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BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

Mail Date: 04/21/2010

Applicant	: Philippe Kahn	: DECISION ON REQUEST FOR
Patent Number	: 7653508	: RECALCULATION of PATENT
Issue Date	: 01/26/2010	: TERM ADJUSTMENT IN VIEW
Application No	: 11/644,455	: OF WYETH AND NOTICE OF INTENT TO
Filed	: 12/22/2006	: ISSUE CERTIFICATE OF CORRECTION
		:

The Request for Recalculation is **GRANTED** to the extent indicated.

The patent term adjustment has been determined to be **556** days. The USPTO will *sua sponte* issue a certificate of correction reflecting the amount of PTA days determined by the recalculation.

Prior to the issuance of the certificate of correction, the USPTO will afford patentee an opportunity to be heard and request reconsideration. Accordingly, patentee has **one month or thirty (30) days**, whichever is longer, to file a request for reconsideration of this patent term adjustment calculation. See 35 U.S.C. 154(b)(3)(B)(ii) and 37 CFR 1.322(a)(4). No extensions of time will be granted under 37 CFR 1.136.

Patentee should use document code PET.OP if electronically filing a request for reconsideration of this patent term adjustment calculation. The patentee must also include the information required by 37 CFR 1.705(b)(2) and the fee required by 37 CFR 1.18(e). If patentee does not file a timely request for reconsideration of this patent term adjustment calculation including the information required by 37 CFR 1.705(b)(2) and the fee required by 37 CFR 1.18(e), the USPTO will issue a certificate of correction reflecting the PTA determination noted above.

Patentee should be aware that in order to preserve the right to review in the United States District Court for the District of Columbia of the USPTO patent term adjustment determination, patentee must ensure that he or she also take the steps required under 35 U.S.C. 154(b)(4)(A) in a timely manner. Nothing in the request for recalculation should be construed as providing an alternative time frame for commencing a civil action under 35 U.S.C. 154(b)(4)(A).

Any questions concerning this decision should be directed to the Office of Patent Legal Administration at 571-272-7702.

REQUEST FOR RECALCULATION OF PATENT TERM ADJUSTMENT IN VIEW OF *WYETH**

Attorney Docket
Number: 8689P027

Application
Number: 11/644,455

Filing Date
(or 371(b) or (f) Date): December 22, 2006

Patent Number: 7,653,508

Issue Date: January 26, 2010

First Named
Inventor: Philippe Kahn

Title: Human Activity Monitoring Device

PATENTEE HEREBY REQUESTS RECALCULATION OF THE PATENT TERM ADJUSTMENT (PTA) UNDER 35 USC 154(b) INDICATED ON THE ABOVE-IDENTIFIED PATENT. THE PATENTEE'S SOLE BASIS FOR REQUESTING THE RECALCULATION IS THE USPTO'S PRE-*WYETH* INTERPRETATION OF 35 U.S.C. 154(b)(2)(A).

Note: This form is only for requesting a recalculation of PTA for patents issued before March 2, 2010, if the sole basis for requesting the recalculation is the USPTO's pre-*Wyeth* interpretation of 35 U.S.C. 154(b)(2)(A). See Instruction Sheet on page 2 for more information.

Patentees are reminded that to preserve the right to review in the United States District Court for the District of Columbia of the USPTO's patent term adjustment determination, a patentee must ensure that he or she also takes the steps required under 35 U.S.C. 154(b)(3) and (b)(4) and 37 CFR 1.705 in a timely manner.

**Wyeth v. Kappos*, No. 2009-1120 (Fed. Cir., Jan. 7, 2010).

Signature /Judith Szepesi/ Date February 19, 2010

Name
(Print/Typed) Judith A. Szepesi

Registration Number 39,393

Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below*.

☒ *Total of 1 forms are submitted.

The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**Instruction Sheet for:
REQUEST FOR RECALCULATION OF PATENT TERM ADJUSTMENT
IN VIEW OF *WYETH****

(Not to be Submitted to the USPTO)

This form is only for requesting a recalculation of PTA for patents issued before March 2, 2010, if the sole basis for requesting the recalculation is the USPTO's pre-*Wyeth* interpretation of 35 U.S.C. 154(b)(2)(A).

This form must be filed within 180 days of the day the patent was granted, with the following exception:

Patentees who received a decision from the USPTO under the USPTO's pre-*Wyeth* interpretation of 35 U.S.C. 154(b)(2)(A) may file a request for reconsideration of that decision if such a request for reconsideration is filed within **two months** of the date of the decision (37 CFR 1.181(f)). If the patentee's sole basis for requesting reconsideration of the decision is the USPTO's pre-*Wyeth* interpretation of 35 U.S.C. 154(b)(2)(A), the request for reconsideration need only state that reconsideration is being requested in view of *Wyeth* (this form may be used for this purpose if it is filed within **two months** of the date of the decision from the USPTO).

Do not use this form if the application has been allowed, but not yet issued as a patent.

- 1. For patents issued before March 2, 2010:** A request for reconsideration under 37 CFR 1.705(d) and the fee set forth in 37 CFR 1.18(e) are not required, provided that the patentee's sole basis for requesting recalculation of the PTA in the patent is the USPTO's pre-*Wyeth* interpretation of 35 U.S.C. 154(b)(2)(A) and this form is filed within 180 days of the day the patent was granted.
- 2. For patents issued on or after March 2, 2010 (do not use this form):** Patentees seeking a revised PTA in a patent issued on or after March 2, 2010, must file a request for reconsideration under 37 CFR 1.705(d) that complies with the requirements of 37 CFR 1.705(b)(1) and (b)(2) within two months of the day the patent issued.

For more information, see "Notice Concerning Calculation of the Patent Term Adjustment With Respect to the Overlapping Delay Provision of 35 U.S.C. 154(b)(2)(A)" available on the USPTO Web site at <http://www.uspto.gov/patents/law/notices/2010.jsp>.

**Wyeth v. Kappos*, No. 2009-1120 (Fed. Cir., Jan. 7, 2010).

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	7051773
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	HUMAN ACTIVITY MONITORING DEVICE
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Judith A. Szepesi
Filer Authorized By:	
Attorney Docket Number:	8689P027
Receipt Date:	19-FEB-2010
Filing Date:	22-DEC-2006
Time Stamp:	19:40:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for PTA recalculation in view of Wyeth	8689P027_Request_for_Recalculation.pdf	128819 e3f5108b94308c9a7c40b9503ebd2b3e6e2a9ac1	no	3

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/644,455	01/26/2010	7653508	8689P027	5415

8791 7590 01/06/2010

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 556 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Philippe Kahn, Aptos, CA;
Arthur Kinsolving, Santa Cruz, CA;
Mark Andrew Christensen, Santa Cruz, CA;
Brian Y. Lee, Aptos, CA;
David Vogel, Santa Cruz, CA;

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn	
				Art Unit	2856	
				Examiner Name	Not Yet Assigned	
				Attorney Docket Number	7538.P027	
Sheet	2	of	3			
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
/EC/		US-	7,171,331	1/30/2007	Vock, et al.	
/EC/		US-	7,200,517	4/3/2007	Darley, et al.	
/EC/		US-	7,212,943	5/1/2007	Aoshima, et al.	
/EC/		US-	7,220,220	5/22/2007	Stubbs, et al.	
/EC/		US-	2002/0109600	8/15/2002	Mault, James R.; et al.	
/EC/		US-	2002/0151810	10/17/2002	Wong, Philip Lim-Kong; et al.	
/EC/		US-	2005/0240375	10/27/2005	Sugai, Yoshinori	
/EC/		US-	2005/0248718	11/10/2005	Howell, Thomas A., et al.	
/EC/		US-	2006/0136173	6/22/2006	Charles Whipple JR.; et al.	
		US-			Case	
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁸
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2856	
				Examiner Name	Kwok, Helen C.	
Sheet	1	of	2	Attorney Docket Number		8689P027
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
/E.C./		US- 6,836,744 B1	12/28/2004	Asphahani, et al.		
/E.C./		US- 6,941,239 B2	9/6/2005	Unuma, et al.		
/E.C./	7328611	US- 7,382,611	2/12/2008	Klees, et al.		
/E.C./		US- 2007/0063850 A1	3/22/2007	Devaul; Richard W.; et al.		
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Based on Form PTO/SB/08A (08-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 09/10/03.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
 or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

8791 7590 11/30/2009

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

Certificate of Transmission

I hereby certify that this Fee(s) Transmittal is being submitted electronically via EFS Web on the date shown below.

Judith A. Szepesi	(Depositor's name)
/Judith Szepesi/	(Signature)
December 9, 2009	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/644,455

12/22/2006

Philippe Kahn

8689P027

5415

TITLE OF INVENTION: HUMAN ACTIVITY MONITORING DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional

NO

\$1510

\$0

\$0

\$1510

03/01/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
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COSIMANO, EDWARD R

2863

702-160000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Blakely, Sokoloff,

2 Taylor & Zafman, LLP

3 Judith A. Szepesi

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

DP TECHNOLOGIES, INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Scotts Valley, California

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 02-2666 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Judith Szepesi/

Date December 9, 2009

Typed or printed name Judith A. Szepesi

Registration No. 39,393

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal				
Application Number:		11644455		
Filing Date:		22-Dec-2006		
Title of Invention:		HUMAN ACTIVITY MONITORING DEVICE		
First Named Inventor/Applicant Name:		Philippe Kahn		
Filer:		Judith A. Szepesi/Joan Abriam		
Attorney Docket Number:		8689P027		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	1501	1	1510	1510
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				1510

Electronic Acknowledgement Receipt

EFS ID:	6607065
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	HUMAN ACTIVITY MONITORING DEVICE
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Judith A. Szepesi
Filer Authorized By:	
Attorney Docket Number:	8689P027
Receipt Date:	09-DEC-2009
Filing Date:	22-DEC-2006
Time Stamp:	22:26:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	8689P027_Issue_Fee.pdf	211575 abbd78dc49054e34247e3479a68a3cfeb300f785	no	1

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	30374	no	2
			0c8974e0bc560db03576dd44518584e6f3e176dd		
Warnings:					
Information:					
Total Files Size (in bytes):			241949		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
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Alexandria, Virginia 22313-1450
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DEC 09 2009

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8791

7590

11/30/2009

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

12/10/2009 RMEBRAH1 00000018 022666 11644455

01 FC:1501 1510.00 DA

Certificate of Transmission

I hereby certify that this Fee(s) Transmittal is being submitted electronically via EFS Web on the date shown below.

Judith A. Szepesi	(Depositor's name)
/Judith Szepesi/	(Signature)
December 9, 2009	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/644,455	12/22/2006	Philippe Kahn	8689P027	5415

TITLE OF INVENTION: HUMAN ACTIVITY MONITORING DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	03/01/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
COSIMANO, EDWARD R	2863	702-160000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. Blakely, Sokoloff,

2. Taylor & Zafman, LLP

3. Judith A. Szepesi

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

DP TECHNOLOGIES, INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Scotts Valley, California

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee☐ Publication Fee (No small entity discount permitted)☐ Advance Order - # of Copies

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.☐ Payment by credit card. Form PTO-2038 is attached.☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 02-2666 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Judith Szepesi/

Date December 9, 2009

Typed or printed name Judith A. Szepesi

Registration No. 39,393

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

8791 7590 11/30/2009

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
COSIMANO, EDWARD R	
ART UNIT	PAPER NUMBER

2863

DATE MAILED: 11/30/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/644,455

12/22/2006

Philippe Kahn

8689P027

5415

TITLE OF INVENTION: HUMAN ACTIVITY MONITORING DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	03/01/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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8791 7590 11/30/2009

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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

11/644,455 12/22/2006 Philippe Kahn 8689P027 5415

TITLE OF INVENTION: HUMAN ACTIVITY MONITORING DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	03/01/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
COSIMANO, EDWARD R	2863	702-160000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
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- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/644,455	12/22/2006	Philippe Kahn	8689P027	5415
8791	7590	11/30/2009	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			COSIMANO, EDWARD R	
			ART UNIT	PAPER NUMBER
			2863	
DATE MAILED: 11/30/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 556 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 556 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	11/644,455	KAHN ET AL.	
	Examiner	Art Unit	
	Edward R. Cosimano	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE, Amendment & IDS filed on 09 October 2009.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>10/09/2009</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Art Unit: 2863

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 09 October 2009 has been entered.

2. EXAMINER'S COMMENT

2.1 When preparing this Office action the examiner considers the instant application to include:

A) the Oath/Declaration filed on 02 April 2007 which is acceptable to the examiner;

B) the Abstract filed on 22 December 2006 which is acceptable to the examiner;

C) figures 1, 2, 3, 4, 5, 6, 7, 8 & 9 of the set of drawings containing 9 sheets of 9 figures comprising figures 1, 2, 3, 4, 6, 7, 8 & 9 as presented in the set of drawings filed on 22 December 2006 and figure 5 as presented in the set of drawing filed on 09 October 2009 where the content of figures 1, 2, 3, 4, 5, 6, 7, 8 & 9 of the above set of drawings is acceptable to the examiner;

D) the written description as filed on 22 December 2006 and amended on 09 October 2009;

E) the set of claims as filed on 22 December 2006; and

F) the Non publication request of 25 June 2007.

2.2 The examiner has approved the proposed changes to figure 5 of the drawings as filed on 09 October 2009.

3. RESPONSE TO APPLICANT'S ARGUMENTS

3.1 The objections and rejection that have not been repeated here in have been over come by applicant's last response.

4. REASONS FOR ALLOWANCE

4.1 The following is a statement of reasons for the indication of allowable subject matter:

A) the prior art, for example:

(1) Ebeling et al (6,145,389) discloses a machine/process that provides the useful and beneficial function of pedometer in which the time variation of a measured acceleration, representing the steps or stride of an user, is evaluated or analyzed in order to determine if the user is running or walking. Further, the evaluation or analysis of the measured acceleration is used in order to more accurately determine a count of the user's steps or strides and to determine an accurate determination of the user's step or stride distance. Then based on the determinations of whether the user is running or walking, the step or stride count, and the distance traveled during one step or stride, the total distance traveled by the user may be determined.

(2) either Sakuria et al (6,369,794) or Kubo et al (2002/0089425 or 6,700,499) or Ladetto et al (2003/0018430 or 6,826,477) disclose a machine/process that provides the useful and beneficial function of determining an user's action or motion in which the time variation of a measured acceleration, representing the user's action or motion, is evaluated or analyzed in order to determine the user's action or motion.

(3) either Tsuji (2005/0232388 or 2005/0238132 or 7,169,084 or 7,297,088) or Park et al (2007/0067094) disclose a machine/process that provides the useful and beneficial function of pedometer in which the time variation of a measured acceleration, representing the steps or stride of an user, is evaluated or analyzed in order to determine if the user is running or walking. Further, the evaluation or analysis of the measured acceleration with in a time window of an expected period or interval representing a cadence or step interval or period is used in order to more accurately determine a count of the user's steps or strides. Then based on the determination of the step or stride count the total distance traveled by the user may be determined.

(4) either Seo et al (2006/0020177 or 7,334,472) disclose a machine/process that provides the useful and beneficial function of placing an acceleration based pedometer machine/process into a sleep or low power mode in which the sampling frequency is changed, when a step is not detected with in a

Art Unit: 2863

predetermined period/interval of time and then wakes the pedometer up when a step is detected.

B) however, the prior art does not fairly teach or suggest in regard to claims 1 & 11 a process in claim 1 and a machine in claim 11 that provides the useful and beneficial function of monitoring human activity by providing actions in claim 1 and structures in claim 11 that perform at least the functions of:

- (1) continuously determining the orientation of an inertial sensor;
- (2) assigning a dominate axis for the inertial axis;
- (3) updating the dominate axis for the inertial axis as the orientation of the inertial sensor changes; and
- (4) counting periodic human activity by using the inertial sensor to monitor accelerations relative to the dominate axis of the inertial sensor.

Claims 2-5, which depend from claim 1, and claims 12-14, which depend from claim 11, are allowable for the same reason.

C) however, the prior art does not fairly teach or suggest in regard to claims 6 & 15 a process in claim 6 and a machine in claim 15 that provides the useful and beneficial function of monitoring human activity by providing actions in claim 6 and structures in claim 15 that perform at least the functions of:

- (1) operating a device, including an inertial sensor, in a non-active mode to buffer human motions;
- (2) operating the device with the inertial sensor, in an active mode after a predetermined number of human motions have been detected within an appropriate cadence window; and
- (3) monitoring human activity by counting each periodic human activity while operating the device with the inertial sensor, in the active mode.

Claims 7-10, which depend from claim 6, and claims 16-20, which depend from claim 15, are allowable for the same reason.

5. CONCLUSION

5.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward R. Cosimano whose telephone number is 571-272-0571.

Art Unit: 2863

The examiner can normally be reached on 571-272-0571 from 7:30am to 4:00pm (Eastern Time).

5.2 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5.3 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ERC

11/09/2009

**/Edward Cosimano/
Primary Examiner Unit 2863**

Notice of References Cited	Application/Control No. 11/644,455	Applicant(s)/Patent Under Reexamination KAHN ET AL.	
	Examiner Edward R. Cosimano	Art Unit 2863	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0020177	01-2006	Seo et al.	600/300
*	B	US-7,334,472	02-2008	Seo et al.	73/379.01
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	456364	(dominate or principle or major or first or primary) near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)	US-PGPUB; USPAT; UPAD	2009/11/09 10:29
2	BRS	L2	2657	1 near5 (alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial)	US-PGPUB; USPAT; UPAD	2009/11/09 10:30
3	BRS	L3	16089	(1 or 2) near8 (id or identify or identifying or identified or identification or determine or determining or determination or determined or judge or judged or judging or judgment or judgement or judger or judgor or evaluate or evaluated or evaluating or evaluation or evaluator or evaulater or analysis or analyze or analyzed or analyzing or analyzer or analyzor or calculate or calculated or calculating or calculation or calculator or calculater)	US-PGPUB; USPAT; UPAD	2009/11/09 10:31

	Type	L #	Hits	Search Text	DBs	Time Stamp
4	BRS	L4	36381	(1 or 2) near6 (replace or replaced or replacing or replacement or switch or switched or switching or change or changed or changing or alter or altered or altering or alteration or modify or modified or modifying or modification or correct or corrected or correcting or correction or compensate or compensated or compensating or compensation or calibrate or calibrated or calibrating or calibration or delta or adjust or adjusted or adjusting or adjustment or update or updated or updating or configure or configured or configuring or configuration or reconfigure or reconfigured or reconfiguring or reconfiguration)	US-PGPUB; USPAT; UPAD	2009/11/09 10:32

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5	BRS	L5	1182650	(step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length) near5 (determine or determining or determination or determined or meter or metered or metering or gauge or gauged or gauging or gage or gaged or gaging or acquire or acquired or acquiring or acquisition or acquisitioning or acquirer or acquiror or aggregate or aggregated or aggregating or aggregation or collect or collected or collecting or collection or collector or collector or log or logged or logging or logger or accumulate or accumulated or accumulating or accumulation)	US-PGPUB; USPAT; UPAD	2009/11/09 10:33

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6	BRS	L6	1706555	(step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length) near5 (count or counted or counting or number or numbered or numbering or measure or measured or measuring or measurement or test or tested or testing or monitor or monitored or monitoring or capture or captured or capturing or detect or detected or detecting or detection or detector or detector or sense or sensed or sensing or sensor or senser or sensible or transduce or transduced or transducing or transducer or sample or sampled or sampling or sampler)	US-PGPUB; USPAT; UPAD	2009/11/09 10:33
7	BRS	L7	855	2 same (5 or 6 or step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length)	US-PGPUB; USPAT; UPAD	2009/11/09 10:35
8	BRS	L8	68	3 and 4 and 7	US-PGPUB; USPAT; UPAD	2009/11/09 10:37

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9	BRS	L9	17699	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (max or maximum or high or higher or highest or upper or top or greater or above or outside or exceed or exceeded or exceeding) near3 (criteria or criterium or setpoint or point or level or threshold or limit or require or required or requiring or requirement or tolerance or qualify or qualified or qualifying or qualification or standard or bench or benchmark or baseline or base or reference)	US-PGPUB; USPAT; UPAD	2009/11/09 10:40
10	BRS	L10	8833	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (min or minimum or low or lower or lowest or bottom or less or below or beneath or underneath) near3 (criteria or criterium or setpoint or point or level or threshold or limit or require or required or requiring or requirement or tolerance or qualify or qualified or qualifying or qualification or standard or bench or benchmark or baseline or base or reference)	US-PGPUB; USPAT; UPAD	2009/11/09 10:40

	Type	L #	Hits	Search Text	DBs	Time Stamp
11	BRS	L11	25901	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (tolerance or window or range or band)	US-PGPUB; USPAT; UPAD	2009/11/09 10:41
12	BRS	L12	5274	((9 near10 10) or 11) near10 ("with" or within or meet or met or meeting or "between")	US-PGPUB; USPAT; UPAD	2009/11/09 10:43
13	BRS	L13	360	12 same (5 or 6)	US-PGPUB; USPAT; UPAD	2009/11/09 10:43
14	BRS	L14	731154	(step or motion or human or run or running or walk or walking or cadence or stride) near3 (interval or period or time or snapshot or periodic or periodically or tolerance or window or range or band)	US-PGPUB; USPAT; UPAD	2009/11/09 10:45

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17	BRS	L17	1646	(kahn\$1.in. adj2 (p.in. or philippe.in.)) or (kinsolving\$1.in. adj2 (a.in. or arthur.in.)) or (christensen\$1.in. adj2 (m.in. or mark.in.)) or (lee\$1.in. adj2 (b.in. or brian.in.)) or (vogel\$1.in. adj2 (d.in. or david.in.))	US-PGPUB; USPAT; UPAD	2009/11/09 10:47
18	BRS	L18	263	8 or 16 or ((8 or 16) and 17) Reviewed Ti, Ab, Kwic All	US-PGPUB; USPAT; UPAD	2009/11/09 10:49

