR 10-2018-0089982 A	10/08/2018	None	
KR 10-2002-0075530 A	05/10/2002	None	
KR 10-2008-0000070 A	02/01/2008	None	
KR 10-2018-0065241 A	18/06/2018	KR 10-1898163 B1 WO 2018-105850 A1	12/09/2018 14/06/2018
KR 10-2018-0082703 A	19/07/2018	None	
US 9935953 B1	03/04/2018	US 10075437 B1 US 10437971 B2 US 2018-365399 A1 US 9301140 B1	11/09/2018 08/10/2019 20/12/2018 29/03/2016