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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,

BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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- (88) **Date of publication of the international search report:**
4 December 2014

- (54) **Title:** COMMUNICATION SECURED BETWEEN A MEDICAL DEVICE AND ITS REMOTE CONTROL DEVICE

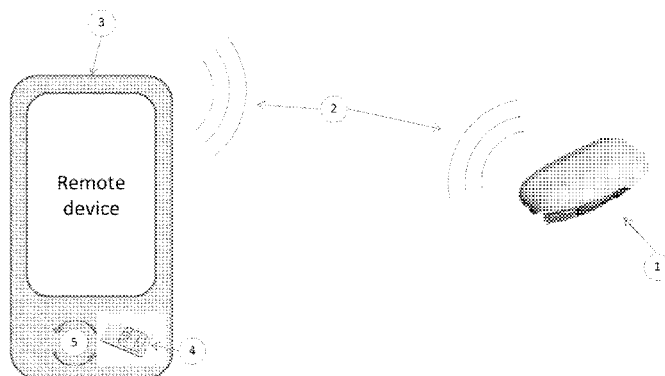


FIG. 5

- (57) **Abstract:** The invention comprises a medical assembly composed by a medical device and a remote control which communicate in a secure and wireless manner. The remote control is connected to at least one security token. Key information stored in the medical device and the security token is used to establish a connection and to communicate in a secure manner.

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/055626

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F19/00 H04L9/08
ADD.

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)

G06F H04L

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

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

EPO-Internal, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SORBER J M ET AL: "Plug-n-trust: Practical trusted sensing for mHealth", THE 10TH INTERNATIONAL CONFERENCE ON MOBILE SYSTEMS, APPLICATIONS, AND SERVICES, MOBISYS'12, AMBLESIDE, UNITED KINGDOM - JUNE 25 - 29, 2012, ACM, NEW YORK, NY, USA, 25 June 2012 (2012-06-25), pages 309-322, XP002692324, DOI: 10.1145/2307636.2307665 the whole document ----- -/--	1-8, 11-23, 29-38, 40-43, 53,54, 58,66,67

☒ 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

"&" document member of the same patent family

Date of the actual completion of the international search

17 September 2014

Date of mailing of the international search report

25/09/2014

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/055626

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 2009/058636 A1 (GASKILL ROBERT [US] ET AL) 5 March 2009 (2009-03-05)</p> <p>paragraph [0056] - paragraph [0058] paragraph [0073] - paragraph [0076] paragraph [0105] - paragraph [0109] paragraph [0212] - paragraph [0255] paragraph [0354] - paragraph [0356] paragraph [0374] - paragraph [0387] figure 13</p>	<p>1-8, 11-23, 29-38, 40-43, 53,54, 58,66,67</p>
X	<p>US 2005/204134 A1 (VON ARX JEFFREY A [US] ET AL) 15 September 2005 (2005-09-15)</p> <p>-----</p> <p>paragraph [0026] - paragraph [0050]; figures 1,2 paragraph [0066] - paragraph [0068]; figure 4D paragraph [0076] - paragraph [0080]; figure 6 paragraph [0091] - paragraph [0093]; figure 10</p>	<p>1-8, 11-23, 29-38, 40-43, 53,54, 58,66,67</p>
X	<p>US 2008/140160 A1 (GOETZ STEVEN M [US] ET AL) 12 June 2008 (2008-06-12)</p> <p>-----</p> <p>paragraph [0015] - paragraph [0022] paragraph [0036] - paragraph [0045] paragraph [0061] - paragraph [0064] paragraph [0096] - paragraph [0111] figures 1,2</p>	<p>1-8, 11-23, 29-38, 40-43, 53,54, 58,66,67</p>
X	<p>JACOB SORBER ET AL: "Poster", MOBISYS '11, ACM, US, 28 June 2011 (2011-06-28), pages 405-406, XP058004611, DOI: 10.1145/1999995.2000058 ISBN: 978-1-4503-0643-0 the whole document</p> <p>-----</p> <p style="text-align: center;">-/--</p>	<p>1-8, 14-23, 29-38, 40,41, 43,58, 66,67</p>

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/055626

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 2011/161577 A1 (DEBIOTECH SA [CH]; NEFTEL FREDERIC [CH]) 29 December 2011 (2011-12-29)</p> <p>the whole document</p>	<p>1-8, 11-23, 29-38, 40-43, 53,54, 58,66,67</p>
X	<p>-----</p> <p>P Menezes ET AL: "This is a Chapter from the Handbook of Applied Cryptography, by A Key Establishment Protocols", 31 December 1997 (1997-12-31), XP055119322, Retrieved from the Internet: URL:http://cacr.uwaterloo.ca/hac/about/cha p12.pdf [retrieved on 2014-05-21] page 489 - page 498</p>	<p>9,10, 44-52, 55-57</p>
X	<p>-----</p> <p>US 2006/190726 A1 (BRIQUE OLIVIER [CH] ET AL) 24 August 2006 (2006-08-24)</p> <p>paragraph [0028] - paragraph [0038]; figure 1</p>	<p>9,10, 44-52, 55-57</p>
X	<p>-----</p> <p>EP 1 282 260 A1 (SCM MICROSYSTEMS GMBH [DE]) 5 February 2003 (2003-02-05)</p> <p>the whole document</p>	<p>9,10, 44-52, 55-57</p>
X	<p>-----</p> <p>EP 0 720 326 A2 (AT & T CORP [US]) 3 July 1996 (1996-07-03)</p> <p>the whole document</p>	<p>9,10, 44-52, 55-57</p>
X	<p>-----</p> <p>JINGWEI LIU ET AL: "Hybrid security mechanisms for wireless body area networks", UBIQUITOUS AND FUTURE NETWORKS (ICUFN), 2010 SECOND INTERNATIONAL CONFERENCE ON, IEEE, PISCATAWAY, NJ, USA, 16 June 2010 (2010-06-16), pages 98-103, XP031731567, ISBN: 978-1-4244-8088-3 the whole document</p> <p>-----</p>	<p>9,10, 44-52, 55-57</p>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2013/055626

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 68-71
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
1-23, 29-38, 40-58, 66, 67
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8, 11-23, 29-38, 40-43, 53, 54, 58, 66, 67

Assembly of medical node and node with security token
containing key information

1.1. claims: 11-13, 42, 53, 54

Process and device to share a secret between a node and its
security token

2. claims: 9, 10, 44-52, 55-57

Method to generate a session key to secure communications
between medical node and node comprising a token by using
key generators and encryption engines

3. claims: 24-28, 39

Use of a virtualization platform comprising a host operating
system and a guest operating system, including control of
integrity and applications authorized to run

4. claims: 59-65

Loopback process between two distinct nodes, a security
token and a user to validate a user's command.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 68-71

Claims 68-71 are defined as the use of an assembly of remote control, which can be an smartphone, and medical devices, which can be an insulin pump. Said claims fail to specify the aim of said use or the technical features implied by it. In the absence of this information is not possible to define the scope of said claims (Article 6 EPC) and therefore it is not possible to carry out a meaningful search for them (Article 17(2) PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guidelines C-IV, 7.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2013/055626

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