Interference Search of L18
/ERC/
09 November 2009

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
1	US 11644455 X1		Kahn; Philippe et al.			19
2	US 20030018430 A1	20030123	Ladetto, Quentin et al.	701/217	701/200	56
3	US 6826477 B2	20041130	Ladetto; Quentin et al.	701/217	340/944; 701/200; 701/213; 73/178R	58
4	US 20050232388 A1	20051020	Tsuji, Tomoharu	377/24.2		10
5	US 20050238132 A1	20051027	Tsuji, Tomoharu	377/24.2		10
6	US 20060020177 A1	20060126	Seo; Jeong-Wook et al.	600/300	482/8; 600/595	90
7	US 7169084 B2	20070130	Tsuji; Tomoharu	482/8	482/1; 482/9; 702/160	9
8	US 20070067094 A1	20070322	Park; Kyong-Ha et al.	701/200	702/141	13
9	US 7297088 B2	20071120	Tsuji; Tomoharu	482/3	377/24.2; 482/8; 482/900; 702/160	10
10	US 7334472 B2	20080226	Seo; Jeong-Wook et al.	73/379.01		89
11	US 20090043531 A1	20090212	Kahn; Philippe et al.	702/149		22

18 Results

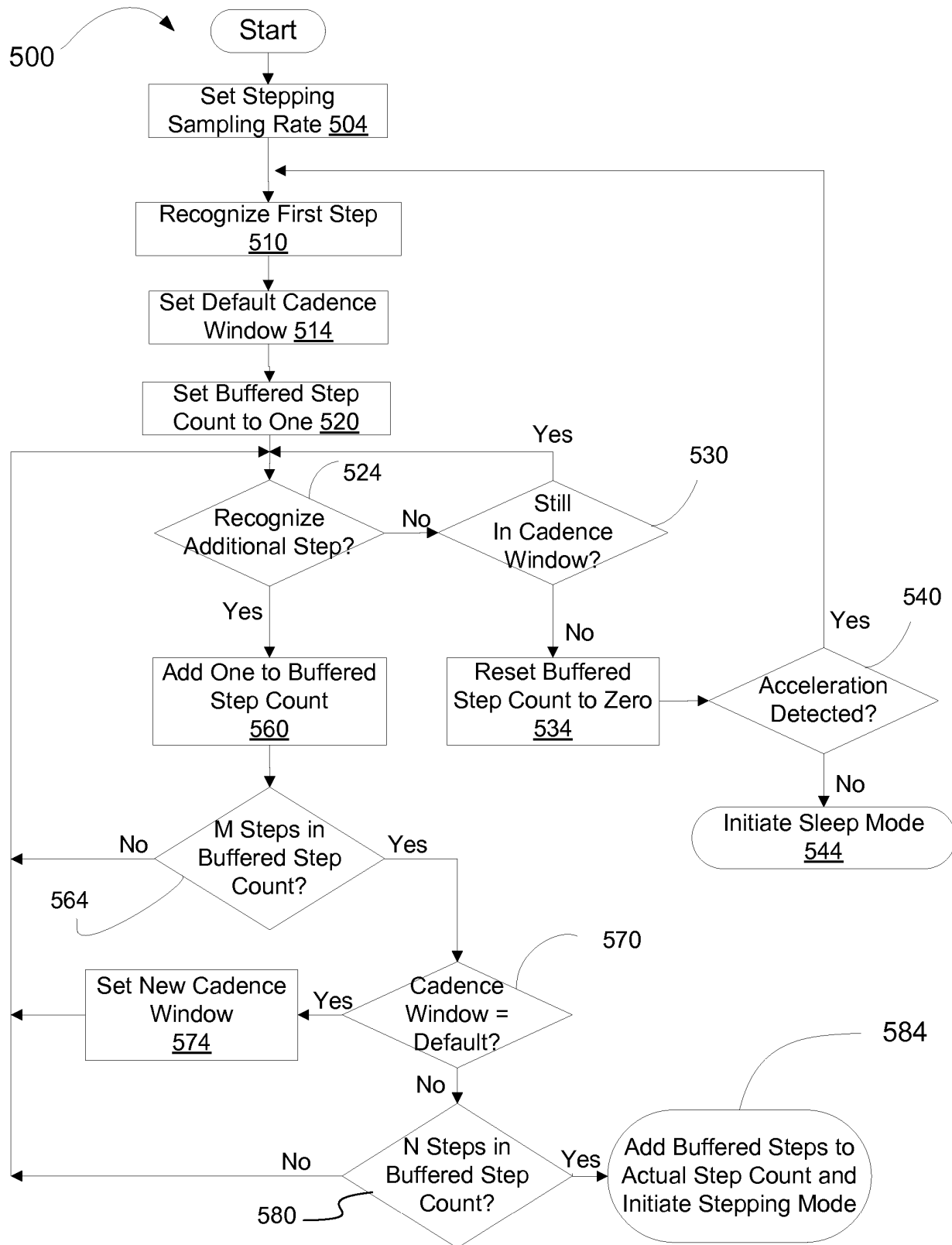




Figure 5

<i>Issue Classification</i> 	Application/Control No. 11644455	Applicant(s)/Patent Under Reexamination KAHN ET AL.
	Examiner Edward R Cosimano	Art Unit 2863

[illegible][illegible]

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)		
/Edward R Cosimano/ Primary Examiner.Art Unit 2863	11/09/2009	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1


Search Notes 	Application/Control No. 11644455	Applicant(s)/Patent Under Reexamination KAHN ET AL.
	Examiner Edward R Cosimano	Art Unit 2863

SEARCHED			
Class	Subclass	Date	Examiner
33	700, 701	08/19/2009	ERC
73	1.01, 1.37, 1.38, 1.75, 1.76, 1.77, 1.78, 1.79, 1.81	08/19/2009	ERC
377	1, 13, 15, 17, 20, 24, 24.1, 24.2	08/19/2009	ERC
702	1, 85, 97, 127, 141, 150, 155, 158, 160, 187, 189	08/19/2009	ERC
Update	above	11/07/2009	ERC

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search; continuity check	08/16/2009	ERC
EAST (USOCR, USPAT, US-PGPUB, DERWENT, EPO, FPRS, JPO, IBM-TDB)	08/19/2009	ERC
Updated EAST search of 19 August 2009	11/07/2009	ERC

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
33	700	11/09/2009	ERC
377	1, 13, 24, 24.2	11/09/2009	ERC
702	1, 127, 155, 158, 160, 187, 189	11/09/2009	ERC

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<i>Index of Claims</i> 	Application/Control No. 11644455	Applicant(s)/Patent Under Reexamination KAHN ET AL.
	Examiner Edward R Cosimano	Art Unit 2863

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant
 ☐ CPA
 ☐ T.D.
 ☐ R.1.47

CLAIM		DATE									
Final	Original	08/22/2009	11/09/2009								
1	1	=	=								
2	2	=	=								
3	3	=	=								
4	4	=	=								
5	5	=	=								
6	6	=	=								
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10	8	=	=								
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13	13	=	=								
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15	15	=	=								
17	16	=	=								
18	17	=	=								
16	18	=	=								
19	19	=	=								
20	20	=	=								

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	11/644,455
				Filing Date	December 22, 2006
				First Named Inventor:	Philippe Kahn, et al.
				Art Unit	2863
				Examiner Name	COSIMANO, EDWARD R.
Sheet	1	of	1	Attorney Docket Number	8689P027
U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/E.C./		US- 5,446,775	8/25/1995	Wright et al.	
/E.C./		US- 6,493,652	12/10/2002	Ohlenbusch et al.	
/E.C./		US- 6,928,382	8/9/2005	Hong et al.	
/E.C./		US- 2003/0109258	6/12/2003	Mantyljarvi et al.	
		US-			
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

Examiner Signature	/Edward Cosimano/	Date Considered	11/07/2009
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

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BIB DATA SHEET

CONFIRMATION NO. 5415

SERIAL NUMBER 11/644,455	FILING or 371(c) DATE 12/22/2006 RULE	CLASS 702	GROUP ART UNIT 2863	ATTORNEY DOCKET NO. 8689P027		
APPLICANTS Philippe Kahn, Aptos, CA; Arthur Kinsolving, Santa Cruz, CA; Mark Andrew Christensen, Santa Cruz, CA; Brian Y. Lee, Aptos, CA; David Vogel, Santa Cruz, CA;						
** CONTINUING DATA ***** NONE/ERC/						
** FOREIGN APPLICATIONS ***** NONE/ERC/						
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/27/2007						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and /EDWARD R COSIMANO/ Acknowledged Examiner's Signature		<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 9	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 4
ADDRESS BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040 UNITED STATES						
TITLE Human activity monitoring device						
FILING FEE RECEIVED 1330	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	202233	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (measure or measured or measuring or measurement or monitor or monitored or monitoring or detect or detected or detecting or detection or detector or sense or sensed or sensing or sensor or senser or sensible or transduce or transduced or transducing or transducer or sample or sampled or sampling or sampler or determine or determining or determination or determined or meter or metered or metering or gauge or gauged or gauging or gage or gaged or gaging or acquire or acquired or acquiring or acquisition or acquisitioning or acquirer or acquiror or collect or collected or collecting or collection or collector or collector or log or logged or logging or logger)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
2	BRS	L2	6344	(L1 or accelerometer or inertial) near5 (orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
3	BRS	L3	27199	(L1 or accelerometer or inertial) near5 (direct or directed or directing or direction of coordinate or "co-ordinate" or (co adj2 ordinate) or cartesian or polar or 3d or linear or ("3" near2 (dimension or dimensional)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

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4	BRS	L4	56779	((x near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)) or "x-axis") same ((y near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)) or "y-axis") same ((z near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)) or "z-axis"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
5	BRS	L5	3094	L4 same (L1 or accelerometer or inertial)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
6	BRS	L6	157243	(orientate or orientated or orientating or orientation or align or aligned or aligning or alignment) near4 (id or identify or identifying or identified or identification or determine or determining or determination or determined or judge or judged or judging or judgment or judgement or judger or judgor or evaluate or evaluated or evaluating or evaluation or evaluator or evaulater or analysis or analyze or analyzed or analyzing or analyzer or analyzor or calculate or calculated or calculating or calculation or calculator or calculater)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

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7	BRS	L7	1827	L6 near5 (alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
8	BRS	L8	1795	(L2 or L3 or L5) same (L6 or L7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
9	BRS	L9	560608	(dominate or principle or major or first or primary) near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
10	BRS	L10	2948	L9 near5 (alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
11	BRS	L11	18176	(L9 or L10) near8 (id or identify or identifying or identified or identification or determine or determining or determination or determined or judge or judged or judging or judgment or judgement or judger or judgor or evaluate or evaluated or evaluating or evaluation or evaluator or evaulater or analysis or analyze or analyzed or analyzing or analyzer or analyzor or calculate or calculated or calculating or calculation or calculator or calculater)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
12	BRS	L12	1364052	(step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length) near5 (determine or determining or determination or determined or meter or metered or metering or gauge or gauged or gauging or gage or gaged or gaging or acquire or acquired or acquiring or acquisition or acquisitioning or acquirer or acquiror or aggregate or aggregated or aggregating or aggregation or collect or collected or collecting or collection or collector or collector or log or logged or logging or logger or accumulate or accumulated or accumulating or accumulation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
13	BRS	L13	2199915	(step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length) near5 (count or counted or counting or number or numbered or numbering or measure or measured or measuring or measurement or test or tested or testing or monitor or monitored or monitoring or capture or captured or capturing or detect or detected or detecting or detection or detector or detector or sense or sensed or sensing or sensor or senser or sensible or transduce or transduced or transducing or transducer or sample or sampled or sampling or sampler)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
14	BRS	L14	804	L1 same (L9 or L10) same (L12 or L13 or step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
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17	BRS	L17	845388	(step or motion or human or run or running or walk or walking or cadence or stride) near3 (interval or period or time or snapshot or periodic or periodically or tolerance or window or range or band)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
18	BRS	L18	779	L16 same L17 same (L12 or L13)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
19	BRS	L19	779	L16 and L18 and (L12 or L13)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
20	BRS	L20	829	L15 or L19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
21	BRS	L21	20889	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (max or maximum or high or higher or highest or upper or top or greater or above or outside or exceed or exceeded or exceeding) near3 (criteria or criterium or setpoint or point or level or threshold or limit or require or required or requiring or requirement or tolerance or qualify or qualified or qualifying or qualification or standard or bench or benchmark or baseline or base or reference)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
22	BRS	L22	10288	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (min or minimum or low or lower or lowest or bottom or less or below or beneath or underneath) near3 (criteria or criterium or setpoint or point or level or threshold or limit or require or required or requiring or requirement or tolerance or qualify or qualified or qualifying or qualification or standard or bench or benchmark or baseline or base or reference)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
23	BRS	L23	98	L21 near10 L22 near10 ("with" or within or meet or met or meeting or "between")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
24	BRS	L24	30323	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (tolerance or window or range or band)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
25	BRS	L25	5850	L24 near10 ("with" or within or meet or met or meeting or "between")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
26	BRS	L26	407	(L23 or L25) same (L12 or L13)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
27	BRS	L27	54711	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (history or historical or previous or prior or slope or trend or pattern or sequence or sequential or signature or trace or traced or tracing or trail or profile or profiled or profiling)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
28	BRS	L28	290	L17 near15 L27	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
29	BRS	L29	102063	L17 near6 (replace or replaced or replacing or replacement or switch or switched or switching or change or changed or changing or alter or altered or altering or alteration or modify or modified or modifying or modification or correct or corrected or correcting or correction or compensate or compensated or compensating or compensation or calibrate or calibrated or calibrating or calibration or delta or adjust or adjusted or adjusting or adjustment or update or updated or updating or configure or configured or configuring or configuration or reconfigure or reconfigured or reconfiguring or reconfiguration)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
30	BRS	L30	107	L27 same L29	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
31	BRS	L31	2	L20 and (L26 or L28 or L30)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
32	BRS	L32	1587	L15 or L20 or L26 or L28 or L30 or L31 Reviewed Ti, Ab, Kwic All	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:44
33	BRS	L33	1516	(@pd>="19470101" and @pd<="19710101") and (33/700 or 33/701 or 73/1.01 or 73/1.37 or 73/1.38 or 73/1.75 or 73/1.76 or 73/1.77 or 73/1.78 or 73/1.79 or 73/1.81 or 377/1 or 377/13 or 377/15 or 377/17 or 377/20 or 377/24 or 377/24.1 or 377/24.2 or 702/1 or 702/85 or 702/97 or 702/127 or 702/141 or 702/150 or 702/155 or 702/158 or 702/160 or 702/187 or 702/189).cc1s.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB Reviewed Ti All NO HITS	2009/11/07 11:50

	Type	L #	Hits	Search Text	DBs	Time Stamp
34	BRS	L34	91	("20090043531" or "4578769" or "5446725" or "5976083" or "6135951" or "6145389" or "6539336" or "6790178" or "6823036" or "6885971" or "6898550" or "6959259" or "7072789" or "7092846" or "7148797" or "7158912" or "7171331" or "7200517" or "7212943" or "7220220" or "20020109600" or "20020151810" or "20050240375" or "20050248718" or "20060136173" or "6836744" or "6941239" or "7382611" or "20070063850" or "4285041" or "7387611" or "20070142715" or "6522266" or "6881191" or "20040225467" or "20050033200" or "5593431" or "5955667" or "6513381" or "6532419" or "6813582" or "20050222801" or "20060223547" or "5446775" or "6493652" or "6928382" or "20030109258").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:51
35	BRS	L35	24864	(kahn\$1.in. adj2 (p.in. or philippe.in.)) or (kinsolving\$1.in. adj2 (a.in. or arthur.in.)) or (christensen\$1.in. adj2 (m.in. or mark.in.)) or (lee\$1.in. adj2 (b.in. or brian.in.)) or (vogel\$1.in. adj2 (d.in. or david.in.))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:51
36	BRS	L36	6	L32 and (L34 or L35) <div>Reviewed TI, Ab, Kwic All</div>	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/11/07 11:51

Interference Search of L32, L33, & L26
/ERC/
09 November 2009

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
1	US 6145389 A	20001114	EBELING A et al.			14
2	US 6369794 B1	20020409	Sakurai; Yasuhiro et al.	345/156	379/433.04	37
3	US 20020089425 A1	20020711	Kubo, Nobuo et al.	340/573.1	340/669	28
4	US 20030018430 A1	20030123	Ladetto, Quentin et al.	701/217	701/200	56
5	US 6700499 B2	20040302	Kubo; Nobuo et al.	340/686.1	340/573.1; 340/573.7; 482/3; 482/74; 600/510; 600/552; 600/553; 73/379.01; 73/379.09	27
6	US 6826477 B2	20041130	Ladetto; Quentin et al.	701/217	340/944; 701/200; 701/213; 73/178R	58
7	US 20050232388 A1	20051020	Tsuji, Tomoharu	377/24.2		10
8	US 20050238132 A1	20051027	Tsuji, Tomoharu	377/24.2		10
9	US 7169084 B2	20070130	Tsuji; Tomoharu	482/8	482/1; 482/9; 702/160	9

L32 Results

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
10	US 20070067094 A1	20070322	Park; Kyong-Ha et al.	701/200	702/141	13
11	US 7297088 B2	20071120	Tsuji; Tomoharu	482/3	377/24.2; 482/8; 482/900; 702/160	10
12	US 7457719 B1	20081125	Kahn; Philippe et al.	702/141		16
13	US 20090043531 A1	20090212	Kahn; Philippe et al.	702/149		22

L32 Results

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
1	US 6145389 A	20001114	EBELING A et al.			14
2	US 7457719 B1	20081125	Kahn; Philippe et al.	702/141		16
3	US 20090043531 A1	20090212	Kahn; Philippe et al.	702/149		22

L36 Results

**REQUEST FOR CONTINUED EXAMINATION (RCE)
TRANSMITTAL**

Address to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450

Application No. 11/644,455
Filing Date December 22, 2006
First Named Inventor Philippe Kahn, et al.
Art Unit 2863
Examiner Name COSIMANO, EDWARD R.
Attorney Docket No. 8689P027

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See instruction sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 C.F.R. § 1.114** – Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).
- a. ☐ Previously submitted If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
- i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on _____
(Any unentered amendment(s) referred to above will be entered. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
- ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- iii. ☐ Other _____
- b. ☒ Enclosed
- i. ☒ Amendment/Reply
- ii. ☐ Affidavit(s)/Declaration(s)
- iii. ☒ Information Disclosure Statement (IDS)
- iv. ☒ Other : Figure 5 – Replacement Drawing
2. **Miscellaneous**
- a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months. **Fee under 37 C.F.R. § 1.17(i) required**)
- b. ☐ Other _____
3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by C.F.R. § 1.114 when the RCE is filed.
- a. ☒ The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. 02-2666
- i. ☒ RCE fee required under 37 C.F.R. § 1.17(e)
- ii. ☐ Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)
- iii. ☐ Processing fee under 37 CFR § 1.17(i) for Limited Suspension of Action
- iv. ☐ Other _____
- b. ☐ Check in the amount of \$ _____ enclosed
- c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type) Benjamin A. Kimes Registration No. (Attorney/Agent) 50,870
Signature /Benjamin A. Kimes/ Date October 9, 2009

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below:

Name (Print/Type) Betty Scaletta
Signature /Betty Scaletta/ Date October 9, 2009

Express Mail No. (only if applicable): _____

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Philippe Kahn, et al.

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: COSIMANO, EDWARD R.

Art Unit: 2863

Confirmation No.: 5415

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND RESPONSE TO *EX PARTE* QUAYLE ACTION

Dear Sir:

In response to the *Ex parte Quayle* Action dated August 31, 2009 please enter this Amendment and consider the following remarks.

Amendments to the specification begin on page 2 of this document.

Amendments to the drawings begin on page 5 of this document.

Remarks begin on page 6 of this document.

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being deposited with the United States Patent and Trademark Office via electronic filing through the United States Patent and Trademark Electronic Filing System on:

October 9, 2009

Date of Deposit

Betty Scaletta

Name of Person Filing Correspondence

/Betty Scaletta/

Signature

10-09-2009

Date

IN THE SPECIFICATION

Please amend the specification to replace originally filed paragraphs [0020], [0024], [0028] and [0039] with replacement paragraphs, as indicated below. The following amendments do not add any new matter to the specification of the present application.

[0020] Filtered measurement data may be passed on to the dominant axis logic 127 and the step counting logic 130. In one embodiment, the dominant axis logic 127 includes a cadence logic 132, a rolling average logic 135, and a dominant axis setting logic 140. In an alternative embodiment, more or fewer logics may be used to determine a dominant axis. ~~One embodiment of implementing dominant axis assignment may be found in co-pending application U.S. Serial No. XXX, which is incorporated herein by reference.~~ Alternative means of identifying a dominant axis may be used in other embodiments.

[0024] Figure 2 illustrates an exemplary motion cycle graph ~~[[201]]~~200 that measures time versus acceleration, in accordance with one embodiment of the present invention. The exemplary motion-cycle graph ~~[[201]]~~200 shows acceleration data taken with a single tri-axis inertial sensor. The acceleration at a given period of time is represented for a first axis 203 of an inertial sensor(s), a second axis 205 of the inertial sensor(s), and a third axis 207 of the inertial sensor(s). In one embodiment, the cadence logic ~~[[135]]~~132 of Figure 1 analyzes the acceleration along the first axis 203, second axis 205 and third axis 207 to detect a motion cycle. Once a motion cycle is detected, a period of the motion cycle is determined, and a cadence of the motion cycle is determined. Figure 2 shows an exemplary period of a motion cycle ~~[[210]]~~215 for the third axis 207, the period being approximately 0.6 seconds. The same period can also be seen to a lesser degree in the second axis 205 and the first axis 203. The corresponding cadence to the motion cycle is approximately one hundred motion cycles per minute.

[0028] Returning to Figure 2, cadence windows may be used to count steps until an expected step is not encountered. In one embodiment, new cadence windows are determined periodically. In one embodiment, the cadence window is a dynamic cadence window that continuously updates as a user's cadence changes. For example, using a dynamic cadence window, a new cadence window length may be set after each step. [(.)] The cadence window minimums may be determined by subtracting a value from the stepping period, and the cadence window maximums may be determined by adding a value to the stepping period. In one embodiment, the cadence window maximums are preset, and the cadence window minimums are updated after each step is counted. In one embodiment, the cadence window minimums are preset, and the cadence window maximums are updated after each step is counted. In one embodiment, both the cadence window minimums and cadence window maximums are updated when a step is counted. In one embodiment, the current cadence window minimum is determined by subtracting 200 ms from the current stepping cadence period. In one embodiment, the cadence window minimum has a minimum value of 240 ms.

