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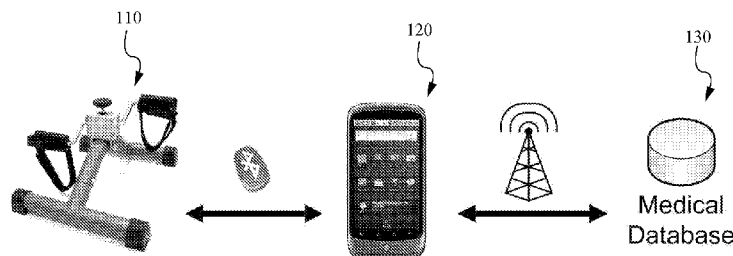
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(54) Title: EXERCISE PROMOTION, MEASUREMENT, AND MONITORING SYSTEM

**Fig. 1**

(57) **Abstract:** An exercise system comprising: an exercise cycle comprising a crank, wherein the crank is configured to be rotated by a user; and a sensing unit coupled to the exercise cycle, wherein the sensing unit is configured to sense information related to at least one crank measurement and to transmit the information related to the at least one crank measurement to a remote device via wireless communication. In some embodiments, the remote device is a mobile device. In some embodiments, the at least one crank measurement comprises a rotational speed of the crank or a force applied to the crank. The remote device can display information related to use of the exercise cycle based on the information received from the exercise cycle.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/039714**A. CLASSIFICATION OF SUBJECT MATTER****G06Q 50/22(2012.01)i**

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

B. FIELDS SEARCHED

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G06Q 50/22; A63B 69/00; G01L 5/02; A61B 5/02; A63B 22/00; A63B 71/00

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

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: exercise cycle, remote device, crank, measurement

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7857731 B2 (HICKMAN PAUL L. et al.) 28 December 2010	1-4,7-8,13,18
Y	See column 5, line 67 - column 7, line 2, column 17, lines 35-38 and claims 1,15-16.	,20-21,22,26 5-6,9-12,14-17,19 ,23-25,27-29
Y	US 05027303A A (WITTE; DON C.) 25 June 1991	5-6,9,11-12,14-17
	See column 3, lines 6-12, column 3, lines 24-28, column 5, line 67 - column 6, line 2, column 11, lines 7-10, and claim 30.	,19,23-25,27-29
Y	WO 00-78413 A1 (DELMAN, DAVID, H.) 28 December 2000	10-12
	See abstract and page 18, lines 1-7.	
A	WO 03-020375 A1 (ICON IP, INC.) 13 March 2003	1-29
	See abstract and claim 1.	



Further documents are listed in the continuation of Box C.



See patent family annex.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7857731 B2	28.12.2010	US 2005-0233861 A1 US 2009-0258758 A1 US 6921351 B1 US 7549947 B2	20.10.2005 15.10.2009 26.07.2005 23.06.2009
US 05027303A A	25.06.1991	None	
WO 00-78413 A1	28.12.2000	US 6179746 B1 US 6244988 B1	30.01.2001 12.06.2001
WO 03-020375 A1	13.03.2003	EP 1194188 A1 EP 1194188 B1 EP 1309375 A1 EP 1309375 B1 EP 1318860 A1 EP 1318860 B1 EP 1355699 A1 EP 1355699 B1 EP 1423171 A1 EP 1487546 A1 EP 1962971 A2 EP 2233180 A1 US 2002-0002103 A1 US 2002-0016235 A1 US 2002-0022551 A1 US 2002-0045519 A1 US 2002-0165067 A1 US 2004-0127335 A1 US 2005-0209052 A1 US 2005-0215397 A1 US 2006-0035768 A1 US 2006-0205566 A1 US 2006-0205569 A1 US 2007-0265138 A1 US 2008-0051256 A1 US 2009-0163321 A1 US 2009-0270226 A1 US 2009-0270227 A1 US 2010-0179028 A1 US 2010-0248900 A1 US 2011-0071003 A1 US 2011-0172059 A1 US 6312363 B1 US 6447424 B1 US 6458060 B1 US 6626799 B2 US 6918858 B2 US 6997852 B2 US 7060006 B1	10.04.2002 15.10.2008 14.05.2003 09.03.2011 18.06.2003 31.08.2011 29.10.2003 21.07.2010 02.06.2004 22.12.2004 03.09.2008 29.09.2010 03.01.2002 07.02.2002 21.02.2002 18.04.2002 07.11.2002 01.07.2004 22.09.2005 29.09.2005 16.02.2006 14.09.2006 14.09.2006 15.11.2007 28.02.2008 25.06.2009 29.10.2009 29.10.2009 15.07.2010 30.09.2010 24.03.2011 14.07.2011 06.11.2001 10.09.2002 01.10.2002 30.09.2003 19.07.2005 14.02.2006 13.06.2006

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/039714

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 7060008 B2	13.06.2006
		US 7166062 B1	23.01.2007
		US 7166064 B2	23.01.2007
		US 7455622 B2	25.11.2008
		US 7537546 B2	26.05.2009
		US 7556590 B2	07.07.2009
		US 7628730 B1	08.12.2009
		US 7628737 B2	08.12.2009
		US 7645212 B2	12.01.2010
		US 7645213 B2	12.01.2010
		US 7789800 B1	07.09.2010
		US 7862478 B2	04.01.2011
		US 7981000 B2	19.07.2011
		US 7985164 B2	26.07.2011
		US 8029415 B2	04.10.2011
		US 8251874 B2	28.08.2012
		WO 01-03777 A1	18.01.2001
		WO 01-56661 A1	09.08.2001
		WO 02-062425 A1	15.08.2002
		WO 02-15985 A1	28.02.2002
		WO 02-15986 A1	28.02.2002
		WO 02-15988 A1	28.02.2002
		WO 03-082409 A1	09.10.2003
		WO 2005-032662 A2	14.04.2005
		WO 2005-032662 A3	14.04.2005
		WO 2007-081607 A2	19.07.2007
		WO 2007-081607 A3	19.07.2007
		WO 2008-112638 A2	18.09.2008
		WO 2008-112638 A3	18.09.2008
		WO 2010-111390 A1	30.09.2010