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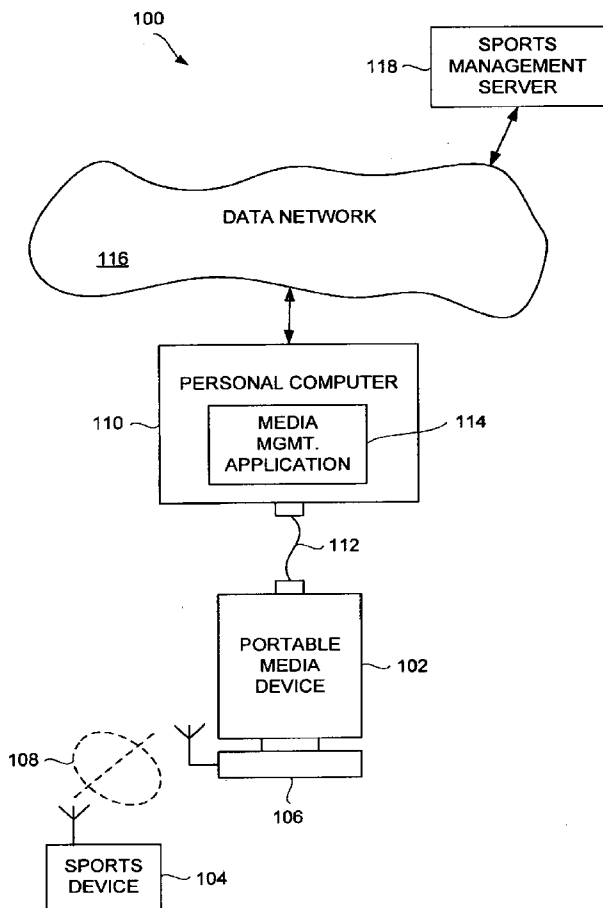
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- (71) Applicant (for all designated States except US): APPLE INC. [US/US]; 1 Infinite Loop, Cupertino, CA 95014 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ANANNY, John Meron [CA/US]; 301 Jersey Street, #1, San Francisco, CA 94114 (US). KALAYJIAN, Nicholas Robert [US/US]; 164 Winding Way, San Carlos, CA 94070 (US).
- (74) Agents: FERRAZANO, Michael J. et al.; Beyer Weaver LLP, PO Box 70250, Oakland, CA 94612-0250 (US).

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[Continued on next page]

(54) Title: CALIBRATION TECHNIQUES FOR ACTIVITY SENSING DEVICES



(57) Abstract: Improved techniques and systems to calibrate an electronic device that is providing activity sensing are disclosed. The activity being sensed can, for example, correspond to walking or running by a user. In one embodiment, calibration can be performed by a portable electronic device so that activity data it receives from a remote sensor device can be more accurately processed. The improved techniques and systems to calibrate can be used to monitor, process, present and manage data captured by a remote sensor. The portable electronic device can also offer a convenient user interface that can be visual and/or audio based, customized to a particular application, user-friendly and/or dynamic. The portable electronic device can pertain to a portable media player and thus also provide media playback.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/012033

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04L29/08

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)

H04L H04Q

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 practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/022828 A1 (PYLES NATHAN [US]) 20 September 2001 (2001-09-20)	1-13, 15-18, 26-37
Y	abstract paragraphs [0002] - [0016], [0019] - [0091], [0250] - [0285]	14
Y	US 4 736 312 A (DASSLER ARMIN A [DE] ET AL) 5 April 1988 (1988-04-05)	14
A	abstract; figures 2-5	1-13, 15-18, 26-37
A	US 5 117 444 A (SUTTON WILLIAM R [US] ET AL) 26 May 1992 (1992-05-26) abstract; figures 6,7 column 2, line 17 - column 6, line 59 claims 1,15	1-18, 26-37

 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 document 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

27 June 2008

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07/07/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Kappatou, Erasmia

INTERNATIONAL SEARCH REPORT

International application No

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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 6 145 389 A (EBELING W H CARL [US] ET AL) 14 November 2000 (2000-11-14) abstract; figure 6 column 10, line 1 - column 12, line 23 -----	1-18, 26-37
A	US 5 476 427 A (FUJIMA MIKAKO [JP]) 19 December 1995 (1995-12-19) abstract; figures 4-6 column 1, line 6 - line 57 column 4, line 56 - column 8, line 22 -----	1-18, 26-37
X	US 6 876 947 B1 (DARLEY JESSE [US] ET AL) 5 April 2005 (2005-04-05)	19-22
Y	column 43, lines 6-29; figures 1,4 -----	23-25
Y	US 2006/097847 A1 (BERVOETS ALFONSUS M [NL] ET AL) 11 May 2006 (2006-05-11) abstract; figures 3a,3b,4 paragraph [0010] -----	23-25
X	US 2005/080566 A1 (VOCK CURTIS A [US] ET AL) 14 April 2005 (2005-04-14) abstract; figures 1,36,37,53,61,62 paragraphs [0193] - [0196], [0288], [0295], [0330], [0338], [0355] - [0360] -----	19-24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/012033

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.:
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:

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 allsearchable 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.:
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: 1-18,26-37

Calibrating an activity monitoring system using an existing or default calibration data model to produce a modified calibration data model.

2. claims: 19-25

Operating an activity monitoring apparatus using a shoe characterising information received from the shoe of the user of the activity monitoring apparatus.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/012033

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2001022828	A1	20-09-2001	NONE	
US 4736312	A	05-04-1988	AU 5372586 A BR 8600254 A DE 3505521 A1 EP 0192172 A1 IN 165653 A1 JP 1991018 C JP 6090043 B JP 61191302 A	21-08-1986 30-09-1986 21-08-1986 27-08-1986 02-12-1989 22-11-1995 14-11-1994 26-08-1986
US 5117444	A	26-05-1992	NONE	
US 6145389	A	14-11-2000	NONE	
US 5476427	A	19-12-1995	JP 3334279 B2 JP 7104077 A	15-10-2002 21-04-1995
US 6876947	B1	05-04-2005	US 6898550 B1	24-05-2005
US 2006097847	A1	11-05-2006	NONE	
US 2005080566	A1	14-04-2005	US 2006052983 A1 US 2007208542 A1	09-03-2006 06-09-2007