[0039] Returning to **Figure 1**, the step counting logic 130 may include a measurement selection logic 145, a cadence window 150, a measurement comparator 155, a threshold comparator 160, a step count buffer 165, and a mode logic 190. The measurement selection logic 145 may determine which measurements from the measurement buffer [(125)] to use to determine if a step has occurred. In one embodiment, the measurement selection logic 145 may monitor accelerations relative to the dominant axis, and select only those measurements with specific relations to the dominant axis for measurement. For example, only accelerations that are approximately parallel to the dominant axis may be selected, or alternatively, only accelerations that are approximately perpendicular to the dominant axis

may be selected. In one embodiment, the measurement selection logic 145 selects only measurements of acceleration data along the dominant axis. In alternative embodiments, measurements of acceleration data along other axes may also be used. In one embodiment, measurements of acceleration along only the other axes are used.

IN THE DRAWINGS

Please replace the as filed Figure 5 with the attached replacement Figure 5.

REMARKS

Applicants respectfully request consideration of the subject application as amended herein. This Amendment is submitted in response to the *Ex Parte Quayle* Action mailed on August 31, 2009. Claims 1-20 are in condition for allowance except for formal matters. In this Amendment, no claims have been amended, added, or canceled. This amendment includes replacement paragraphs for the detailed description, as well as a replacement drawing. The replacement paragraphs and replacement drawing do not add any new matter to the specification of the present application.

Drawings Objections – 37 CFR 1.84(p)(4,5)

The Examiner has objected to the drawings under 37 CFR 1.83(p)(4,5) because of duplicate and improper use of some reference legends. The detailed description has been amended to refer to appropriate reference legends, as suggested by the Examiner.

The Examiner has also objected to Figure 5 for confusing placement of the descriptor “YES” associated with block 524. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are being submitted with this response showing a new placement for the descriptor.

Accordingly, Applicants respectfully request that the objections to the drawings be withdrawn.

Disclosure Objections

The specification of the present application is objected to because of minor errors and/or inconsistencies between the drawings and the written description. Paragraphs [0024], [0028] and [0039] have been amended to correct these minor errors and inconsistencies, as suggested by the Examiner. The specification is further objected to for including an incorporation by reference to an unidentified application. Paragraph [0020] has been amended to remove this informality.

Accordingly, Applicants respectfully request that the objections to the disclosure be withdrawn.

Comments on Reasons for Allowance

Applicants thank Examiner for allowing claims 1-20.

Conclusion

Applicants respectfully request the withdrawal of the objections and submit that all formal matters addressed by the Examiner have been corrected.

Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: October 9, 2009

/Benjamin A. Kimes/
Benjamin A. Kimes
Registration No. 50,870

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
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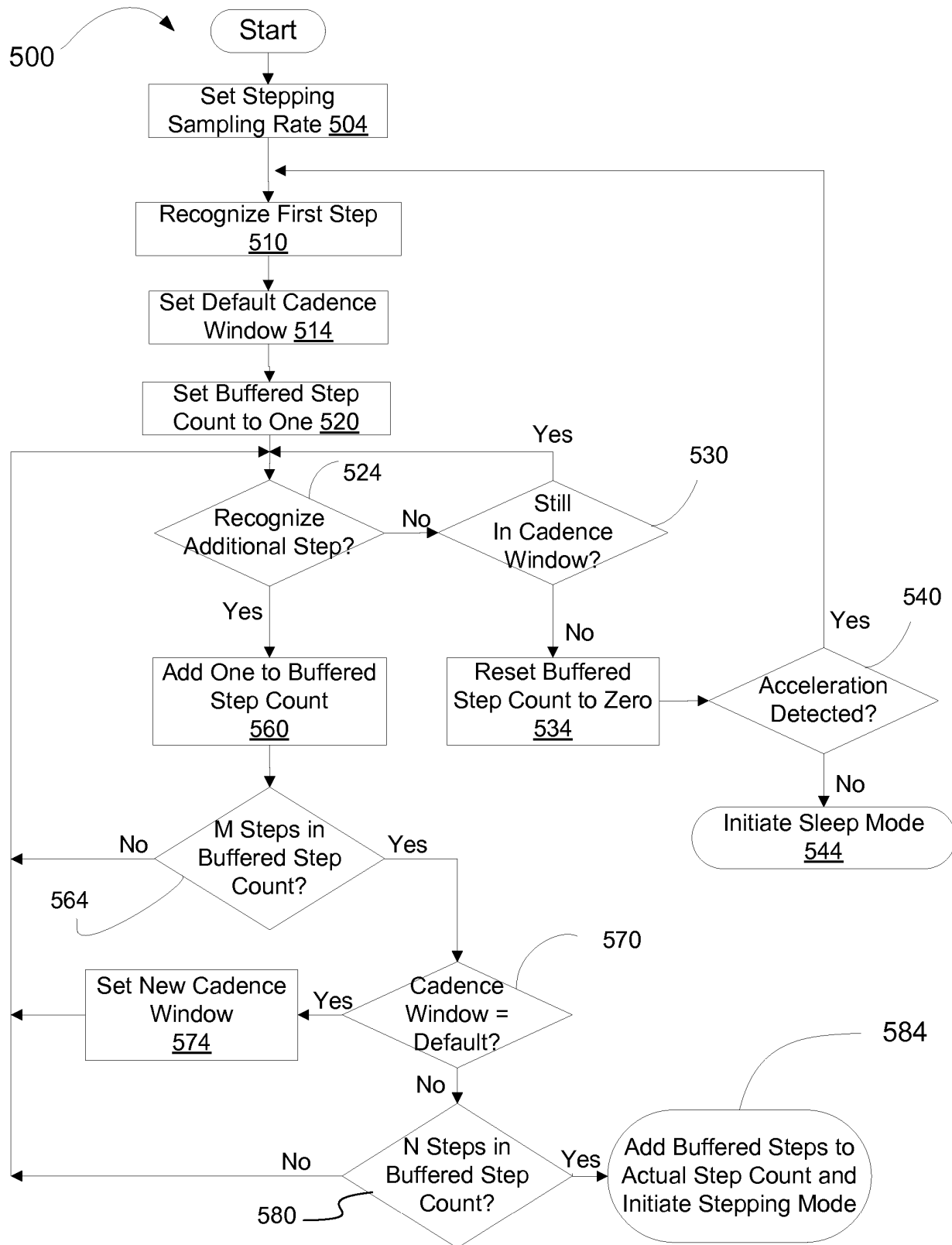


Figure 5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Philippe Kahn, et al.

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: COSIMANO, EDWARD R.

Art Unit: 2863

Confirmation No.: 5415

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed for applications filed after June 30, 2003). It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

CERTIFICATE OF ELECTRONIC FILING

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October 9, 2009

Date of Deposit

Betty Scaletta

Name of Person Mailing Correspondence

/Betty Scaletta/

Signature

10-09-2009

Date

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

- X 37 C.F.R. §1.97(b).
- 37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:
- A statement pursuant to 37 C.F.R. §1.97(e) or
- The Director is Authorized to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p).
- 37 C.F.R. §1.97(d). If so, then enclosed with this Information Disclosure Statement are the following:
- (1) A statement pursuant to 37 C.F.R. §1.97(e); and
 - (2) Authorization to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. §1.17(p) for submission of the Information Disclosure Statement.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: October 9, 2009 /Benjamin A. Kimes/
Benjamin A. Kimes
Reg. No. 50,870

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2863	
				Examiner Name	COSIMANO, EDWARD R.	
Sheet	1	of	1	Attorney Docket Number	8689P027	
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US-	5,446,775	8/25/1995	Wright et al.	
		US-	6,493,652	12/10/2002	Ohlenbusch et al.	
		US-	6,928,382	8/9/2005	Hong et al.	
		US-	2003/0109258	6/12/2003	Mantjarvi et al.	
		US-				
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FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)					

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Patent Application Fee Transmittal				
Application Number:		11644455		
Filing Date:		22-Dec-2006		
Title of Invention:		Human activity monitoring device		
First Named Inventor/Applicant Name:		Philippe Kahn		
Filer:		Benjamin Kimes/Betty Scaletta		
Attorney Docket Number:		8689P027		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	1801	1	810	810
Total in USD (\$)				810

Electronic Acknowledgement Receipt

EFS ID:	6239441
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Benjamin Kimes/Betty Scaletta
Filer Authorized By:	Benjamin Kimes
Attorney Docket Number:	8689P027
Receipt Date:	09-OCT-2009
Filing Date:	22-DEC-2006
Time Stamp:	20:00:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$810
RAM confirmation Number	5553
Deposit Account	022666
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	8689P027_RCE_10-09-09.pdf	20888 64dfd3d0a9902becce9133602044e68f38e786dc	no	1

Warnings:

This is not a USPTO supplied RCE SB30 form.

Information:

2		8689P027_R-Ex_parte_Quayle_10-09-09.pdf	49864 004c196f2d18af2913ee0f541d55cc5d43065ba7	yes	7
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Multipart Description/PDF files in .zip description

Document Description	Start	End
Response after Ex Parte Quayle Action	1	1
Specification	2	5
Applicant Arguments/Remarks Made in an Amendment	6	7

Warnings:

Information:

3	Drawings-only black and white line drawings	8689P027_Replacement_Figure_5_10-09-09.pdf	506295 f0acbda5a13126bfa89557d8ea6792954dd859d	no	1
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Warnings:

Information:

4	Transmittal Letter	8689P027_IDS_LTR_10-09-09.pdf	19441 64cb4021c8f754bf679773b51920ec69f0a6f9f	no	2
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Warnings:

Information:

5	Information Disclosure Statement (IDS) Filed (SB/08)	8689P027_IDS_SB08_10-09-09.pdf	55296 ebcc3036cd0ba9b8e599ad762fe9bc936f6780d7	no	1
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Warnings:

Information:

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6	Fee Worksheet (PTO-875)	fee-info.pdf	29973	no	2
			63da5a43dc099d779ab0376325f9270aac3dcdab		
Warnings:					
Information:					
Total Files Size (in bytes):			681757		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/644,455	12/22/2006	Philippe Kahn	8689P027	5415
8791 7590 08/31/2009 BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER COSIMANO, EDWARD R	
			ART UNIT	PAPER NUMBER
			2863	
			MAIL DATE	DELIVERY MODE
			08/31/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/644,455	Applicant(s) KAHN ET AL.	
	Examiner Edward R. Cosimano	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/13/07; 12/3/08; 12/11/08; 1/16/09; 6/26/09; 8/14/09.

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1. When preparing this Office action the examiner considers the instant application to include:

A) the Oath/Declaration filed on 02 April 2007 which is acceptable to the examiner;

B) the Abstract filed on 22 December 2006 which is acceptable to the examiner;

C) figures 1, 2, 3, 4, 5, 6, 7, 8 & 9 of the set of drawings containing 9 sheets of 9 figures comprising figures 1, 2, 3, 4, 5, 6, 7, 8 & 9 as presented in the set of drawings filed on 22 December 2006 where the content of figures 1, 3, 4, 6, 7, 8 & 9 of the above set of drawings is acceptable to the examiner;

D) the written description as filed on 22 December 2006; and

E) the set of claims as filed on 22 December 2006.

2. The drawings filed on 22 December 2006 are objected to because:

A) applicant's references to: (1) either a "motion cycle graph 210" or a "first axis 203" or a "first axis 205" or a "first axis 207" or as "cadence logic 135" in paragraph number 24, and (2) a "measurement buffer 125" in paragraph number 39; are confusing as well as an improper duplicate use of reference legends 135 & 210. These uses of reference legends are confusing and improper, because as can be seen in figures 1 & 2 and from the context of the written description, it is noted that the drawings lack a feature of the invention that one of ordinary skill at the time the invention was made would fairly and reasonably recognize as has been designated as "motion cycle graph 210" or as "first axis 203" or as "first axis 205" or as "first axis 207" or as "cadence logic 135", as required by 37 CFR 1.84(p(4,5)), and as can be seen in figure 2 and from the context of the written description figure 2 does include a feature of the invention that has been designated by reference legend 215 but which has not been mentioned in the written description as required by 37 CFR 1.84(p(4,5)). In this regard it is noted that as can be seen in figure 1 and/or figure 2 as well as from the context of the written description in at least paragraph numbers 20, 22, 24, 25, 33, 34, 35, 37, 39 & 84, applicant has:

(1) used reference number 132 in order to designate the feature of the invention entitled as "Cadence Logic 132" in figure 1;

(2) used reference number 135 in order to designate the feature of the invention entitled as “Rolling Average Logic 135” in figure 1;

(3) applicant has used reference number 200 in order to designate the feature of the invention that has been depicted as a graph in figure 2;

(4) applicant has used reference number 203 in order to designate the feature of the invention that has been depicted as a plot of a measured acceleration verses time in graph 200 of figure 2;

(5) applicant has used reference number 205 in order to designate the feature of the invention that has been depicted as a plot of a measured acceleration verses time in graph 200 of figure 2;

(6) applicant has used reference number 207 in order to designate the feature of the invention that has been depicted as a plot of a measured acceleration verses time in graph 200 of figure 2;

(7) applicant has not used reference number 210 in order to designate any of the features of the invention that have been depicted as part of graph 200 of figure 2;

(8) applicant has not used reference numbers 203, 205 & 207 in order to designate any of the features of the invention that one of ordinary skill at the time the invention was made would fairly and reasonably recognize as having been depicted as an “axis” in graph 200 of figure 2;

(9) applicant has used reference legend 215 in figure 2 in order to designate what appears to be an “motion cycle” in graph 200 of figure 2; and

(10) applicant has not used reference number 125 in order to designate any of the features of the invention depicted in figure 1;

and applicant should note the corresponding objections to the written description below.

B) applicant’s placement of the “YES” legend for decision block 524 in figure 5 in view of the context of the written description in paragraph number 65 is confusing. It is noted that this legend should be placed closer to the flow path from block 524 to block 560.

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2.1 Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities:

A) applicant must update the application data with the current status of each reference application, note the unidentified application in paragraph number 20. In this regard applicant should note that because applicant has filed to clearly and explicitly identify the referenced application, by for example title, filing date, attorney docket number, then this requirement and the incorporation of the unidentified application may constitute new matter and hence NO NEW MATTER should be entered.

B) the following errors and/or inconsistencies between the drawings filed on 22 December 2006 and the written description have been noted:

(1) applicant's references to: (1a) either a “motion cycle graph 210” or a “first axis 203” or a “first axis 205” or a “first axis 207” or as “cadence logic 135” in paragraph number 24, and (1b) a “measurement buffer 125” in paragraph number 39; are confusing as well as an improper duplicate use of reference legends 135 & 210. These uses of reference legends are confusing and improper, because as can be seen in figures 1 & 2 and from the context of the written description, it is noted that the drawings lack a feature of the invention that one of ordinary skill at the time the invention was made would fairly and reasonably

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recognize as has been designated as “motion cycle graph 210” or as “first axis 203” or as “first axis 205” or as “first axis 207” or as “cadence logic 135” , as required by 37 CFR 1.84(p(4,5)), and as can be seen in figure 2 and from the context of the written description figure 2 does include an feature of the invention that has been designated by reference legend 215 but which has not been mentioned in the written description as required by 37 CFR 1.84(p(4,5)). In this regard it is noted that as can be seen in figure 1 and/or figure 2 as well as from the context of the written description in at least paragraph numbers 20, 22, 24, 25, 33, 34, 35, 37, 39 & 84, applicant has:

(a) used reference number 132 in order to designate the feature of the invention entitled as “Cadence Logic 132” in figure 1;

(b) used reference number 135 in order to designate the feature of the invention entitled as “Rolling Average Logic 135” in figure 1;

(c) applicant has used reference number 200 in order to designate the feature of the invention that has been depicted as a graph in figure 2;

(d) applicant has used reference number 203 in order to designate the feature of the invention that has been depicted as a plot of a measured acceleration verses time in graph 200 of figure 2;

(e) applicant has used reference number 205 in order to designate the feature of the invention that has been depicted as a plot of a measured acceleration verses time in graph 200 of figure 2;

(f) applicant has used reference number 207 in order to designate the feature of the invention that has been depicted as a plot of a measured acceleration verses time in graph 200 of figure 2;

(g) applicant has not used reference number 210 in order to designate any of the features of the invention that have been depicted as part of graph 200 in figure 2;

(h) applicant has not used reference numbers 203, 205 & 207 in order to designate any of the features of the invention that one of ordinary

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skill at the time the invention was made would fairly and reasonably recognize as having been depicted as an “axis” in graph 200 of figure 2;

(i) applicant has used reference legend 215 in figure 2 in order to designate what appears to be a “motion cycle” in graph 200 of figure 2;

(j) applicant has not used reference number 125 in order to designate any of the features of the invention depicted in figure 1.

In view of the above, it is noted that in paragraph numbers 24 & 39 the references to:

(a) “motion cycle graph 210” should be to –motion cycle graph 200--;

(b) “cadence logic 135” should be to --cadence logic 132--;

(c) “first axis 203” (first occurrence) should be to –first axis 203 of an inertial sensor(s)--;

(d) “second axis 205” (first occurrence) should be to –second axis 205 of the inertial sensor(s)--;

(e) “third axis 207” (first occurrence) should be to –third axis 207 of the inertial sensor(s)--;

(f) the reference to “motion cycle 210” should be to –motion cycle 215--; and

(g) the reference to “measurement buffer 125” should be to a –measurement buffer--;

and applicant should note the proposed amendments below.

C) applicant use of the symbol “(.”, as found in paragraph number 28 is unclear and confusing and therefore should be deleted as suggested in the proposed amendment to paragraph number 28 below.

D) in view of the above objections it is suggested that the following paragraphs be amended as indicated:

(1) at paragraph number 24:

[0024] Figure 2 illustrates an exemplary motion cycle graph ~~[[201]]~~ 200 that measures time versus acceleration, in accordance with one embodiment of the present

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invention. The exemplary motion-cycle graph [[201]] 200 shows acceleration data taken with a single tri-axis inertial sensor. The acceleration at a given period of time is represented for a first axis 203 of an inertial sensor(s), a second axis 205 of the inertial sensor(s), and a third axis 207 of the inertial sensor(s). In one embodiment, the cadence logic [[135]] 132 of Figure 1 analyzes the acceleration along the first axis 203, second axis 205 and third axis 207 to detect a motion cycle. Once a motion cycle is detected, a period of the motion cycle is determined, and a cadence of the motion cycle is determined. Figure 2 shows an exemplary period of a motion cycle [[201]] 215 for the third axis 207, the period being approximately 0.6 seconds. The same period can also be seen to a lesser degree in the second axis 205 and the first axis 203. The corresponding cadence to the motion cycle is approximately one hundred motion cycles per minute.

(2) at paragraph number 28:

[0028] Returning to Figure 2, cadence windows may be used to count steps until an expected step is not encountered. In one embodiment, new cadence windows are determined periodically. In one embodiment, the cadence window is a dynamic cadence window that continuously updates as a user's cadence changes. For example, using a dynamic cadence window, a new cadence window length may be set after each step. [[.]] The cadence window minimums may be determined by subtracting a value from the stepping period, and the cadence window maximums may be determined by adding a value to the stepping period. In one embodiment, the cadence window maximums are preset, and the cadence window minimums are updated after each step is counted. In one embodiment, the cadence window minimums are preset, and the cadence window maximums are updated after each step is counted. In one embodiment, both the cadence window minimums and cadence window maximums are updated when a step is counted. In one embodiment, the current cadence window minimum is determined by subtracting 200 ms from the current stepping cadence period. In one embodiment, the cadence window minimum has a minimum value of 240 ms.

(3) at paragraph number 39:

[0039] Returning to Figure 1, the step counting logic 130 may include a measurement selection logic 145, a cadence window 150, a measurement comparator

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155, a threshold comparator 160, a step count buffer 165, and a mode logic 190. The measurement selection logic 145 may determine which measurements from the measurement buffer [[125]] to use to determine if a step has occurred. In one embodiment, the measurement selection logic 145 may monitor accelerations relative to the dominant axis, and select only those measurements with specific relations to the dominant axis for measurement. For example, only accelerations that are approximately parallel to the dominant axis may be selected, or alternatively, only accelerations that are approximately perpendicular to the dominant axis may be selected. In one embodiment, the measurement selection logic 145 selects only measurements of acceleration data along the dominant axis. In alternative embodiments, measurements of acceleration data along other axes may also be used. In one embodiment, measurements of acceleration along only the other axes are used.

3.1 Appropriate correction is required.

4. This application is in condition for allowance except for the following formal matters:

A) see the above objections as set forth above in sections 2 & 3.

4.1 Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4.2 A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

5. The following is a statement of reasons for the indication of allowable subject matter:

A) the prior art, for example:

(1) Ebeling et al (6,145,389) discloses a machine/process that provides the useful and beneficial function of pedometer in which the time variation of a measured acceleration, representing the steps or stride of an user, is evaluated or analyzed in order to determine if the user is running or walking. Further, the evaluation or analysis of the measured acceleration is used in order to more accurately determine a count of the user's steps or strides and to determine an accurate determination of the user's step or stride distance. Then based on the determinations of whether the user is running or walking, the step or stride count,

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and the distance traveled during one step or stride, the total distance traveled by the user may be determined.

(2) either Sakuria et al (6,369,794) or Kubo et al (2002/0089425 or 6,700,499) or Ladetto et al (2003/0018430 or 6,826,477) disclose a machine/process that provides the useful and beneficial function of determining an user's action or motion in which the time variation of a measured acceleration, representing the user's action or motion, is evaluated or analyzed in order to determine the user's action or motion.

(3) either Tsuji (2005/0232388 or 2005/0238132 or 7,169,084 or 7,297,088) or Park et al (2007/0067094) disclose a machine/process that provides the useful and beneficial function of pedometer in which the time variation of a measured acceleration, representing the steps or stride of an user, is evaluated or analyzed in order to determine if the user is running or walking. Further, the evaluation or analysis of the measured acceleration with in a time window of an expected period or interval representing a cadence or step interval or period is used in order to more accurately determine a count of the user's steps or strides. Then based on the determination of the step or stride count the total distance traveled by the user may be determined.

