

**INTERNATIONAL SEARCH REPORT**

International application No. PCT/JP2019/046700
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 Int.Cl. H04R17/00 (2006.01) i, G06F3/01 (2006.01) i  
 FI: G06F3/01514, G06F3/01570, H04R17/00330J

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)  
 Int.Cl. H04R17/00, G06F3/01

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

Published examined utility model applications of Japan	1922-1996
Published unexamined utility model applications of Japan	1971-2020
Registered utility model specifications of Japan	1996-2020
Published registered utility model applications of Japan	1994-2020

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2017/075611 A1 (OSTENDO TECHNOLOGIES, INC.)	1-10
Y	04.05.2017 (2017-05-04), claims 1-3, paragraphs [63]-[65], [71]-[78], [96]-[138], fig. 1-8	11
Y	JP 2006-212287 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.) 17.08.2006 (2006-08-17), paragraphs [0003], [0010]-[0012], fig. 1	11
A	WO 2017/163389 A1 (HITACHI, LTD.) 28.09.2017 (2017-09-28), paragraph [0116], fig. 15C	1-11
A	WO 2017/221381 A1 (HITACHI, LTD.) 28.12.2017 (2017-12-28), paragraphs [0011], [0014], fig. 1, 2	1-11
A	JP 2011-48818 A (KOREA ELECTRONICS TELECOMMUN) 10.03.2011 (2011-03-10), paragraphs [0030]-[0055], fig. 1-6	1-11

<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.
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* 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 "&" document member of the same patent family
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Date of the actual completion of the international search 05.02.2020	Date of mailing of the international search report 18.02.2020
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Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer  Telephone No.
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International application No.

PCT/JP2019/046700

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2017/0055938 A1 (VERILY LIFE SCIENCES LLC) 02.03.2017 (2017-03-02), abstract, fig. 1, 2	1-11
A	US 2013/0041477 A1 (SIKDAR, S.) 14.02.2013 (2013-02-14), abstract, fig. 1-3	1-11
A	MCINTOSH, J. et al., EchoFlex: Hand gesture recognition using ultrasound imaging, Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 06 May 2017, pp. 1923-1934 pp. 1923-1934	1-11

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

International application No.  
PCT/JP2019/046700

WO 2017/075611 A1	04.05.2017	JP 2018-536933 A
		US 2017/0123487 A1
		CN 108431736 A
		KR 10-2018-0088390 A
JP 2006-212287 A	17.08.2006	(Family: none)
WO 2017/163389 A1	28.09.2017	US 2018/0296194 A1
		paragraphs [0219]-[0221], fig. 15C
WO 2017/221381 A1	28.12.2017	US 2018/0271479 A1
		paragraphs [0029], [0032], fig. 1, 2
JP 2011-48818 A	10.03.2011	US 2011/054360 A1
		paragraphs [0037]-[0069], fig. 1-6
US 2017/0055938 A1	02.03.2017	WO 2017/034748 A1
US 2013/0041477 A1	14.02.2013	(Family: none)