B) however, the prior art does not fairly teach or suggest in regard to claims 1 & 11 a process in claim 1 and a machine in claim 11 that provides the useful and beneficial function of monitoring human activity by providing actions in claim 1 and structures in claim 11 that perform at least the functions of:

- (1) continuously determining the orientation of an inertial sensor;
- (2) assigning a dominate axis for the inertial axis;
- (3) updating the dominate axis for the inertial axis as the orientation of the inertial sensor changes; and
- (4) counting periodic human activity by using the inertial sensor to monitor accelerations relative to the dominate axis of the inertial sensor.

Claims 2-5, which depend from claim 1, and claims 12-14, which depend from claim 11, are allowable over the prior art for the same reason.

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C) however, the prior art does not fairly teach or suggest in regard to claims 6 & 15 a process in claim 6 and a machine in claim 15 that provides the useful and beneficial function of monitoring human activity by providing actions in claim 6 and structures in claim 15 that perform at least the functions of:

(1) operating a device, including an inertial sensor, in a non-active mode to buffer human motions;

(2) operating the device with the inertial sensor, in an active mode after a predetermined number of human motions have been detected within an appropriate cadence window; and

(3) monitoring human activity by counting each periodic human activity while operating the device with the inertial sensor, in the active mode.

Claims 7-10, which depend from claim 6, and claims 16-20, which depend from claim 15, are allowable over the prior art for the same reason.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward R. Cosimano whose telephone number is 571-272-0571. The examiner can normally be reached on 571-272-0571 from 7:30am to 4:00pm (Eastern Time).

6.1 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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6.2 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ERC

08/22/2009

**/Edward Cosimano/
Primary Examiner Unit 2863**

Notice of References Cited	Application/Control No. 11/644,455		Applicant(s)/Patent Under Reexamination KAHN ET AL.	
	Examiner Edward R. Cosimano		Art Unit 2863	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,369,794	04-2002	Sakurai et al.	345/156
*	B	US-2002/0089425	07-2002	Kubo et al.	340/573.1
*	C	US-2003/0018430	01-2003	Ladetto et al.	701/217
*	D	US-6,700,499	03-2004	Kubo et al.	340/686.1
*	E	US-6,826,477	11-2004	Ladetto et al.	701/217
*	F	US-2005/0232388	10-2005	Tsuji, Tomoharu	377/024.2
*	G	US-2005/0238132	10-2005	Tsuji, Tomoharu	377/024.2
*	H	US-7,169,084	01-2007	Tsuji, Tomoharu	482/8
*	I	US-2007/0067094	03-2007	Park et al.	701/200
*	J	US-7,297,088	11-2007	Tsuji, Tomoharu	482/3
*	K	US-7,457,719	11-2008	Kahn et al.	702/141
*	L	US-2009/0043531	02-2009	Kahn et al.	702/149
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



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BIB DATA SHEET

CONFIRMATION NO. 5415

SERIAL NUMBER 11/644,455	FILING or 371(c) DATE 12/22/2006 RULE	CLASS 702	GROUP ART UNIT 2863	ATTORNEY DOCKET NO. 8689P027		
APPLICANTS Philippe Kahn, Aptos, CA; Arthur Kinsolving, Santa Cruz, CA; Mark Andrew Christensen, Santa Cruz, CA; Brian Y. Lee, Aptos, CA; David Vogel, Santa Cruz, CA;						
** CONTINUING DATA ***** NONE/ERC/						
** FOREIGN APPLICATIONS ***** NONE/ERC/						
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/27/2007						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and /EDWARD R COSIMANO/ Acknowledged Examiner's Signature		<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 9	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 4
ADDRESS BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040 UNITED STATES						
TITLE Human activity monitoring device						
FILING FEE RECEIVED 1330	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	198169	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (measure or measured or measuring or measurement or monitor or monitored or monitoring or detect or detected or detecting or detection or detector or sense or sensed or sensing or sensor or senser or sensible or transduce or transduced or transducing or transducer or sample or sampled or sampling or sampler or determine or determining or determination or determined or meter or metered or metering or gauge or gauged or gauging or gage or gaged or gaging or acquire or acquired or acquiring or acquisition or acquisitioning or acquirer or acquiror or collect or collected or collecting or collection or collector or collector or log or logged or logging or logger)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:32
2	BRS	L2	6138	(1 or accelerometer or inertial) near5 (orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:32
3	BRS	L3	26641	(1 or accelerometer or inertial) near5 (direct or directed or directing or direction of coordinate or "co-ordinate" or (co adj2 ordinate) or cartesian or polar or 3d or linear or ("3" near2 (dimension or dimensional)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:32

	Type	L #	Hits	Search Text	DBs	Time Stamp
4	BRS	L4	55512	((x near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)) or "x-axis") same ((y near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)) or "y-axis") same ((z near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)) or "z-axis"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:33
5	BRS	L5	3004	4 same (1 or accelerometer or inertial)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:33
6	BRS	L6	153748	(orientate or orientated or orientating or orientation or align or aligned or aligning or alignment) near4 (id or identify or identifying or identified or identification or determine or determining or determination or determined or judge or judged or judging or judgment or judgement or judger or judgor or evaluate or evaluated or evaluating or evaluation or evaluator or evaulater or analysis or analyze or analyzed or analyzing or analyzer or analyzor or calculate or calculated or calculating or calculation or calculator or calculater)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:34

	Type	L #	Hits	Search Text	DBs	Time Stamp
7	BRS	L7	1756	6 near5 (alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:34
8	BRS	L8	1717	(2 or 3 or 5) same (6 or 7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:34
9	BRS	L9	551924	(dominate or principle or major or first or primary) near3 (axis or orientate or orientated or orientating or orientation or align or aligned or aligning or alignment)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:34
10	BRS	L10	2860	9 near5 (alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:35
11	BRS	L11	17767	(9 or 10) near8 (id or identify or identifying or identified or identification or determine or determining or determination or determined or judge or judged or judging or judgment or judgement or judger or judgor or evaluate or evaluated or evaluating or evaluation or evaluator or evaulater or analysis or analyze or analyzed or analyzing or analyzer or analyzor or calculate or calculated or calculating or calculation or calculator or calculater)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:36

	Type	L #	Hits	Search Text	DBs	Time Stamp
12	BRS	L12	1335521	(step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length) near5 (determine or determining or determination or determined or meter or metered or metering or gauge or gauged or gauging or gage or gaged or gaging or acquire or acquired or acquiring or acquisition or acquisitioning or acquirer or acquiror or aggregate or aggregated or aggregating or aggregation or collect or collected or collecting or collection or collector or collector or log or logged or logging or logger or accumulate or accumulated or accumulating or accumulation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:36

	Type	L #	Hits	Search Text	DBs	Time Stamp
13	BRS	L13	2159999	(step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length) near5 (count or counted or counting or number or numbered or numbering or measure or measured or measuring or measurement or test or tested or testing or monitor or monitored or monitoring or capture or captured or capturing or detect or detected or detecting or detection or detector or detector or sense or sensed or sensing or sensor or senser or sensible or transduce or transduced or transducing or transducer or sample or sampled or sampling or sampler)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:36
14	BRS	L14	787	1 same (9 or 10) same (12 or 13 or step or motion or human or run or running or walk or walking or cadence or stride or pedometer or distance or length)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:37
15	BRS	L15	49	8 and 11 and 14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:37

	Type	L #	Hits	Search Text	DBs	Time Stamp
16	BRS	L16	129394	(awake or wakeup or awoken or woken or waking or enable or enabled or enabling) near10 (sleep or asleep or idle or dormant or disable or disabled or disabling or "non-active" or nonactive or inactive or (("non" or "not" or "in") adj2 (activate or activated or activating or activation)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:38
17	BRS	L17	829131	(step or motion or human or run or running or walk or walking or cadence or stride) near3 (interval or period or time or snapshot or periodic or periodically or tolerance or window or range or band)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:39
18	BRS	L18	760	16 same 17 same (12 or 13)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:40
19	BRS	L19	760	16 and 18 and (12 or 13)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:40
20	BRS	L20	809	15 or 19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:40

	Type	L #	Hits	Search Text	DBs	Time Stamp
21	BRS	L21	20540	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (max or maximum or high or higher or highest or upper or top or greater or above or outside or exceed or exceeded or exceeding) near3 (criteria or criterium or setpoint or point or level or threshold or limit or require or required or requiring or requirement or tolerance or qualify or qualified or qualifying or qualification or standard or bench or benchmark or baseline or base or reference)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:41
22	BRS	L22	10091	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (min or minimum or low or lower or lowest or bottom or less or below or beneath or underneath) near3 (criteria or criterium or setpoint or point or level or threshold or limit or require or required or requiring or requirement or tolerance or qualify or qualified or qualifying or qualification or standard or bench or benchmark or baseline or base or reference)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:41

	Type	L #	Hits	Search Text	DBs	Time Stamp
23	BRS	L23	96	21 near10 22 near10 ("with" or within or meet or met or meeting or "between")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:42
24	BRS	L24	29781	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (tolerance or window or range or band)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:42
25	BRS	L25	5763	24 near10 ("with" or within or meet or met or meeting or "between")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:43
26	BRS	L26	398	(23 or 25) same (12 or 13)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:43
27	BRS	L27	53580	(alpha or acc or accelerate or accelerated or accelerating or acceleration or accelerometer or inertial) near3 (history or historical or previous or prior or slope or trend or pattern or sequence or sequential or signature or trace or traced or tracing or trail or profile or profiled or profiling)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:43
28	BRS	L28	282	17 near15 27	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
29	BRS	L29	99831	17 near6 (replace or replaced or replacing or replacement or switch or switched or switching or change or changed or changing or alter or altered or altering or alteration or modify or modified or modifying or modification or correct or corrected or correcting or correction or compensate or compensated or compensating or compensation or calibrate or calibrated or calibrating or calibration or delta or adjust or adjusted or adjusting or adjustment or update or updated or updating or configure or configured or configuring or configuration or reconfigure or reconfigured or reconfiguring or reconfiguration)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:44
30	BRS	L30	106	27 same 29	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:44
31	BRS	L31	2	20 and (26 or 28 or 30)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:44

	Type	L #	Hits	Search Text	DBs	Time Stamp
32	BRS	L32	1549	15 or 20 or 26 or 28 or 30 or 31 Reviewed Ti, Ab, Kwic All	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:45
33	BRS	L33	1516	(@pd>="19470101" and @pd<="19710101") and (33/700 or 33/701 or 73/1.01 or 73/1.37 or 73/1.38 or 73/1.75 or 73/1.76 or 73/1.77 or 73/1.78 or 73/1.79 or 73/1.81 or 377/1 or 377/13 or 377/15 or 377/17 or 377/20 or 377/24 or 377/24.1 or 377/24.2 or 702/1 or 702/85 or 702/97 or 702/127 or 702/141 or 702/150 or 702/155 or 702/158 or 702/160 or 702/187 or 702/189).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB Reviewed Ti All	2009/08/19 18:46

	Type	L #	Hits	Search Text	DBs	Time Stamp
34	BRS	L34	83	("20090043531" or "4578769" or "5446725" or "5976083" or "6135951" or "6145389" or "6539336" or "6790178" or "6823036" or "6885971" or "6898550" or "6959259" or "7072789" or "7092846" or "7148797" or "7158912" or "7171331" or "7200517" or "7212943" or "7220220" or "20020109600" or "20020151810" or "20050240375" or "20050248718" or "20060136173" or "6836744" or "6941239" or "7382611" or "20070063850" or "4285041" or "7387611" or "20070142715" or "6522266" or "6881191" or "20040225467" or "20050033200" or "5593431" or "5955667" or "6513381" or "6532419" or "6813582" or "20050222801" or "20060223547").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:47
35	BRS	L36	24428	(kahn\$1.in. adj2 (p.in. or philippe.in.)) or (kinsolving\$1.in. adj2 (a.in. or arthur.in.)) or (christensen\$1.in. adj2 (m.in. or mark.in.)) or (lee\$1.in. adj2 (b.in. or brian.in.)) or (vogel\$1.in. adj2 (d.in. or david.in.))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:48
36	BRS	L37	5	32 and (34 or 36) <div>Reviewed TI, Ab, Kwic All</div>	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	2009/08/19 18:49

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
1	US 6145389 A	20001114	EBELING A et al.			14
2	US 6369794 B1	20020409	Sakurai; Yasuhiro et al.	345/156	379/433.04	37
3	US 20020089425 A1	20020711	Kubo, Nobuo et al.	340/573.1	340/669	28
4	US 20030018430 A1	20030123	Ladetto, Quentin et al.	701/217	701/200	56
5	US 6700499 B2	20040302	Kubo; Nobuo et al.	340/686.1	340/573.1; 340/573.7; 482/3; 482/74; 600/510; 600/552; 600/553; 73/379.01; 73/379.09	27
6	US 6826477 B2	20041130	Ladetto; Quentin et al.	701/217	340/944; 701/200; 701/213; 73/178R	58
7	US 20050232388 A1	20051020	Tsuji, Tomoharu	377/24.2		10
8	US 20050238132 A1	20051027	Tsuji, Tomoharu	377/24.2		10
9	US 7169084 B2	20070130	Tsuji; Tomoharu	482/8	482/1; 482/9; 702/160	9

L32 Results

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
10	US 20070067094 A1	20070322	Park; Kyong-Ha et al.	701/200	702/141	13
11	US 7297088 B2	20071120	Tsuji; Tomoharu	482/3	377/24.2; 482/8; 482/900; 702/160	10
12	US 7457719 B1	20081125	Kahn; Philippe et al.	702/141		16
13	US 20090043531 A1	20090212	Kahn; Philippe et al.	702/149		22

L32 Results

	Document ID	Publication Date	Inventor	Current OR	Current XRef	Pages
1	US 6145389 A	20001114	EBELING A et al.			14
2	US 7457719 B1	20081125	Kahn; Philippe et al.	702/141		16
3	US 20090043531 A1	20090212	Kahn; Philippe et al.	702/149		22

L37 Results

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	11/644,455
				Filing Date	December 22, 2006
				First Named Inventor:	Philippe Kahn, et al.
				Art Unit	2856
				Examiner Name	KWOK, HELEN C
Sheet	1	of	1	Attorney Docket Number	8689P027
U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/E.C./		US- 6,522,266 B1	2/18/2003	Soehren, et al.	
/E.C./		US- 6,881,191 B2	4/19/2005	Oakley, et al.	
/E.C./		US- 2004/0225467 A1	11/11/2004	Vock, Curtis A.; et al.	
/E.C./		US- 2005/0033200 A1	2/10/2005	Soehren, Wayne A.; et al.	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶

Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

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Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2863	
				Examiner Name	Cosimano, Edward R.	
Sheet	1	of	2	Attorney Docket Number	8689P027	
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
/E.C./		US-	5,593,431	1/14/1997	Sheldon	
/E.C./		US-	5,955,667	9/21/1999	Fyfe	
/E.C./		US-	6,513,381 B2	2/4/2003	Fyfe et al.	
/E.C./		US-	6,532,419	3/11/2003	Begin, et al.	
/E.C./		US-	6,813,582 B2	11/2/2004	Levi et al.	
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

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Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known								
			Application Number	11/644,455							
			Filing Date	December 22, 2006							
			First Named Inventor:	Philippe Kahn, et al.							
			Art Unit	2863							
			Examiner Name	Cosimano, Edward R.							
Sheet	2	of	2	Attorney Docket Number	8689P027						
NON PATENT LITERATURE DOCUMENTS											
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²						
/E.C./		MARGARIA, Rodolfo, "Biomechanics and Energetics of Muscular Exercise", Chapter 3, pages 105-125, Oxford: Clarendon Press 1976.									
/E.C./		PCT International Search Report and Written Opinion for International Application No. PCT/US2008/072537, mailed 22 October 2008, 10 pages.									


Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

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Search Notes 	Application/Control No. 11644455	Applicant(s)/Patent Under Reexamination KAHN ET AL.
	Examiner Edward R Cosimano	Art Unit 2863

SEARCHED			
Class	Subclass	Date	Examiner
33	700, 701	08/19/2009	ERC
73	1.01, 1.37, 1.38, 1.75, 1.76, 1.77, 1.78, 1.79, 1.81	08/19/2009	ERC
377	1, 13, 15, 17, 20, 24, 24.1, 24.2	08/19/2009	ERC
702	1, 85, 97, 127, 141, 150, 155, 158, 160, 187, 189	08/19/2009	ERC

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search; continuity check	08/16/2009	ERC
EAST (USOCR, USPAT, US-PGPUB, DERWENT, EPO, FPRS, JPO, IBM-TDB)	08/19/2009	ERC

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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<p align="center"><i>Index of Claims</i></p> 	Application/Control No. 11644455	Applicant(s)/Patent Under Reexamination KAHN ET AL.
	Examiner Edward R Cosimano	Art Unit 2863

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant										<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
CLAIM		DATE													
Final	Original	08/22/2009													
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Substitute for Form 1449/PTO

INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

(use as many sheets as necessary)

(use as many sheets as necessary)

Complete if Known

Application Number	11/644,455
Filing Date	December 22, 2006
First Named Inventor:	Philippe Kahn
Art Unit	2856
Examiner Name	Not Yet Assigned
Attorney Docket Number	7538.P027

Sheet	1	of	3
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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
/EC/		US-	4,578,769	3/25/1986	Frederick	
/EC/		US-	5,446,725	8/29/1995	Ishiwatari	
/EC/		US-	5,976,083	11/2/1999	Richardson, et al.	
/EC/		US-	6,135,951	10/24/2000	Richardson, et al.	
/EC/		US-	6,145,389	11/14/2000	Ebeling, et al.	
/EC/		US-	6,539,336	3/25/2003	Vock, et al.	
/EC/		US-	6,790,178	9/14/2004	Mault, et al.	
/EC/		US-	6,823,036	11/23/2004	Chen	
/EC/		US-	6,885,971	4/26/2005	Vock, et al.	
/EC/		US-	6,898,550	5/24/2005	Blackadar, et al.	
/EC/		US-	6,959,259	10/25/2005	Vock, et al.	
/EC/		US-	7,072,789	7/4/2006	Vock, et al.	
/EC/		US-	7,092,846	8/15/2006	Vock, et al.	
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Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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Substitute for Form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	11/644,455
Filing Date	December 22, 2006
First Named Inventor:	Philippe Kahn
Art Unit	2856
Examiner Name	Not Yet Assigned
Attorney Docket Number	7538.P027

 Sheet **2** of **3**
U.S. PATENT DOCUMENTS

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/EC/		US-	7,171,331	1/30/2007	Vock, et al.	
/EC/		US-	7,200,517	4/3/2007	Darley, et al.	
/EC/		US-	7,212,943	5/1/2007	Aoshima, et al.	
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/EC/		US-	2005/0248718	11/10/2005	Howell, Thomas A., et al.	
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Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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(408) 720-8300 Substitute for Form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	11/644,455
Filing Date	December 22, 2009
First Named Inventor:	Philippe Kahn
Art Unit	2863
Examiner Name	Cosimano, Edward B
Attorney Docket Number	8689P027

Sheet	1	of	2
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U.S. PATENT DOCUMENTS

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/E.C./		US-	2005/0222801	10/6/2005	Wulff et al	
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				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2856	
				Examiner Name	Kwok, Helen C.	
Sheet	1	of	2	Attorney Docket Number	8689P027	
U.S. PATENT DOCUMENTS						
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/E.C./		US-	6,836,744 B1	12/28/2004	Asphahani, et al.	
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/E.C./		US-	2007/0063850 A1	3/22/2007	Devaul; Richard W.; et al.	
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Examiner Signature	/Edward Cosimano/	Date Considered	08/22/2009
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				Examiner Name	Kwok, Helen C.						
Sheet	2	of	2	Attorney Docket Number	8689P027						
NON PATENT LITERATURE DOCUMENTS											
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²						
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/E.C./		MIZELL, David, "Using Gravity to Estimate Accelerometer Orientation", Seventh IEEE International Symposium on Wearable Computers, 2003, 2 pages.									
/E.C./		WEINBERG, Harvey, "MEMS Motion Sensors Boost Handset Reliability", June 2006, http://www.mwrf.com/Articles/Print.cfm?ArticleID=12740 , February 21, 2007, 4 pages.									

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/E.C./		US-	7,387,611	6/17/2008	Inoue et al.	
/E.C./		US-	2007/0142715	6/21/2007	Banet et al.	
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Inventor Information for 11/644455

Inventor Name	City	State/Country
KAHN, PHILIPPE	APTOS	CALIFORNIA
KINSOLVING, ARTHUR	SANTA CRUZ	CALIFORNIA
CHRISTENSEN, MARK ANDREW	SANTA CRUZ	CALIFORNIA
LEE, BRIAN Y.	APTOS	CALIFORNIA
VOGEL, DAVID	SANTA CRUZ	CALIFORNIA

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16 August 2009

Continuity/Reexam Information for 11/644455

Parent Data**No Parent Data****Child Data****No Child Data**

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Foreign Information for 11/644455

No Foreign Data

Appln Info	Contents	Petition Info	Atty/Agent Info	Continuity/Reexam	Foreign Data	Inventors
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	5894427
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Judith A. Szepesi
Filer Authorized By:	
Attorney Docket Number:	8689P027
Receipt Date:	14-AUG-2009
Filing Date:	22-DEC-2006
Time Stamp:	21:11:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		8689P027_IDS_and_SB08.pdf	63742 5fa7a1a6cb5ab65a0e10046b1fa4b87053e3ab8f	yes	3

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Filed (SB/08)	3	3
Warnings:			
Information:			
Total Files Size (in bytes):		63742	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Philippe Kahn, et al
Appl. No. : 11/644,455
Filed : December 22, 2006
For : Human Activity Monitoring Device
Customer No. : 08791

Examiner: Cosimano, Edward B
Art Unit: 2863
Confirmation No. 5415

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being submitted electronically via EFS Web on the date shown below.

/Judith Szepesi/ August 14, 2009
Judith A. Szepesi **Date**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed). It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

- X 37 C.F.R. §1.97(b).
- 37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:
- A statement pursuant to 37 C.F.R. §1.97(e) or
- The Director is Authorized to charge in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p).
- 37 C.F.R. §1.97(d). If so, then enclosed with this Information Disclosure Statement are the following:
- (1) A statement pursuant to 37 C.F.R. §1.97(e); and
- (2) A check for \$180.00 for the fee under 37 C.F.R. §1.17(p) for submission of the Information Disclosure Statement.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: August 14, 2009

/Judith Szepesi/
Judith A. Szepesi
Reg. No. 39,393

1279 Oakmead Parkway
Sunnyvale, CA 94085
(408) 720-8300

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2863	
				Examiner Name	Cosimano, Edward R.	
Sheet	1	of	2	Attorney Docket Number	8689P027	
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US-	5,593,431	1/14/1997	Sheldon	
		US-	5,955,667	9/21/1999	Fyfe	
		US-	6,513,381 B2	2/4/2003	Fyfe et al.	
		US-	6,532,419	3/11/2003	Begin, et al.	
		US-	6,813,582 B2	11/2/2004	Levi et al.	
		US-				
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		US-				
		US-				
		US-				

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴ Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Based on Form PTO/SB/08A (08-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 09/10/03.

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	5591340
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Benjamin Kimes/Betty Scaletta
Filer Authorized By:	Benjamin Kimes
Attorney Docket Number:	8689P027
Receipt Date:	26-JUN-2009
Filing Date:	22-DEC-2006
Time Stamp:	19:25:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	NPL Documents	8689P027_IDS_NPL_Margaria.pdf	1231895 0a62823febcd98bd363850b5547082d563521def	no	22

Warnings:

Information:

2	NPL Documents	8689P027_IDS_NPL_PCTUS2008072537.pdf	689371 2d9149c52e84c15c323a2877091e70128c ee43b	no	10
Warnings:					
Information:					
3	Transmittal Letter	8689P027_IDS_LTR_06-26-09.pdf	19307 02a8c21c9af77453d49949cb167f3ecb5cc1 c3ea	no	2
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Filed (SB/08)	8689P027_IDS_SB08_06-26-09.pdf	65569 ea13f8fe1ac8ac33320e01cc580ec542269 5deb	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
Total Files Size (in bytes):			2006142		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

PATENT COOPERATION TREATY

OCT 2 2008

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To: LESTER VINCENT
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN
LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4009

RECEIVED

OCT 28 2008

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN
SUNNYVALE

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 7538P044PCT		Date of mailing (day/month/year)
International application No. PCT/US2008/072537		International filing date (day/month/year) 07 August 2008
Applicant FULLPOWER TECHNOLOGIES, INC.		

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, within **20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver Telephone No. 571-272-7774
---	--

Form PCT/ISA/220 (January 2004)

(See notes on accompanying sheet)

Entered into PIP
By: *Alm*

DATE IN TO FOREIGN DOCKETING 10/28/08
DOCKETED BY _____
REVIEWED BY _____
DATE OUT _____

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

To: LESTER VINCENT BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 2px;">Date of mailing <small>(day/month/year)</small></td> <td style="padding: 2px; text-align: center;">22 OCT 2008</td> </tr> </table>	Date of mailing <small>(day/month/year)</small>	22 OCT 2008
Date of mailing <small>(day/month/year)</small>	22 OCT 2008		
Applicant's or agent's file reference 7538P044PCT	FOR FURTHER ACTION See paragraphs 1 and 4 below		
International application No. PCT/US2008/072537	International filing date <small>(day/month/year)</small> 07 August 2008		
Applicant FULLPOWER TECHNOLOGIES, INC.			

1.	<input checked="" type="checkbox"/>	The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith. Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46): <div style="margin-left: 20px;"> When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report. Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35 For more detailed instructions, see the notes on the accompanying sheet. </div>
2.	<input type="checkbox"/>	The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3.	<input type="checkbox"/>	With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that: <div style="margin-left: 20px;"> <input type="checkbox"/> the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices. <input type="checkbox"/> no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made. </div>
4.		Reminders Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication. The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date. Within 19 months from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices. In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months. See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the <i>PCT Applicant's Guide</i> , Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver Telephone No. 571-272-7774
---	--

Form PCT/ISA/220 (January 2004)

(See notes on accompanying sheet)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 7538P044PCT	FOR FURTHER ACTION <div style="float: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. PCT/US2008/072537	International filing date (day/month/year) 07 August 2008	(Earliest) Priority Date (day/month/year) 08 August 2007
Applicant FULLPOWER TECHNOLOGIES, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. 1.

2. ☐ Certain claims were found unsearchable (see Box No. II)

3. ☐ Unity of invention is lacking (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1
- ☐ as suggested by the applicant
- ☒ as selected by this Authority, because the applicant failed to suggest a figure
- ☐ as selected by this Authority, because this figure better characterizes the invention
- b. ☐ none of the figures is to be published with the abstract

Form PCT/ISA/210 (first sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/072537

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G01P 5/00 (2008.04)

USPC - 702/142

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)

IPC(8) - G01P 5/00 (2008.04)

USPC - 702/141, 142

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)

MicroPatent, Google Patent

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,522,266 B1 (SOEHREN et al) 18 February 2003 (18.02.2003) entire document	1-3, 6, 7, 13, 14, 20-22, 25, 26
Y		4, 5, 8-12, 15-19, 23-24, 27-31
Y	US 2005/0033200 A1 (SOEHREN et al) 10 February 2005 (10.02.2005) entire document	4-5, 15, 23, 24
Y	US 6,881,191 B2 (OAKLEY et al) 19 April 2005 (19.04.2005) entire document	8, 9, 16, 17, 27, 28
Y	US 2004/0225467 A1 (VOCK et al) 11 November 2004 (11.11.2004) entire document	10-12, 18, 19, 29-31

☐ Further documents are listed in the continuation of Box C.

* 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

07 October 2008

Date of mailing of the international search report

22 OCT 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2005)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: LESTER VINCENT
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN
LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 7538P044PCT		Date of mailing (day/month/year) 22 OCT 2008
International application No. PCT/US2008/072537		FOR FURTHER ACTION See paragraph 2 below
International filing date (day/month/year) 07 August 2008	Priority date (day/month/year) 08 August 2007	
International Patent Classification (IPC) or both national classification and IPC IPC(8) - G01P 5/00 (2008.04) USPC - 702/142		
Applicant FULLPOWER TECHNOLOGIES, INC.		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Date of completion of this opinion 07 October 2008	Authorized officer: Blaine Copenheaver <small>PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</small>
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Form PCT/ISA/237 (cover sheet) (April 2007)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2006/072537

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established on the basis of:
 - a. type of material
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing
 - ☐ contained in the international application as filed
 - ☐ filed together with the international application in electronic form
 - ☐ furnished subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2008/072537

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	4, 5, 8-12, 15-19, 23, 24, 27-31	YES
	Claims	1-3, 6, 7, 13, 14, 20-22, 25, 26	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-31	NO
Industrial applicability (IA)	Claims	1-31	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-3, 6, 7, 13, 14, 20-22, 25, and 26 lack novelty under PCT Article 33(2) as being anticipated by Soehren et al. (US 6,522,266 B1), hereinafter referred to as Soehren '266.

Regarding Claim 1, Soehren '266 discloses a method of monitoring human activity (navigation system for a human, abstract), comprising: monitoring accelerations (100, fig. 1) using an inertial sensor (414, fig. 4) disposed at one of a plurality of locations on a human body, wherein at least one of the plurality of locations is not a foot location (backpack, wrist or arm location, col. 14, lines 23-30); counting a plurality of steps based on the accelerations (counting steps, col. 6, line 35); determining a gait characteristic of the plurality of steps (frequency of step, col. 6, lines 32-36); using the gait characteristic to determine a stride length (step length determined, col. 6, lines 16-28); and determining at least one of a distance traveled and a speed of travel based on the stride length (distance traveled determined, col. 6, lines 36-39).

Regarding Claim 13, Soehren '266 discloses a mobile apparatus (navigation system for a human, abstract), comprising: an inertial sensor (414, fig. 4) to monitor accelerations (100, fig. 1) from one of a plurality of locations on a body, wherein at least one of the plurality of locations is not a foot location (backpack, wrist or arm location, col. 14, lines 23-30); a step counting logic coupled with the inertial sensor to count a plurality of steps based on the accelerations (counting steps, col. 6, line 35); a gait logic coupled with the step counting logic to determine a gait characteristic of the plurality of steps (modeling step distance, col. 6, lines 16-28); and a distance logic coupled with the gait logic to determine a stride length of the plurality of steps based on the gait characteristic (step length versus walking speed algorithm, col. 6, lines 20-28; also col. 14, lines 42-57; the distance is determined, col. 6, lines 32-36); and to apply the stride length to the plurality of steps to determine at least one of a distance traveled and a speed of travel (motion classifier combines the step length and frequency to determine the distance traveled, col. 6, lines 36-39).

Regarding claim 20, Soehren '266 discloses a machine-accessible storage medium including instructions that, when executed by a machine, cause the machine to perform a method (computer or processor 404, fig. 4; col. 6, lines 8-53), comprising: monitoring accelerations (100, fig. 1) using an inertial sensor (414, fig. 4) disposed at one of a plurality of locations on a human body, wherein at least one of the plurality of locations is not a foot location (backpack, wrist or arm location, col. 14, lines 23-30); counting a plurality of steps based on the accelerations (counting steps, col. 6, line 35); determining a gait characteristic of the plurality of steps (frequency of step, col. 6, lines 32-36); using the gait characteristic to determine a stride length (step length determined, col. 6, lines 16-28); and determining at least one of a distance traveled and a speed of travel based on the stride length (distance traveled determined, col. 6, lines 36-39).

Regarding Claims 2 and 21, Soehren '266 discloses the gait characteristic comprises a step cadence (step per unit time, col. 6, lines 33-36).

Regarding Claims 3 and 22, Soehren '266 discloses that determining the stride length includes locating a stride length associated with the gait characteristic in a data structure (step length versus walking speed algorithm, col. 6, lines 20-28; also col. 14, lines 42-57; fig. 6 shows data structure).

Regarding Claims 6, 7, 14, 25, and 26, Soehren '266 discloses receiving distance information, wherein the distance information is based on at least one of global positioning system (GPS) data, network triangulation data, or user input (d-GPS 510, fig. 5, col. 8, lines 45-61) and automatically calibrating the stride length based on a difference between the received distance information and the determined distance traveled (col. 8, line 62 to col. 9, line 24).

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Claims 4, 5, 15, 23, and 24 lack an inventive step under PCT Article 33(3) as being obvious over Soehren '266 in view of Soehren et al. (US 2005/0033200 A1), hereinafter referred to as Soehren '200.

Regarding Claims 4, 15, and 23, Soehren '266 discloses that the data structure includes a plurality of entries, each of the plurality of entries associating a distinct stride length with one or more distinct gait characteristics (col. 6, lines 20-28; also col. 14, lines 42-57; fig. 6), but lacks the teaching of determining one or more user attributes; and modifying the data structure based on the one or more user attributes to calibrate the stride length by changing one or more of the plurality of entries.

Soehren '200 teaches a method of monitoring human activity (classifying and measuring human motion, abstract), comprising: monitoring accelerations using an inertial sensor (IMU 24, fig. 2, para. 0033) in order to provide a distance estimate (28, para. 0041) and further teaches determining one or more user attributes (52, information on the state of the person monitored, para. 0041); and modifying the data structure based on the one or more user attributes (52 to 50 to Kalman filter 41) to calibrate the stride length by changing one or more of the plurality of entries (Kalman filter feeds back to motion classification unit 28, where the stride length is initially calculated, para. 0012, 0041).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the user attributes of Soehren '200 to the data structure and analysis of Soehren '266 in order to monitor persons with health problems so that help can be sent should they become incapacitated (Soehren '200, para. 0004).

Regarding Claims 5 and 24, Soehren '266 lacks the teaching of receiving a user input of one or more user attributes; and generating the data structure using the one or more user attributes.

Soehren '200 teaches a method of monitoring human activity (classifying and measuring human motion, abstract), comprising: monitoring accelerations using an inertial sensor (IMU 24, fig. 2, para. 0033) in order to provide a distance estimate (28, para. 0041) and further teaches receiving a user input of one or more user attributes (52, information on the state of the person monitored, para. 0041); and generating the data structure using the one or more user attributes (52 to 50 to Kalman filter 41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the user attributes of Soehren '200 to the data structure and analysis of Soehren '266 in order to monitor persons with health problems so that help can be sent should they become incapacitated (Soehren '200, para. 0004).

Claims 8, 9, 16, 17, 27, and 28 lack an inventive step under PCT Article 33(3) as being obvious over Soehren '266 in view of Oakley et al., hereinafter referred to as Oakley.

Regarding claims 8, 16, and 27, Soehren '266 teaches the use of a stride length to determine a distance travelled as previously described with respect to claim 1, but lacks the teaching of receiving a heart rate from a heart rate sensor; and determining information about the distance traveled based on the heart rate.

Oakley teaches a movement sensor system (abstract) in which heart rate is monitored by a heart rate sensor (col. 1, lines 8-10) and is used to determine information about the stride length based on the heart rate (heart-rate measurement used to determine user's stride length or number of strides, col. 3, lines 19-24).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the heart rate information as taught by Oakley to determine the distance travelled of Soehren '266 in order to aid in determining the energy expenditure of the user over distance in order to define a weight loss regimen (Oakley, col. 1, lines 48-55).

Regarding claims 9 and 17, Soehren '266 discloses that determining information comprises determining an incline (col. 3, lines 8-14), and adjusting a stride length to gait characteristic based on the incline (230, fig. 2).

Regarding claim 28, Soehren '266 discloses that determining information comprises determining an incline (col. 3, lines 8-14), and adjusting a stride length to cadence correlation based on the incline (230, fig. 2).

Claims 10-12, 18, 19, and 29-31 lack an inventive step under PCT Article 33(3) as being obvious over Soehren '266 in view of Vock et al., hereinafter referred to as Vock.

Regarding claims 10, 18, and 29, Soehren '266 lacks the teaching of using a competition logic to compare the distance traveled and the speed of travel to stored race data to generate a comparison result; and presenting a real time performance indication that includes the comparison result.

Vock teaches the use of inertial sensors in a distance (para. 0074) and speed (para. 0050) measuring system and further teaches the use of a competition logic (controller subsystem 12, fig. 1A) to compare the distance traveled and the speed of travel to stored race data to generate a comparison result (claim 1; para. 0081); and presenting a real time performance indication that includes the comparison result (para. 0191).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the comparison data of Vock in the method of Soehren in order to provide a quantification of a user's activity in relation to others (Vock, para. 0022) so as to guide him in improving his skills.

Regarding claims 11 and 30, Soehren '266 lacks the teaching of receiving stored race data from one of a server and a mobile device. Vock teaches receiving stored race data from one of a server and a mobile device (82, fig. 1B).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the server of Vock to download the race data in order to allow the user to compare his statistics to a plurality of statistics from other users (Vock, para. 0022).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2008/072537

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Regarding claims 12 and 31, modified Soehren '266 discloses comparing data as shown above, and Soehren '266 further teaches normalizing at least one of the distance traveled, the speed of travel, the stored distance traveled, and the stored speed of travel (accelerometer signals are divided into 2.56 second signal segments, further processing determines the human motion, col. 15, lines 25-32; the human motion is used to determine the distance travelled, col. 15, lines 2-4).

Regarding claim 19, Soehren '266 lacks the teaching of a competition logic to enable users to set up time shifted races.

Vock teaches a competition logic which can enable users to set up time shifted races (comparing scores with other players across the world, para. 0404).

It would have been obvious to one of ordinary skill in the art at the time of the invention use the competition logic of Vock in the apparatus of Soehren '266 in order to allow players to improve their abilities by comparison with their own previous score or with other players (Vock, para. 0404).

Claims 1-31 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended ?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When ? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments ?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How ? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments ?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Philippe Kahn, et al.

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: Cosimano, Edward R.

Art Unit: 2863

Confirmation No.: 5415

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed for applications filed after June 30, 2003). It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being deposited with the United States Patent and Trademark Office via electronic filing through the United States Patent and Trademark Electronic Filing System on:

June 26, 2009

Date of Deposit

Betty Scaletta

Name of Person Mailing Correspondence

/Betty Scaletta/

Signature

06-26-2009

Date

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

- X 37 C.F.R. §1.97(b).
- 37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:
- A statement pursuant to 37 C.F.R. §1.97(e) or
- The Director is Authorized to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p).
- 37 C.F.R. §1.97(d). If so, then enclosed with this Information Disclosure Statement are the following:
- (1) A statement pursuant to 37 C.F.R. §1.97(e); and
 - (2) Authorization to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. §1.17(p) for submission of the Information Disclosure Statement.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: June 25, 2009 /Benjamin A. Kimes/
Benjamin A. Kimes
Reg. No. 50,870

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Philippe Kahn, et al.

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: KWOK, HELEN C

Art Unit: 2856

Confirmation No.: 5415

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed for applications filed after June 30, 2003). It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being deposited with the United States Patent and Trademark Office via electronic filing through the United States Patent and Trademark Electronic Filing System on:

January 16, 2009

Date of Deposit

Betty Scaletta

Name of Person Mailing Correspondence

/Betty Scaletta/

Signature

01-16-2009

Date

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

- X 37 C.F.R. §1.97(b).
- 37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:
- A statement pursuant to 37 C.F.R. §1.97(e) or
- The Director is Authorized to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p).
- 37 C.F.R. §1.97(d). If so, then enclosed with this Information Disclosure Statement are the following:
- (1) A statement pursuant to 37 C.F.R. §1.97(e); and
 - (2) Authorization to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. §1.17(p) for submission of the Information Disclosure Statement.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: January 16, 2009 /Benjamin A. Kimes/
Benjamin A. Kimes
Reg. No. 50,870

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2856	
				Examiner Name	KWOK, HELEN C	
Sheet	1	of	1	Attorney Docket Number	8689P027	
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US-	6,522,266 B1	2/18/2003	Soehren, et al.	
		US-	6,881,191 B2	4/19/2005	Oakley, et al.	
		US-	2004/0225467 A1	11/11/2004	Vock, Curtis A.; et al.	
		US-	2005/0033200 A1	2/10/2005	Soehren, Wayne A.; et al.	
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FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴ Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	4633170
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Benjamin Kimes/Betty Scaletta
Filer Authorized By:	Benjamin Kimes
Attorney Docket Number:	8689P027
Receipt Date:	16-JAN-2009
Filing Date:	22-DEC-2006
Time Stamp:	19:45:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement Letter	8689P027_IDS_LTR_01-16-09.pdf	21641 d987253f358e7f81b19b8e04703b877a77c913fc	no	2

Warnings:

Information:

2	Information Disclosure Statement (IDS) Filed (SB/08)	8689P027_IDS_SB08_01-16-09. pdf	56133 7b0f8bdbcd5a53aad56d78727ec5b2d9610 ccf94	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
Total Files Size (in bytes):			77774		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Philippe Kahn, et al.

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: KWOK, HELEN C

Art Unit: 2856

Confirmation No.: 5415

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed for applications filed after June 30, 2003). It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 or PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

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I hereby certify that this correspondence is being deposited with the United States Patent and Trademark Office via electronic filing through the United States Patent and Trademark Electronic Filing System on:

December 11, 2008

Date of Deposit

Betty Scaletta

Name of Person Mailing Correspondence

/Betty Scaletta/

Signature

12-11-2008

Date

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

- X 37 C.F.R. §1.97(b).
- 37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:
- A statement pursuant to 37 C.F.R. §1.97(e) or
- The Director is Authorized to charge our Deposit Acct. No. 02-2666 in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p).
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If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: December 11, 2008 /Benjamin A. Kimes/
Benjamin A. Kimes
Reg. No. 50,870

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300

[illegible]

Examiner Signature		Date Considered	
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	4441533
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Benjamin Kimes/Betty Scaletta
Filer Authorized By:	Benjamin Kimes
Attorney Docket Number:	8689P027
Receipt Date:	11-DEC-2008
Filing Date:	22-DEC-2006
Time Stamp:	19:40:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement Letter	8689P027_IDS_LTR_12-11-08.pdf	21633 c14a1d6def1d0be56a7a45cc6ba140bdc0081b8b	no	2

Warnings:

Information:

2	Information Disclosure Statement (IDS) Filed (SB/08)	8689P027_IDS_SB08_12-11-08. pdf	55520 0fea890387cd0d33056c2259bab2f32dedd 81e20	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
Total Files Size (in bytes):				77153	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

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DEVICE

Examiner: KWOK, HELEN C

Art Unit: 2856

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Betty Scaletta

Name of Person Mailing Correspondence

/Betty Scaletta/

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12-03-2008

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Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: December 3, 2008 /Benjamin A. Kimes/
Benjamin A. Kimes
Reg. No. 50,870

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known		
				Application Number	11/644,455	
				Filing Date	December 22, 2006	
				First Named Inventor:	Philippe Kahn, et al.	
				Art Unit	2856	
				Examiner Name	Kwok, Helen C.	
Sheet	1	of	2	Attorney Docket Number	8689P027	
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US-	6,836,744 B1	12/28/2004	Asphahani, et al.	
		US-	6,941,239 B2	9/6/2005	Unuma, et al.	
		US-	7,382,611	2/12/2008	Klees, et al.	
		US-	2007/0063850 A1	3/22/2007	Devaul; Richard W.; et al.	
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FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)					

Examiner Signature		Date Considered	
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

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Electronic Acknowledgement Receipt

EFS ID:	4391729
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	08791
Filer:	Benjamin Kimes/Betty Scaletta
Filer Authorized By:	Benjamin Kimes
Attorney Docket Number:	8689P027
Receipt Date:	03-DEC-2008
Filing Date:	22-DEC-2006
Time Stamp:	20:06:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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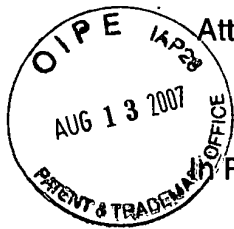
File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement Letter	8689P027_IDS_LTR_12-03-08.pdf	21615 649c7a6a16ba4d5da0972f6aa1243c0e142f088e	no	2

Warnings:

Information:

2	Information Disclosure Statement (IDS) Filed (SB/08)	8689P027_IDS_SB08_12-03-08. pdf	67204 e1e62dd44e7bbba7e2b4b074cda4bff78cb9378	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	NPL Documents	8689P027_IDS_NPL_12-03-08_ DAO.PDF	155691 d88934ad3b9c36d4cb43d81824f236c9423fc0c9	no	3
Warnings:					
Information:					
4	NPL Documents	8689P027_IDS_NPL_12-03-08_ MIZELL.PDF	116960 5c0775eb23dd770bf817769aa5655ce7b55ae6ed	no	2
Warnings:					
Information:					
5	NPL Documents	8689P027_IDS_NPL_12-03-08_ WEINBERG.PDF	260885 da2970f644dd43b765a139d4ffe56a3fe3b078e8	no	4
Warnings:					
Information:					
Total Files Size (in bytes):			622355		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



Attorney's Docket No. 7538.P027

Itw
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of:

Philippe Kahn

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: Not Yet Assigned

Art Unit: 2856

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

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(Date of Deposit)

Alma Goldchain

(Typed or printed name of person mailing correspondence)

(Signature of person mailing correspondence)

8/9/07
(Date)

has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

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Dated: August 9, 2007



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Reg. No. 50,870

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Sunnyvale, CA 94085-4040
(408) 720-8300

Substitute for Form 1449/PTO			Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Application Number	11/644,455	
			Filing Date	December 22, 2006	
			First Named Inventor:	Philippe Kahn	
			Art Unit	2856	
			Examiner Name	Not Yet Assigned	
			Attorney Docket Number	7538.P027	
Sheet	1	of	3		

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If known)				
		US-	4,578,769	3/25/1986	Frederick	
		US-	5,446,725	8/29/1995	Ishiwatari	
		US-	5,976,083	11/2/1999	Richardson, et al.	
		US-	6,135,951	10/24/2000	Richardson, et al.	
		US-	6,145,389	11/14/2000	Ebeling, et al.	
		US-	6,539,336	3/25/2003	Vock, et al.	
		US-	6,790,178	9/14/2004	Mault, et al.	
		US-	6,823,036	11/23/2004	Chen	
		US-	6,885,971	4/26/2005	Vock, et al.	
		US-	6,898,550	5/24/2005	Blackadar, et al.	
		US-	6,959,259	10/25/2005	Vock, et al.	
		US-	7,072,789	7/4/2006	Vock, et al.	
		US-	7,092,846	8/15/2006	Vock, et al.	
		US-	7,148,797	12/12/2006	Albert	
		US-	7,158,912	1/20/2007	Vock, et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	11/644,455
Filing Date	December 22, 2006
First Named Inventor:	Philippe Kahn
Art Unit	2856
Examiner Name	Not Yet Assigned
Attorney Docket Number	7538.P027

Sheet 2 **of** 3
U.S. PATENT DOCUMENTS

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		Number-Kind Code ² (If known)				
		US-	7,171,331	1/30/2007	Vock, et al.	
		US-	7,200,517	4/3/2007	Darley, et al.	
		US-	7,212,943	5/1/2007	Aoshima, et al.	
		US-	7,220,220	5/22/2007	Stubbs, et al.	
		US-	2002/0109600	8/15/2002	Mault, James R.; et al.	
		US-	2002/0151810	10/17/2002	Wong, Philip Lim-Kong; et al.	
		US-	2005/0240375	10/27/2005	Sugai, Yoshinori	
		US-	2005/0248718	11/10/2005	Howell, Thomas A., et al.	
		US-	2006/0136173	6/22/2006	Charles Whipple JR.; et al.	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				

**Examiner
Signature**
Date Considered

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
11/644,455	12/22/2006	Philippe Kahn	07538.P027

CONFIRMATION NO. 5415

8791

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
 1279 OAKMEAD PARKWAY
 SUNNYVALE, CA 94085-4040

Date Mailed: 06/29/2007

NOTICE REGARDING NONPUBLICATION REQUEST

The receipt of a nonpublication request filed under 35 U.S.C. 122(b)(2)(B)(i) with the above-identified application is acknowledged. The application will not be scheduled for publication.

Applicant may rescind the nonpublication request at any time. If applicant subsequently rescinds the nonpublication request, the above-identified application will be scheduled for publication at the later of eighteen (18) months from the earliest filing date claimed or fourteen (14) weeks from the date that the Office recognizes the rescission.

If applicant subsequently files an application directed to the invention disclosed in the above-identified application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant **must** notify the Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

Any response to this notice must be directed to the Pre-Grant Publication Division via facsimile at (703) 305-8568. Questions regarding this notice may be directed to the Pre-Grant Publication Division at (703) 605-4283.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Philippe Kahn, et al.

Application No.: 11/644,455

Filed: December 22, 2006

For: Human Activity Monitoring Device

Examiner: Not yet assigned

Art Unit: 2856

Conf. No.: 5415

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being submitted electronically via EFS Web on the date shown below.

/Judith A. Szepesi/
Judith A. Szepesi

June 25, 2007
Date

ATTN: OIPE Customer Service
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Sir:

On April 27, 2007, we received the Updated Filing Receipt in connection with the above-identified patent application (copy enclosed).

However, the following information needs to be corrected due to a PTO error. Please change:

FROM:

Non-Publication Request: No

TO:

Non-Publication Request: Yes

Also attached are the stamped postcard receipt for the original filing indicating that the Non-Publication Request was submitted, and the copy of the signed Non-Publication Request Under 35 U.S.C. 122(b)(2)(B)(i) submitted with the original application.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: June 25, 2007

/Judith A. Szepesi/

Judith A. Szepesi

Reg. No. 39,393

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300

FUI YOVCK
JASS-
D-
W-

UNITED STATES PATENT AND TRADEMARK OFFICE

ENTERED JAS DB

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPL NO.	FILING OR 371(c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLMS	IND CLMS
11/644,455 ✓	12/22/2006	2856	1330 ✓	07538.P027 ✓	20 ✓	4 ✓

CONFIRMATION NO. 5415

8791

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

RECEIVED

APR 30 2007

UPDATED FILING RECEIPT



OC000000023580725

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
LOS ANGELES

Date Mailed: 04/27/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Philippe Kahn, Aptos, CA; ✓
 Arthur Kinsolving, Santa Cruz, CA; ✓
 Mark Andrew Christensen, Santa Cruz, CA;
 Brian Y. Lee, Aptos, CA; ✓
 David Vogel, Santa Cruz, CA;

Power of Attorney: The patent practitioners associated with Customer Number 08791.

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted: 01/27/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US11/644,455**

Projected Publication Date: 06/26/2008

Non-Publication Request: ^{Yes} ~~No~~Early Publication Request: No ^x

Title

Human activity monitoring device ✓

Preliminary Class

073

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

7538.P027
Fullpower Tech
JAS

RECEIVED

JAN 08 2007

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
LOS ANGELES

ENTERED JAS DB

Application No.: Not yet assigned Filing/Issue Date: Herewith Docket No.: 7538.P027

Date Mailed: 12/22/06

Due Date(s): N/A

Atty/Sec: JAS/BAK/den

Client: FullPower, Inc.

Title: HUMAN ACTIVITY MONITORING DEVICE

First Named Inventor: Philippe Zafman

The following has been received in the U.S.P.T.O. on the date stamped hereon:

☒ Express Mail No. EV 397 652 066 US

☒ Utility Transmittal

☒ Fee Transmittal (original & copy)

☒ Nonpublication Request

☐ Petition for Extension of Time

☒ Application Type: Utility

(39) pages (incover & abstract)

☐ Transmittal of Formal Drawings

☒ Drawings (9) sheets (9) figures

☐ Amendment (___ pgs)

☐ Application amended to Reflect Claim of Priority

☒ Declaration & PDA (4 pgs) Unsigned

☐ Assignment & Cover Sheet (___ pgs)

☐ Information Disclosure Statement & PTO/BI/CP

(___ pgs) (previously 1443)

☒ Check No. 0452 Amount \$1,200.00

☐ Check No. Amount \$

☒ Postcard

☒ Other: Express Mail Certificate of Mailing

113260 U.S. PTO
11/644455



122206

Date 3/22/2007 Client: FullPower Technologies,

Docket Initials 7538.P027

Dock. Sup. Initials

Atty Initials JAS BAK

Pat/Ser/Reg 644455

19

Description:

3 month deadline to file prior art disclosure and check related cases (based on filed US application).

1/8/2007

Casey Hayes

638494

Date 6/22/2007 Client: FullPower Technologies,

Docket Initials 7538.P027

Dock. Sup. Initials

Atty Initials JAS BAK

Pat/Ser/Reg 644455

20

Description:

F/F letter

1/8/2007

Casey Hayes

638495

NONPUBLICATION REQUEST UNDER 35 U.S.C. 122(b)(2)(B)(i)

First Named Inventor Philippe Kahn
Title HUMAN ACTIVITY MONITORING DEVICE
Attorney Docket No. 7538.P027

I hereby certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months after filing.

I hereby request that the attached application not be published under 35 U.S.C. 122(b).

December 22, 2006
Date

(408) 720-8300
Telephone Number


Signature

Benjamin A. Kimes
Typed or Printed Name

50,870
Registration No.

This request must be signed in compliance with 37 CFR 1.33(b) and submitted with the application **upon filing**.

Applicant may rescind this nonpublication request at any time. If applicant rescinds a request that an application not be published under 35 U.S.C. 122(b), the application will be scheduled for publication at eighteen months from the earliest claimed filing date for which a benefit is claimed.

If applicant subsequently files an application directed to the invention disclosed in the attached application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant **must** notify the United States Patent and Trademark Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

Electronic Acknowledgement Receipt

EFS ID:	1908251
Application Number:	11644455
International Application Number:	
Confirmation Number:	5415
Title of Invention:	Human activity monitoring device
First Named Inventor/Applicant Name:	Philippe Kahn
Customer Number:	8791
Filer:	Judith A. Szepesi/Joan Abriam
Filer Authorized By:	Judith A. Szepesi
Attorney Docket Number:	07538.P027
Receipt Date:	25-JUN-2007
Filing Date:	22-DEC-2006
Time Stamp:	19:25:21
Application Type:	Utility

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Request for Corrected Filing Receipt	7538P027_Request_for_Corrected_Filing_Receipt.pdf	705794	no	7

Warnings:

Information:	
Total Files Size (in bytes):	705794
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
11/644,455	12/22/2006	2856	1330	07538.P027	20	4

CONFIRMATION NO. 5415

8791

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA90025-1030

UPDATED FILING RECEIPT

Date Mailed: 04/27/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Philippe Kahn, Aptos, CA;
Arthur Kinsolving, Santa Cruz, CA;
Mark Andrew Christensen, Santa Cruz, CA;
Brian Y. Lee, Aptos, CA;
David Vogel, Santa Cruz, CA;

Power of Attorney: The patent practitioners associated with Customer Number 08791

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted: 01/27/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is
US11/644,455

Projected Publication Date: 06/26/2008

Non-Publication Request: No

Early Publication Request: No

Title

Human activity monitoring device

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the

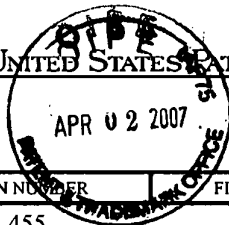
subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
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 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/644,455	12/22/2006	Phillippe Kahn	7538.P027

8791

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
 12400 WILSHIRE BOULEVARD
 SEVENTH FLOOR
 LOS ANGELES, CA 90025-1030

CONFIRMATION NO. 5415

FORMALITIES
 LETTER

Date Mailed: 01/29/2007

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$130** for a non-small entity

- **\$130** Surcharge.

Replies should be mailed to: Mail Stop Missing Parts
 Commissioner for Patents
 P.O. Box 1450
 Alexandria VA 22313-1450

04/03/2007 CNGUYEN2 00000065 11644455

01 FC:1051

130.00 0P

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

BN

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 2 - COPY TO BE RETURNED WITH RESPONSE

**TRANSMITTAL****PATENT**

Applicant No.: 11/644,455
Filing Date: December 22, 2006
First Named Inventor: Philippe Kahn et al.
Examiner's Name: not yet assigned
Art Unit: 2856
Attorney Docket No.: 07538.P027

- ☐ An Amendment After Final Action (37 CFR 1.116) is attached and applicant(s) request expedited action.
- ☒ Charge any fee not covered by any check submitted to Deposit Account No. 02-2666.
- ☒ Applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 CFR 1.16 and 1.17, for any concurrent or future reply to Deposit Account No. 02-2666.
- ☐ Applicant(s) claim small entity status (37 CFR 1.27).

ATTACHMENTS

- ☐ Preliminary Amendment
- ☐ Amendment/Response with respect to Office Action
- ☐ Amendment/Response After Final Action (37 CFR 1.116) (reminder: consider filing a Notice of Appeal)
- ☐ Notice of Appeal
- ☐ RCE (Request for Continued Examination)
- ☐ Supplemental Declaration
- ☐ Terminal Disclaimer (reminder: if executed by an attorney, the attorney must be properly of record)
- ☐ Information Disclosure Statement (IDS)
- ☐ Copies of IDS citations
- ☐ Petition for Extension of Time
- ☒ Fee Transmittal Document (that includes a fee calculation based on the type and number of claims)
- ☐ Cross-Reference to Related Application(s)
- ☐ Certified Copy of Priority Document
- ☒ Other: Response to Notification To File Missing Parts and signed declaration
- ☒ Other: Copy of Notification To File Missing Parts
- ☒ Check(s)
- ☒ Postcard (Return Receipt)

SUBMITTED BY:

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

TYPED OR PRINTED NAME: Benjamin A. Kimes

SIGNATURE:

REG. NO.: 50,870

DATE: 3/29/07

ADDRESS: 12400 Wilshire Boulevard, Seventh Floor

Los Angeles, California 90025

TELEPHONE NO.: (408) 720-8300

CERTIFICATE OF MAILING BY FIRST CLASS MAIL (if applicable)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria Virginia 22313-1450

on

March 29, 2007

Date of Deposit

Shannon Tinsley

Name of Person Mailing Correspondence

Signature

3/29/07

Date

Express Mail Label No. (if applicable): «Expressmail»

(10/14/03)

Send to: COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, Virginia 22313-1450

**FEE TRANSMITTAL FOR FY 2007**

Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

TOTAL AMOUNT OF PAYMENT (\$) 130.00

Information Known:

Application No. 11/644,455
 Filing Date December 22, 2006
 First Named Inventor Philippe Kahn et al.
 Examiner Name not yet assigned
 Art Unit 2856
 Attorney Docket No. 07538.P027

Applicant claims small entity status. See 37 CFR 1.27.

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify)☒ Deposit AccountDeposit Account Number : 02-2666

Deposit Account Name: _____

☒ The Director is Authorized to do the following with respect to the above-identified Deposit Account:☒ Charge fee(s) indicated below.☒ Charge any additional fee(s) or underpayment of fee(s) during the pendency of this application.☐ Charge fee(s) indicated below except for the filing fee☒ Credit any overpayments.☒ Any concurrent or future reply that requires a petition for extension of time should be treated as incorporating an appropriate petition for extension of time and all required fees should be charged.

Warning: Information on this form may become public. Credit card information should not be included on this form.
 Provide credit card information and authorization on PTO-2038.

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

<u>Large Entity</u>		<u>Small Entity</u>		<u>Fee Description</u>		<u>Fees Paid (\$)</u>
<u>Code</u>	<u>Fee (\$)</u>	<u>Code</u>	<u>Fee (\$)</u>			
1011	300	2011	150	Utility application filing fee	} 1,000/500	_____
1111	500	2111	250	Utility search fee		_____
1311	200	2311	100	Utility examination fee		_____
1012	200	2012	100	Design application filing fee	} 430/215	_____
1112	100	2112	50	Design search fee		_____
1312	130	2312	65	Design examination fee		_____
1013	200	2013	100	Plant filing fee	} 660/330	_____
1113	300	2113	150	Plant search fee		_____
1313	160	2313	80	Plant examination fee		_____
1004	300	2004	150	Reissue filing fee	} 1,400/700	_____
1114	500	2114	250	Reissue search fee		_____
1314	600	2314	300	Reissue examination fee		_____
1005	200	2005	100	Provisional application filing fee		_____
SUBTOTAL (1) <u>\$0.00</u>						_____

**2. EXCESS CLAIM FEES****Fee Description****Large Entity Small Entity****Fee Fee Fee Fee****Code (\$) Code (\$) Fee Description**

1202 50 2202 25 Each claim over 20

1201 200 2201 100 Each independent claim over 3

1203 360 2203 180 Multiple dependent claims, if not paid

1204 200 2204 100 Reissue: each claim over 20 and more than in the original patent

1205 50 2205 25 Reissue: each independent claim more than in the original patent

Extra Claims**Fee****Fees Paid (\$)****Total Claims** _____ - 20 or HP = _____

X _____ = _____

HP = highest number of total claims paid for, if greater than 20

Independent Claims _____ - 3 or HP = _____

X _____ = _____

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims _____ = _____**SUBTOTAL (2) \$ 0.00****3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 C.F.R. 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets**Extra Sheets****Number of each additional
50 or fraction thereof****Fee from
below****Fees paid (\$)**

_____ - 100 = _____ / 50 = _____ (round up to whole number) X \$ _____

Large Entity**Small Entity****Fee Fee Fee Fee****Code (\$) Code (\$) Fee Description: Application size fee for each additional group of 50 sheets****beyond initial 100 sheets (count spec & drawings except sequences & program listings):**

1081 250 2081 125 Utility

1082 250 2082 125 Design

1083 250 2083 125 Plant

1084 250 2084 125 Reissue

SUBTOTAL (3) \$ 0.00

**FEE CALCULATION (continued)****4. OTHER FEE(S)**

				Fees Paid (\$)	
Non-English Specification, \$130 fee (no small entity discount)					
Large Entity		Small Entity			
Fee	Fee	Fee	Fee		
Code	(\$)	Code	(\$)	Fee Description	
1051	130	2051	65	Surcharge - late filing fee or oath	\$130.00
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1813	8,800	1813	8,800	Request for inter parties reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	500	2452	250	Petition to revive - unavoidable	
1453	1,500	2453	750	Petition to revive - unintentional	
1501	1,400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1503	1100	2503	550	Plant issue fee	
1462	400	1462	400	Petitions to the Commissioner (CFR 1.17(f) Group I)	
1463	200	1463	200	Petitions to the Commissioner (CFR 1.17(g) Group II)	
1464	130	1464	130	Petitions to the Commissioner (CFR 1.17(h) Group III)	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	For filing a submission after final rejection (see 37 CFR 1.129(a))	
1814	130	2814	65	Statutory Disclaimer	
1810	790	2810	395	For each additional invention to be examined (see 37 CFR 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
1504	300	1504	300	Publication fee for early, voluntary, or normal pub.	
1505	300	1505	300	Publication fee for republication	
1803	130	1803	130	Request for voluntary publication or republication	
1808	130	1808	130	Processing fee under 37 CFR 1.17(i) (except provisionals)	
1454	1,370	1454	1,370	Acceptance of unintentionally delayed claim for priority	
Other fee (specify) _____					
Other fee (specify) _____					
				SUBTOTAL (4)	\$ 130.00

*Reduced by Basic Filing Fee Paid

SUBMITTED BY:Typed or Printed Name: Benjamin A. KimesSignature: Date: 3/29/07Reg. Number: 50,870Telephone Number: 408-720-8300

Send to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450



Attorney's Docket No. 07538.P027

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Philippe Kahn

Application No.: 11/644,455

Filed: December 22, 2006

For: HUMAN ACTIVITY MONITORING
DEVICE

Examiner: not yet assigned

Art Unit: 2856

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION
(FILING DATE GRANTED)

Sir:

In response to the Notice to File Missing parts of Application (Filing Date
Granted) mailed January 29, 2006, please find enclosed:

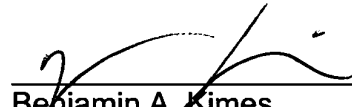
- (1) a duly executed Declaration and Power of Attorney with respect to
the above-referenced patent application;
- (2) a check in the amount of \$130.00 in payment of the surcharge of
37 C.F.R. § 1.16(e); and
- (3) a copy of the Notice to File Missing Parts of Application.

If any additional fee is required, please charge Deposit Account No. 02-2666. A duplicate of the Fee Transmittal is enclosed for deposit account charging purposes.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 3/29/07


Benjamin A. Kimes
Reg. No. 50,870

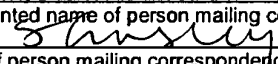
12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025
(408) 720-8300

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on March 29, 2007.

(Date of Deposit)

Shannon Tinsley

(Typed or printed name of person mailing correspondence)


(Signature of person mailing correspondence)

2. EXCESS CLAIM FEES**Fee Description****Large Entity**

Fee Code	Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)
1202	50	2202	25
1201	200	2201	100
1203	360	2203	180
1204	200	2204	100
1205	50	2205	25

Fee Code	Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1202	50	2202	25	Each claim over 20
1201	200	2201	100	Each independent claim over 3
1203	360	2203	180	Multiple dependent claims, if not paid
1204	200	2204	100	Reissue: each claim over 20 and more than in the original patent
1205	50	2205	25	Reissue: each independent claim more than in the original patent

	Extra Claims	Fee	Fees Paid (\$)
Total Claims _____ - 20 or HP = _____	X _____	= _____	
HP = highest number of total claims paid for, if greater than 20			
Independent Claims _____ - 3 or HP = _____	X _____	= _____	
HP = highest number of independent claims paid for, if greater than 3			
Multiple Dependent Claims _____		= _____	

SUBTOTAL (2) \$ 0.00**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 C.F.R. 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee from below	Fees paid (\$)
_____ - 100 = _____ / 50 = _____ (round up to whole number)			X \$ _____	

Large Entity

Fee Code	Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)
1081	250	2081	125
1082	250	2082	125
1083	250	2083	125
1084	250	2084	125

Fee Code	Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1081	250	2081	125	Utility
1082	250	2082	125	Design
1083	250	2083	125	Plant
1084	250	2084	125	Reissue

Fee Description: Application size fee for each additional group of 50 sheets beyond initial 100 sheets (count spec & drawings except sequences & program listings):

SUBTOTAL (3) \$ 0.00

FEE CALCULATION (continued)**4. OTHER FEE(S)****Fees Paid (\$)**

Non-English Specification, \$130 fee (no small entity discount)

<u>Large Entity</u>		<u>Small Entity</u>		<u>Fee Description</u>	
<u>Fee Code</u>	<u>Fee (\$)</u>	<u>Fee Code</u>	<u>Fee (\$)</u>		
1051	130	2051	65	Surcharge - late filing fee or oath	\$130.00
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1813	8,800	1813	8,800	Request for inter parties reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
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1403	1,000	2403	500	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	500	2452	250	Petition to revive - unavoidable	
1453	1,500	2453	750	Petition to revive - unintentional	
1501	1,400	2501	700	Utility issue fee (or reissue)	
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1503	1100	2503	550	Plant issue fee	
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1463	200	1463	200	Petitions to the Commissioner (CFR 1.17(g) Group II)	
1464	130	1464	130	Petitions to the Commissioner (CFR 1.17(h) Group III)	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	For filing a submission after final rejection (see 37 CFR 1.129(a))	
1814	130	2814	65	Statutory Disclaimer	
1810	790	2810	395	For each additional invention to be examined (see 37 CFR 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
1504	300	1504	300	Publication fee for early, voluntary, or normal pub.	
1505	300	1505	300	Publication fee for republication	
1803	130	1803	130	Request for voluntary publication or republication	
1808	130	1808	130	Processing fee under 37 CFR 1.17(l) (except provisionals)	
1454	1,370	1454	1,370	Acceptance of unintentionally delayed claim for priority	

Other fee (specify) _____

Other fee (specify) _____

SUBTOTAL (4) \$ 130.00

*Reduced by Basic Filing Fee Paid

SUBMITTED BY:Typed or Printed Name: Benjamin A. KimesSignature: Date: 5/29/07Reg. Number: 50,870Telephone Number: 408-720-8300

Send to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Attorney Docket No.: 07538.P027PatentFirst Named Inventor: Philippe Kahn et al.

Check One:

Complete If Known:

- ☐ Declaration Submitted with
Initial Filing OR
- ☒ Declaration Submitted After
Initial Filing (Surcharge under
37 C.F.R. § 1.16(e) Required).

Application No.: _____

Filing Date: _____

Art Unit: _____

Examiner Name: _____

DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

HUMAN ACTIVITY MONITORING DEVICE

(Title of the invention)

the specification of which

☐ is attached hereto OR

☒ was filed on (12/28/2006)

as United States Application Number 11/644,455

or PCT International Application Number _____

and was amended on (MM/DD/YYYY) _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the

BSTZ ONLY (LONG FORM)

-1-

Rev. 07/01/04

03/20/07 TUE 19:39 [TX/RX NO 9588]

continuation-in-part application.

BSTZ ONLY (LONG FORM)
Rev. 07/01/04

-2-

03/20/07 TUE 19:39 [TX/RX NO 9588]

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed?		Certified Copy Attached?	
(Number)	(Country)	(Foreign Filing Date - MM/DD/YYYY)	Yes	No	Yes	No
(Number)	(Country)	(Foreign Filing Date - MM/DD/YYYY)	Yes	No	Yes	No
(Number)	(Country)	(Foreign Filing Date - MM/DD/YYYY)	Yes	No	Yes	No
(Number)	(Country)	(Foreign Filing Date - MM/DD/YYYY)	Yes	No	Yes	No

Appointment of Patent Practitioners:

I hereby appoint the patent practitioners associated with the Customer Number **08791** as my respective patent attorneys and patent agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

If this patent application is assigned, then the undersigned hereby authorizes the patent attorneys and patent agents named herein to accept and follow instructions from the assignee(s) as to any action to be taken in the United States Patent and Trademark Office regarding this application without direct communication between the patent attorneys and patent agents and the undersigned. In the event of a change in the persons from whom instructions may be taken, at least one patent attorney or patent agent named herein will be so notified by the undersigned.

Direct all correspondence to (check one):

☒ Customer Number **08791** OR

☐ Correspondence Address Below:

Benjamin A. Kimes
 (Name of Attorney or Agent)
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
 12400 Wilshire Boulevard
 Seventh Floor
 Los Angeles, California 90025 U.S.A.
 Telephone: (408) 720-8300
 Fax: (408) 720-8383

BSTZ ONLY (LONG FORM)
 Rev. 07/01/04

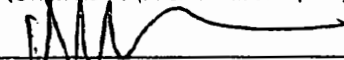
-3-

03/20/07 TUE 19:39 [TX/RX NO 9588]

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this unsigned inventor

Full Name: Philippe Kahn
(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature  Date 3-29-07

Residence Aptos, CA, USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 777 Hudson Lane
Aptos, CA 95003

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this unsigned inventor

Full Name: Arthur Kinsolving
(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature _____ Date _____

Residence Santa Cruz, CA, USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 122 Fairview Place
Santa Cruz, CA 95062

NAME OF THIRD INVENTOR: ☐ A petition has been filed for this unsigned inventor

Full Name: Mark Andrew Christensen
(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature _____ Date _____

Residence Santa Cruz, CA, USA Citizenship New Zealand
(City, State, Country) (Country)

Mailing Address 215 Anchorage Ave

BSTZ ONLY (LONG FORM)

-4-

Rev. 07/01/04

03/28/07 WED 18:11 [TX/RX NO 9798]



I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: ☐ A petition has been filed for this unsigned inventor

Full Name: Philippe Kahn
(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature _____ Date _____

Residence Aptos, CA, USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 777 Hudson Lane
Aptos, CA 95003

NAME OF SECOND INVENTOR: ☐ A petition has been filed for this unsigned inventor

Full Name: Arthur Kinsolving
(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature [Signature] Date 3/21/07

Residence Santa Cruz, CA, USA Citizenship USA
(City, State, Country) (Country)

Mailing Address 122 Fairview Place
Santa Cruz, CA 95062

NAME OF THIRD INVENTOR: ☐ A petition has been filed for this unsigned inventor

Full Name: Mark Andrew Christensen
(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature [Signature] Date 3/20/07

Residence Santa Cruz, CA, USA Citizenship New Zealand
(City, State, Country) (Country)

Mailing Address 215 Anchorage Ave

BSTZ ONLY (LONG FORM)

Rev. 07/01/04

-4-

03/20/07 TUE 19:39 [TX/RX NO 9588]

Santa Cruz, CA 95062NAME OF FOURTH INVENTOR: ☐ A petition has been filed for this unsigned inventorFull Name: Brian Y. Lee

(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature Date 3/26/2007Residence Aptos, CA, USA

(City, State, Country)

Citizenship USA

(Country)

Mailing Address 777 Hudson LaneAptos, CA 95003NAME OF FIFTH INVENTOR: ☐ A petition has been filed for this unsigned inventorFull Name: David Vogel

(Given Name (First and Middle (if any)), Family Name (or Surname), and Suffix (if any))

Inventor's Signature Date 3/26/07Residence Santa Cruz, CA, USA

(City, State, Country)

Citizenship USA

(Country)

Mailing Address 600 Beel DriveSanta Cruz, CA 95060



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	DRAWINGS	TOT CLAIMS	IND CLAIMS
11/644,455	12/22/2006	2856	1200	7538.P027	9	20	4

CONFIRMATION NO. 5415

8791

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA90025-1030

FILING RECEIPT

Date Mailed: 01/29/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Phillippe Kahn, Aptos, CA;
Arthur Kinsolving, Santa Cruz, CA;
Mark Andrew Christensen, Santa Cruz, CA;
Brian Y. Lee, Aptos, CA;
David Vogel, Santa Cruz, CA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted: 01/27/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is
US11/644,455

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Human activity monitoring device

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the

subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/644,455	12/22/2006	Phillippe Kahn	7538.P027

CONFIRMATION NO. 5415

FORMALITIES
 LETTER

8791
 BLAKELY SOKOLOFF TAYLOR & ZAFMAN
 12400 WILSHIRE BOULEVARD
 SEVENTH FLOOR
 LOS ANGELES, CA 90025-1030

Date Mailed: 01/29/2007

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$130** for a non-small entity

- **\$130** Surcharge.

Replies should be mailed to: Mail Stop Missing Parts
 Commissioner for Patents
 P.O. Box 1450
 Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebs>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

BN

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 3 - OFFICE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/644,455	12/22/2006	Phillippe Kahn	7538.P027

CONFIRMATION NO. 5415

8791

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
 12400 WILSHIRE BOULEVARD
 SEVENTH FLOOR
 LOS ANGELES, CA 90025-1030

Date Mailed: 01/29/2007

RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT**Publication and General Rules Issues**

In response to your request for a corrected Filing Receipt, the Office is unable to comply with the request because:

- ☐ The articles such as "a", "an", and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- ☐ The words "new", "improved", "improvement of", "improvement in", or "improvement relating to" are not included as the first words in the title of an application because a patent application is, by nature, a new idea or improvement. See MPEP 606.
- ☐ The title appears on the filing receipt in sentence case for publication in the Annual Index of Patents.
- ☐ Amendments are not accepted in provisional applications. See 37 CFR 1.53(c).
- ☐ An amendment or Application Data Sheet is needed to make this change.
- ☐ The inventor's residence will only include the city and state for U.S. residences or city and country for residences outside the U.S. (See MPEP 605.02.)
- ☐ Continuity claimed under 35 USC 120 cannot be added to the Filing Receipt without the applicant supplying the relationship (continuation, divisional, or continuation-in-part) in an Application Data Sheet or amendment to the first page of the specification.
- ☐ Small entity status was previously claimed in this application. To notify the Office of a loss of entitlement to small entity status, see 37 CFR 1.27(g). To have a good faith error in claiming small entity status excused, see 37 CFR 1.28(c).

- ☐ The request for non-publication was not timely filed. A request for non-publication must be submitted upon filing of an application. The application is scheduled to be published on the date specified on the filing receipt. See 37 CFR 1.213(a)(1)
- ☐ The request for non-publication has not been recognized because it is not conspicuous as required by 37 CFR 1.213(a)(2)
- ☒ The request for non-publication has not been recognized because it does not contain the certification as required by 37 CFR 1.213(a)(3).
- ☐ The request for non-publication has not been recognized because it is not signed in compliance with 37 CFR 1.33(b) as required by 37 CFR 1.213(a)(4).
- ☐ There was no prior request for non-publication in this application. The request to rescind the non-publication request will not be processed.
- ☐ Your request for non-publication will not be acknowledged because this application is not eligible for publication. Only utility and plant applications filed on or after November 29, 2000 are eligible for publication.
- ☐ The "Non-Publication Request" indicator is correct. If there was a proper request submitted at the time of filing, the notation on the filing receipt will be "Yes". If no such request was made, the notation will be "No".
- ☐ Assignment information will only be included for applications that are eligible for publication.

BN

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382

PART 3 - OFFICE COPY

17114
122206

113260 U.S. PTO
11/644455
122206

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.: 7538.P027
(maximum 12 characters)

First Named Inventor: Philippe Kahn

Title: HUMAN ACTIVITY MONITORING DEVICE

Express Mail Label No.: EV 897 652 066 US

ADDRESS TO: **Commissioner for Patents**
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. X **Fee Transmittal Form (e.g., PTO/SB/17)**
(Submit an original and a duplicate for fee processing)
2. **Applicant Claims Small Entity Status. (37 CFR 1.27)**
3. X **Specification (Total Pages 39 – including cover & abstract)**
(preferred arrangement set forth below)
 - Descriptive Title of the Invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference sequence listing, a table,
or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. X **Drawings (35 USC 113) (Total Sheets 9)**
5. X **Oath or Declaration (Total Pages 3)**
 - a. Newly Executed (Original or Copy)
 - b. Copy from a Prior Application (37 CFR 1.63(d))
(for Continuation/Divisional with Box 18 completed)
 - i. **DELETIONS OF INVENTOR(S)** Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
 - c. X Unsigned.
6. **Application Data Sheet. (37 CFR 1.76)**
7. **CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)**
8. **Nucleotide and/or Amino Acid Sequence Submission**
(if applicable, all necessary)
 - a. **Computer Readable Form (CRF)**
 - b. **Specification Sequence Listing on:**
 - i. **CD-ROM or CD-R (2 copies); or**
 - ii. **paper**
 - c. **Statements verifying identity of above copies**

- 1 -

Based on Form PTO/SB/05 (08-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 09/12/03.

ACCOMPANYING APPLICATION PARTS

9. _____ **Assignment Papers (cover sheet & documents(s))**
10. _____ a. Separate 37 CFR 3.73(b) Statement (where there is an assignee)
- _____ b. Power of Attorney
11. _____ English Translation Document (if applicable)
12. _____ a. Information Disclosure Statement (IDS)/PTO-1449 (or PTO/SB/08)
- _____ b. Copies of IDS Citations
13. _____ **Preliminary Amendment**
14. X **Return Receipt Postcard (MPEP 503) (Should be specifically itemized)**
15. _____ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. X **Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.**
- 17A. _____ Claim for Foreign Priority
- 17B. X Other: Check for \$1,200 (filing fees); and Certificate of Mailing by Express Mail


17C. X Pursuant to 37 C.F.R. 1.136(a)(3), applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

18. If a **CONTINUING APPLICATION**, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title (e.g., by way of preliminary amendment), or in an Application Data Sheet Under 37 C.F.R. 1.76:

_____ Continuation _____ Divisional _____ Continuation-in-part (CIP)
 Of Prior Application No.: _____ Examiner _____ Group Art Unit _____
 (which is a _____ continuation/ _____ divisional/ _____ CIP of prior application no. _____,
 which is a _____ continuation/ _____ divisional/ _____ CIP of prior application no. _____) (List entire chain of priority)

Applicant(s): Also include a Preliminary Amendment to amend the specification to claim priority.
 For CONTINUATION AND DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. Correspondence Address
 X Customer Number or Bar Code Label 08791
 or (Insert Customer No. or Attach Bar Code Label here)
 Correspondence Address Below
 NAME Judith A. Szepesi
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
 ADDRESS 12400 Wilshire Boulevard
Seventh Floor
 CITY Los Angeles STATE California ZIP CODE 90025
 Country U.S.A. TELEPHONE (408) 720-8300 FAX (408) 720-8383

Name (PRINT/TYPE): Benjamin A. Kimes Registration No.: 50,870
 Signature:  Date: December 22, 2006

FEE TRANSMITTAL FOR FY 2006

Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

TOTAL AMOUNT OF PAYMENT (\$) 1,200.00

Complete if Known:

Application No. Not yet assignedFiling Date HerewithFirst Named Inventor Philippe KahnExaminer Name Not yet assignedArt Unit Not yet assignedAttorney Docket No. 7538.P027 Applicant claims small entity status. See 37 CFR 1.27.**METHOD OF PAYMENT** (check all that apply)☒ Check Credit Card Money Order None Other (please identify) Deposit AccountDeposit Account Number : 02-2666Deposit Account Name: ☒ The Director is Authorized to do the following with respect to the above-identified Deposit Account:

Charge fee(s) indicated below.

☒ Charge any additional fee(s) or underpayment of fee(s) during the pendency of this application.☒ Charge fee(s) indicated below except for the filing fee☒ Credit any overpayments.☒ Any concurrent or future reply that requires a petition for extension of time should be treated as incorporating an appropriate petition for extension of time and all required fees should be charged.

Warning: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Large Entity		Small Entity		Fee Description		Fees Paid (\$)
Code	Fee (\$)	Code	Fee (\$)			
1011	300	2011	150	Utility application filing fee	1,000/500	<u>\$300.00</u>
1111	500	2111	250	Utility search fee		<u>\$500.00</u>
1311	200	2311	100	Utility examination fee		<u>\$200.00</u>
1012	200	2012	100	Design application filing fee	430/215	<u> </u>
1112	100	2112	50	Design search fee		<u> </u>
1312	130	2312	65	Design examination fee		<u> </u>
1013	200	2013	100	Plant filing fee	660/330	<u> </u>
1113	300	2113	150	Plant search fee		<u> </u>
1313	160	2313	80	Plant examination fee		<u> </u>
1004	300	2004	150	Reissue filing fee	1,400/700	<u> </u>
1114	500	2114	250	Reissue search fee		<u> </u>
1314	600	2314	300	Reissue examination fee		<u> </u>
1005	200	2005	100	Provisional application filing fee		<u> </u>
SUBTOTAL (1) \$ <u>1,000.00</u>						

- 1 -

Based on Form PTO/SB/17 (12-04) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 12/13/04

2. EXCESS CLAIM FEES

		<u>Extra Claims</u>	<u>Fee from below</u>	<u>Fees Paid (\$)</u>																																			
Total Claims	<u>20</u>	- 20 or HP = <u>0</u>	X <u>\$50.00</u>	= <u>00.00</u>																																			
HP = highest number of total claims paid for, if greater than 20																																							
Independent Claims	<u>4</u>	- 3 or HP = <u>1</u>	X <u>\$200.00</u>	= <u>200.00</u>																																			
HP = highest number of independent claims paid for, if greater than 3																																							
Multiple Dependent Claims				=																																			
<table> <tr> <th colspan="2"><u>Large Entity</u></th><th colspan="2"><u>Small Entity</u></th><th></th></tr> <tr> <th>Fee Code</th><th>Fee (\$)</th><th>Fee Code</th><th>Fee (\$)</th><th><u>Fee Description</u></th></tr> <tr> <td>1202</td><td>50</td><td>2202</td><td>25</td><td>Each claim over 20</td></tr> <tr> <td>1201</td><td>200</td><td>2201</td><td>100</td><td>Each independent claim over 3</td></tr> <tr> <td>1203</td><td>360</td><td>2203</td><td>180</td><td>Multiple dependent claims, if not paid</td></tr> <tr> <td>1204</td><td>200</td><td>2204</td><td>100</td><td>Reissue: each claim over 20 and more than in the original patent</td></tr> <tr> <td>1205</td><td>50</td><td>2205</td><td>25</td><td>Reissue: each independent claim more than in the original patent</td></tr> </table>					<u>Large Entity</u>		<u>Small Entity</u>			Fee Code	Fee (\$)	Fee Code	Fee (\$)	<u>Fee Description</u>	1202	50	2202	25	Each claim over 20	1201	200	2201	100	Each independent claim over 3	1203	360	2203	180	Multiple dependent claims, if not paid	1204	200	2204	100	Reissue: each claim over 20 and more than in the original patent	1205	50	2205	25	Reissue: each independent claim more than in the original patent
<u>Large Entity</u>		<u>Small Entity</u>																																					
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1202	50	2202	25	Each claim over 20																																			
1201	200	2201	100	Each independent claim over 3																																			
1203	360	2203	180	Multiple dependent claims, if not paid																																			
1204	200	2204	100	Reissue: each claim over 20 and more than in the original patent																																			
1205	50	2205	25	Reissue: each independent claim more than in the original patent																																			
SUBTOTAL (2)				\$ <u>200.00</u>																																			

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each add'l 50 or fraction thereof</u>	<u>Fee from below</u>	<u>Fees paid (\$)</u>																														
<u>48</u>	- 100 = <u>0</u>	/ 50 = _____ (round up to whole number)	X <u>\$250.00</u>	<u>00.00</u>																														
<table> <tr> <th colspan="2"><u>Large Entity</u></th><th colspan="2"><u>Small Entity</u></th><th></th></tr> <tr> <th>Fee Code</th><th>Fee (\$)</th><th>Fee Code</th><th>Fee (\$)</th><th><u>Fee Description: Application size fee for each additional group of 50 sheets beyond initial 100 sheets (count spec & drawings except sequences & program listings):</u></th></tr> <tr> <td>1081</td><td>250</td><td>2081</td><td>125</td><td>Utility</td></tr> <tr> <td>1082</td><td>250</td><td>2082</td><td>125</td><td>Design</td></tr> <tr> <td>1083</td><td>250</td><td>2083</td><td>125</td><td>Plant</td></tr> <tr> <td>1084</td><td>250</td><td>2084</td><td>125</td><td>Reissue</td></tr> </table>					<u>Large Entity</u>		<u>Small Entity</u>			Fee Code	Fee (\$)	Fee Code	Fee (\$)	<u>Fee Description: Application size fee for each additional group of 50 sheets beyond initial 100 sheets (count spec & drawings except sequences & program listings):</u>	1081	250	2081	125	Utility	1082	250	2082	125	Design	1083	250	2083	125	Plant	1084	250	2084	125	Reissue
<u>Large Entity</u>		<u>Small Entity</u>																																
Fee Code	Fee (\$)	Fee Code	Fee (\$)	<u>Fee Description: Application size fee for each additional group of 50 sheets beyond initial 100 sheets (count spec & drawings except sequences & program listings):</u>																														
1081	250	2081	125	Utility																														
1082	250	2082	125	Design																														
1083	250	2083	125	Plant																														
1084	250	2084	125	Reissue																														
SUBTOTAL (3)				\$ <u>0.00</u>																														

FEE CALCULATION (continued)**4. OTHER FEE(S)****Fees Paid (\$)**

Non-English Specification, \$130 fee (no small entity discount)

<u>Large Entity</u>		<u>Small Entity</u>		<u>Fee Description</u>	
Code	Fee (\$)	Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1813	8,800	1813	8,800	Request for inter parties reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	500	2452	250	Petition to revive - unavoidable	
1453	1,500	2453	750	Petition to revive - unintentional	
1501	1,400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1503	1100	2503	550	Plant issue fee	
1462	400	1462	400	Petitions to the Commissioner (CFR 1.17(f) Group I)	
1463	200	1463	200	Petitions to the Commissioner (CFR 1.17(g) Group II)	
1464	130	1464	130	Petitions to the Commissioner (CFR 1.17(h) Group III)	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	For filing a submission after final rejection (see 37 CFR 1.129(a))	
1814	130	2814	65	Statutory Disclaimer	
1810	790	2810	395	For each additional invention to be examined (see 37 CFR 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
1504	300	1504	300	Publication fee for early, voluntary, or normal pub.	
1505	300	1505	300	Publication fee for republication	
1803	130	1803	130	Request for voluntary publication or republication	
1808	130	1808	130	Processing fee under 37 CFR 1.17(l) (except provisionals)	
1454	1,370	1454	1,370	Acceptance of unintentionally delayed claim for priority	

Other fee (specify) _____

Other fee (specify) _____

SUBTOTAL (4) \$ 0.00

*Reduced by Basic Filing Fee Paid

SUBMITTED BY:Typed or Printed Name: Benjamin A. KimesSignature:  Date: December 22, 2006Reg. Number: 50,870 Telephone Number: 408-720-8300

Send to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Patent

UNITED STATES UTILITY PATENT APPLICATION

FOR

HUMAN ACTIVITY MONITORING DEVICE

INVENTORS:

PHILIPPE KAHN
ARTHUR KINSOLVING
MARK ANDREW CHRISTENSEN
BRIAN Y LEE
DAVID VOGEL

PREPARED BY:

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1026

(408) 720-8300

ATTORNEY'S DOCKET NO. 7538.P027

"Express Mail" mailing label number: EV 897 652 066 US

Date of Deposit: December 22, 2006

I hereby certify that I am causing this paper or fee to be deposited with the United States Postal Service "Express Mail Post Office to Addressee" service on the date indicated above and that this paper or fee has been addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450

Dianne Neathery

(Typed or printed name of person mailing paper or fee)

Dianne Neathery
(Signature of person mailing paper or fee)

12/22/06
(Date signed)

HUMAN ACTIVITY MONITORING DEVICE

FIELD OF THE INVENTION

[0001] This invention relates to a method of monitoring human activity, and more particularly to counting periodic human motions such as steps.

BACKGROUND

[0002] The development of Micro-Electro-Mechanical Systems (MEMS) technology has enabled manufacturers to produce inertial sensors (e.g., accelerometers) of sufficient size, cost, and power consumption to fit into portable electronic devices. Such inertial sensors can be found in a limited number of commercial electronic devices such as cellular phones, portable music players, pedometers, game controllers, and portable computers.

[0003] Step counting devices are used to monitor an individual's daily activity by keeping track of the number of steps that he or she takes. Generally, step counting devices that utilize an inertial sensor to measure motion to detect steps require the user to first position the device in a limited set of orientations. In some devices, the required orientations are dictated to the user by the device. In other devices, the beginning orientation is not critical, so long as this orientation can be maintained.

[0004] Step counting devices are often confused by motion noise experienced by the device throughout a user's daily routine. This noise causes false steps to be measured and actual steps to be missed in conventional step counting devices. Conventional step counting devices also fail to accurately measure steps for individuals

who walk at a slow pace. Such step counting devices can fail to operate for seniors and others walking at a slow pace.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] The present invention is illustrated by way of example, and not by way of limitation, and can be more fully understood with reference to the following detailed description when considered in connection with the following figures:

[0006] **Figure 1** is a block diagram illustrating one embodiment of an electronic device;

[0007] **Figure 2** illustrates an exemplary cadence of motion graph that measures time versus acceleration, in accordance with one embodiment of the present invention;

[0008] **Figure 3** shows a state diagram for the behavior of a system of monitoring human activity using an inertial sensor, in accordance with one embodiment of the present invention;

[0009] **Figure 4** illustrates a flow diagram for a method of operating an electronic device in sleep mode, in accordance with one embodiment of the present invention;

[0010] **Figure 5** illustrates a flow diagram for a method of operating an electronic device in entry mode, in accordance with one embodiment of the present invention;

[0011] **Figure 6** illustrates a flow diagram for a method of operating an electronic device in stepping mode, in accordance with one embodiment of the present invention;

[0012] **Figure 7** illustrates a flow diagram for a method of operating an electronic device in exit mode, in accordance with one embodiment of the present invention;

[0013] **Figure 8** illustrates a flow diagram for a method of recognizing a step in accordance with one embodiment of the present invention, in accordance with one embodiment of the present invention; and

[0014] **Figure 9** illustrates a flow diagram for a method of orienting an inertial sensor, in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION

[0015] Embodiments of the present invention are designed to monitor human activity using an inertial sensor. In one embodiment, a dominant axis is assigned after determining an orientation of an inertial sensor. The orientation of the inertial sensor is continuously determined, and the dominant axis is updated as the orientation of the inertial sensor changes. In one embodiment, periodic human motions are counted by monitoring accelerations relative to the dominant axis.

[0016] **Figure 1** is a block diagram illustrating an electronic device 100, in accordance with one embodiment of the present invention. The electronic device 100 in one embodiment comprises an acceleration measuring logic 105, a filter 120, a dominant axis logic 127, a step counting logic 130, a timer 170, and a final step count 175. In one embodiment, the electronic device 100 is a portable electronic device that includes one or more inertial sensors. The inertial sensors may measure accelerations along a single axis or multiple axes. The inertial sensors may measure linear as well as rotational (angular) accelerations. The electronic device 100 may be used to count steps or other periodic human motions. Steps may be accurately counted regardless of the placement and/or orientation of the device on a user. Steps may be accurately counted whether the electronic device 100 maintains a fixed orientation or changes orientation during operation. The electronic device 100 may be carried in a backpack, pocket, purse, hand, or elsewhere, and accurate steps may still be counted.

[0017] The acceleration measuring logic 105 measures acceleration data at a sampling rate. The sampling rate may be fixed or variable. In one embodiment, the acceleration measuring logic 105 receives a timing signal from the timer 170 in order to

take measurements at the sampling rate. The acceleration measuring logic 105 may be an inertial sensor.

[0018] In one embodiment, measurement data is processed by the filter 120 to remove noise. The filter 120 may be implemented in hardware, software, or both hardware and software. The filter 120 may include a high pass filter, a low pass filter, a bandpass filter, a bandstop filter and/or additional filters. The filter 120 may include a digital filter and/or an analog filter. In one embodiment, a hardware digital filter includes at least one of a finite impulse response (FIR) filter and an infinite impulse response (IIR) filter. In one embodiment, an N-tap hardware digital FIR filter is used. The use of a hardware FIR filter may reduce power consumption by reducing and/or eliminating software digital filtering.

[0019] In one embodiment, the filter 120 includes multiple filters, and a determination of which filters to apply to the measurement data is made based upon an operating mode of the electronic device 100. In one embodiment, the selection of which filters to use is determined by the type of user activity detected. For example, a low pass filter may be used to remove high frequency noise that would interfere with step counting when a user is walking. In contrast, a high pass filter may be used when quick motions are to be monitored.

[0020] Filtered measurement data may be passed on to the dominant axis logic 127 and the step counting logic 130. In one embodiment, the dominant axis logic 127 includes a cadence logic 132, a rolling average logic 135, and a dominant axis setting logic 140. In an alternative embodiment, more or fewer logics may be used to determine a dominant axis. One embodiment of implementing dominant axis assignment may be found in co-pending application U.S. Serial No. XXX, which is

incorporated herein by reference. Alternative means of identifying a dominant axis may be used in other embodiments.

[0021] In one embodiment, the dominant axis logic 127 is used to determine an orientation of the electronic device 100 and/or an inertial sensor within the electronic device 100. In alternative embodiments, other logics may be used to determine an orientation of the electronic device 100.

[0022] Referring to **Figure 1**, the cadence logic 132 may determine one or more sample periods to be used by the rolling average logic 135, and may determine a cadence window 150 to be used by the step counting logic 130. In one embodiment, the cadence logic 135 detects a period and/or cadence of a motion cycle. The period and/or cadence of the motion cycle may be based upon user activity (e.g. rollerblading, biking, running, walking, etc).

[0023] Many types of motions that are useful to keep track of have a periodic set of movements. Specific periodic human motions may be characteristic of different types of user activity. For example, to walk, an individual must lift a first leg, move it forward, plant it, then repeat the same series of motions with a second leg. In contrast, a person rollerblading performs a repeated sequence of pushing, coasting and liftoff for each leg. For a particular individual, the series of walking motions will usually occur in about the same amount of time, and the series of rollerblading motions will usually occur in the same amount of time. The repeated set of motions can be considered a unit, and defines the motion cycle. The amount of time that it takes to complete one motion cycle defines the motion cycle's period, and the number of motion cycles that occur in a given unit of time define the motion cycle's cadence. For simplicity, the term "step" is used in this application to describe the user activity being evaluated. However,

in the context of this application, the term "step" should be taken to mean any user activity having a periodic set of repeated movements.

[0024] **Figure 2** illustrates an exemplary motion cycle graph 201 that measures time versus acceleration, in accordance with one embodiment of the present invention. The exemplary motion-cycle graph 201 shows acceleration data taken with a single tri-axis inertial sensor. The acceleration at a given period of time is represented for a first axis 203, a second axis 205, and a third axis 207. In one embodiment, the cadence logic 135 of **Figure 1** analyzes the acceleration along the first axis 203, second axis 205 and third axis 207 to detect a motion cycle. Once a motion cycle is detected, a period of the motion cycle is determined, and a cadence of the motion cycle is determined. **Figure 2** shows an exemplary period of a motion cycle 210 for the third axis 207, the period being approximately 0.6 seconds. The same period can also be seen to a lesser degree in the second axis 205 and the first axis 203. The corresponding cadence to the motion cycle is approximately one hundred motion cycles per minute.

[0025] In one embodiment, once a stepping period (or other motion cycle period) is determined, that period may be used to set the cadence window (the allowable time window for steps to occur). In one embodiment, the period is updated after each step. The current stepping period may be a rolling average of the stepping periods over previous steps, as discussed in more detail with reference to the rolling average logic 135 of **Figure 1**.

[0026] A cadence window may be used to facilitate accurate measurement of a step, or other periodic human motion. A cadence window is a window of time since a last step was counted that is looked at to detect a new step. A cadence window may be

set based on the period and/or cadence of the actual motion cycle (e.g., a stepping period), on set limits, and/or on other determiners.

[0027] Referring to **Figure 2**, an exemplary first cadence window 240 and second cadence window 255 are shown. The first cadence window 240 may be defined by a first cadence window minimum 230 and a first cadence window maximum 235. The second cadence window 255 may be defined by a second cadence window minimum 245 and a second cadence window maximum 250. In one embodiment, the cadence window minimums 230 and 245 and cadence window maximums 235 and 250 are determined by measuring lengths of time since the most recent step was counted. In one embodiment, this length of time is measured via the timer 170 of **Figure 1**. In other embodiments, other variables may be used to set the cadence window. For example, cadence windows may be determined by measuring cumulative amounts of acceleration that have been measured since the previous step was counted.

[0028] Returning to **Figure 2**, cadence windows may be used to count steps until an expected step is not encountered. In one embodiment, new cadence windows are determined periodically. In one embodiment, the cadence window is a dynamic cadence window that continuously updates as a user's cadence changes. For example, using a dynamic cadence window, a new cadence window length may be set after each step. (. The cadence window minimums may be determined by subtracting a value from the stepping period, and the cadence window maximums may be determined by adding a value to the stepping period. In one embodiment, the cadence window maximums are preset, and the cadence window minimums are updated after each step is counted. In one embodiment, the cadence window minimums are preset, and the cadence window maximums are updated after each step is counted. In one

embodiment, both the cadence window minimums and cadence window maximums are updated when a step is counted. In one embodiment, the current cadence window minimum is determined by subtracting 200 ms from the current stepping cadence period. In one embodiment, the cadence window minimum has a minimum value of 240 ms.

[0029] In the illustrated embodiment of **Figure 2**, a first step 217 is counted at 0.65 seconds, and a second step 232 is counted at approximately 1.15 seconds. The first cadence window 240 opens at approximately 0.4 seconds from the first step 217, and closes at approximately 0.8 seconds from the first step 217. As shown, the second step 232 falls within the first dynamic cadence window 240. A third step 233 falls within the second dynamic cadence window 255, which may have a second cadence window minimum 245 and second cadence window maximum 250 that are different from the first cadence window minimum 230 and first cadence window maximum 235. The illustrated second cadence window minimum is about 0.35 seconds from the second step 232, and the second cadence window maximum 250 is about 0.75 seconds from the second step 232. Other cadence window minimums and maximums are also possible. When motion criteria (e.g., threshold conditions) are met within a cadence window, a step is detected, whereas when motion criteria are met outside of the cadence windows no step is detected.

[0030] If no previous steps have been detected, there is no cadence minimum, and a step may be detected at any time that motion criteria are met. If fewer than the required number of steps to determine a dynamic cadence window have been detected, then the cadence window may have a default minimum and maximum value. In one embodiment, the cadence window has a default minimum of around 325 ms and

a default maximum of around 1000 ms. Once enough steps have been detected to determine a dynamic stepping cadence or period, the cadence window may be set to the determined stepping period plus or minus an error factor. In one embodiment, a count of between about two to about ten periodic human motions is sufficient to set a dynamic cadence window.

[0031] The cadence of any periodic human motion will generally not change more than a certain amount in a given time period. In one embodiment, the cadence window may be sufficiently wide to continue counting periodic human motions even when a stepping cadence changes. In one embodiment, the cadence window is narrower, and steps may not be counted when a stepping cadence changes. So as not to miss steps, once a new stepping cadence is detected, previous measurements may be examined to determine whether they register as steps under the new stepping cadence and a new cadence window. Therefore, steps may be counted even if they did not occur in the original cadence window. The cadence window may update dynamically to a user's actual cadence. Human cadences change within a known window of rates, and so steps can be differentiated from other noise. This may ameliorate and/or eliminate missed step counts due to changes in cadence.

[0032] In one embodiment, when steps repeatedly occur at a time different from the current stepping period, a new stepping period and a new cadence window are set. For example, when the stepping period is 0.7 seconds, and a step occurs about every 0.6 seconds enough times in a row, then the stepping period is changed to 0.6 seconds and a new cadence window is set based on the changed stepping period.

[0033] Returning to **Figure 1**, once the stepping period is detected, the cadence logic 132 may set one or more sample periods for the rolling average logic 135

to use based upon the stepping period. In one embodiment, the sample period(s) are set such that at least one sample period is approximately the length of, or longer than, the stepping period. In one embodiment, a sample period is set such that it is a multiple of the stepping period.

[0034] The rolling average logic 135 creates one or more rolling averages of accelerations as measured by the inertial sensor(s) over the sample period(s) set by the cadence logic 132. The rolling averages of accelerations may be used for determining an orientation of the electronic device, for determining thresholds to compare acceleration measurements against, and/or for other purposes. In one embodiment, the rolling average logic 135 creates a rolling average of accelerations for determining an orientation of the electronic device 100, the rolling average having a period that is at least the stepping period. In one embodiment, the rolling average logic creates a rolling average of accelerations for determining a lower threshold to compare acceleration measurements against, the rolling average having a sample period that is at least twice the stepping period.

[0035] The rolling average logic 135 may create one or more rolling averages of data other than accelerations. In one embodiment, the rolling average logic 135 creates a rolling average of stepping periods, where the rolling average is the rolling average time between steps. In one embodiment, the rolling average of stepping periods is calculated over the past four counted steps. The rolling average of the stepping periods may be used by the cadence logic 132 to determine a cadence window and a current stepping cadence.

[0036] In one embodiment, rolling averages may be maintained in registries that keep track of rolling average values and the number of samples that were used to

calculate current rolling average values. When a new measurement is taken, it can be incorporated into the previous rolling average value, and the registry can then be updated with a new rolling average value. Alternatively, the rolling averages may be maintained by buffering the measurements used to calculate the rolling averages. As the buffers fill, oldest measurement data can be discarded and replaced by new measurement data. The measurements in the buffer can be averaged after each measurement to determine a new rolling average.

[0037] In one embodiment, the dominant axis setting logic 140 determines an orientation of the electronic device 100 and/or the inertial sensor(s) within the electronic device 100. The orientation may be determined based upon the rolling averages of accelerations created by the rolling average logic 135. In one embodiment, once the orientation is determined, a dominant axis is assigned based upon the orientation. Determining an orientation of the electronic device 100 may include identifying a gravitational influence. The axis with the largest absolute rolling average may be the axis most influenced by gravity, which may change over time (e.g. as the electronic device is rotated). Therefore, a new dominant axis may be assigned when the orientation of the electronic device 100 and/or the inertial sensor(s) attached to or embedded in the electronic device 100 changes.

[0038] In one embodiment, the actual axis with the largest absolute rolling average over the sample period is assigned as the dominant axis. In alternative embodiments, the dominant axis does not correspond to one of the actual axes of the inertial sensor(s) in a current orientation, but rather to an axis that is defined as approximately aligned to gravity. In one embodiment, the dominant axis corresponds to a virtual axis that is a component of a virtual coordinate system. In one embodiment,

the dominant axis setting logic 140 assigns the dominant axis by performing a true gravity assessment, such as by doing trigonometric calculations on the actual axes based on the gravitational influence. In one embodiment, the dominant axis setting logic 140 assigns the dominant axis by comparing the gravitational influence to a data structure such as a lookup table, associative array, hash table, adjacency matrix, etc.

[0039] Returning to **Figure 1**, the step counting logic 130 may include a measurement selection logic 145, a cadence window 150, a measurement comparator 155, a threshold comparator 160, a step count buffer 165, and a mode logic 190. The measurement selection logic 145 may determine which measurements from the measurement buffer 125 to use to determine if a step has occurred. In one embodiment, the measurement selection logic 145 may monitor accelerations relative to the dominant axis, and select only those measurements with specific relations to the dominant axis for measurement. For example, only accelerations that are approximately parallel to the dominant axis may be selected, or alternatively, only accelerations that are approximately perpendicular to the dominant axis may be selected. In one embodiment, the measurement selection logic 145 selects only measurements of acceleration data along the dominant axis. In alternative embodiments, measurements of acceleration data along other axes may also be used. In one embodiment, measurements of acceleration along only the other axes are used.

[0040] Selected measurements may be forwarded to the measurement comparator 155 and the threshold comparator 160 to determine whether a step has occurred. The measurement comparator 155 may compare a current measurement to previous measurements. Based on this comparison, a current measurement may

qualify as a step if it has met certain comparison criteria, as discussed in more detail with reference to **Figure 8**.

[0041] In one embodiment, a motion cycle graph is maintained, and the current measurement is compared to the motion cycle graph. If the motion cycle graph indicates that the current measurement in relation to preceding measurements fits the profile of a step, then a step may be counted. Otherwise a step may not be counted.

[0042] Returning to **Figure 1**, the threshold comparator 160 disqualifies measurements from being counted as steps for failure to meet certain thresholds. In one embodiment, measurements must be larger than a lower threshold to qualify as a step. In one embodiment, the threshold comparator 160 compares measurements to an upper threshold. In one embodiment, only a measurement having a smaller absolute value of acceleration than the upper threshold and a higher absolute value than the lower threshold is counted as a step. The upper threshold and the lower threshold are discussed in more detail below with reference to **Figure 8**.

[0043] In one embodiment, the threshold comparator 160 and the measurement comparator 155 are combined into a single comparator. In one embodiment, other comparators may be used, such as a curve fitting comparator or a slope comparator.

[0044] The step count buffer 165 keeps track of probable steps. The exact behavior of the step count buffer 165 depends on which operating mode the electronic device 100 is in. In one embodiment, the operating mode that the electronic device is in is determined by the mode logic 190. In the illustrated embodiment, the mode logic 190 is a component of the step counting logic 130. In an alternative embodiment, the mode logic 190 is a separate logic from the step counting logic 130. In one

embodiment, operating modes include a non-active mode, in which periodic human motions are buffered, and an active mode, in which periodic human motions are counted. In one embodiment, operating modes include a sleep mode, a step counting mode, an entry mode, and an exit mode. Operating modes are discussed in greater detail below in reference to **Figure 3**.

[0045] Returning to **Figure 1**, when the threshold comparator 160 and measurement comparator 155 both indicate that a measurement is a step, then the step count buffer 165 is incremented by one. Depending on the mode, when the step count buffer 165 reaches a certain amount, the step count buffer 165 is emptied and the final count 175 is incremented by the amount of steps that were in the step count buffer 165. The number of steps that must be counted by the step count buffer 165 before they register as actual steps may vary from one to ten or more, depending on the current operating mode. The final step count 175 keeps track of the total number of steps that have occurred. In one embodiment, this data is transmitted to a server or remote database.

[0046] **Figure 3** shows a state diagram for the behavior 300 of a system for monitoring human activity, in accordance with one embodiment of the present invention. The system may have multiple operating modes (states) that are navigated between by processing logic that may comprise hardware (e.g., circuitry, dedicated logic, programmable logic, microcode, etc.), software (such as instructions run on a processing device), or a combination thereof. In one embodiment, behavior 300 is the behavior of the electronic device 100 of **Figure 1**.

[0047] The behavior 300 may include four operating modes for monitoring human activity: a sleep mode, an entry mode, a stepping mode, and an exit mode. In

alternative embodiments, a different number of modes may be used. In one embodiment, only two modes are used: active mode and non-active mode. The active mode is entered once continuous steps within the cadence window have been identified, while the non-active mode is used for all other states. In alternative embodiments, multiple inactive modes and/or active modes are used. To navigate between modes, certain conditions must be met. The conditions may include exit conditions for terminating an active mode and entry conditions for initiating inactive modes. Each mode may have different exit and entry conditions.

[0048] Use of different conditions for different operating modes increases the reliability of the device that is monitoring the human activity. For example, once an object (e.g., a person) is moving, they are more likely to remain moving than to stop. Likewise, if a person is not moving, they are more likely not to move than to begin moving. These principles can be applied by requiring more stringent conditions to be met for a device to initiate a walking (stepping) mode than to continue the walking mode. The different modes may each have rules that reflect what is more likely to happen for subsequent measurements. This may reduce or eliminate the number of uncoun ted steps and/or false step counts.

[0049] Referring to **Figure 3**, modes 300 in one embodiment include a sleep mode 305, an entry mode 315, a stepping mode 325, and an exit mode 335. In one embodiment, the power level of the system or device is linked to these modes.

[0050] The first mode initiated is the sleep mode 305. When no activity (acceleration) is detected, the system remains in sleep mode 305. When acceleration is detected, an entry mode 315 is initiated.

[0051] Once in entry mode 315, acceleration may be monitored to detect steps. When N steps are detected in appropriate cadence windows, a stepping mode 325 is initiated. If N steps are not detected within a period of time, sleep mode is reinitiated. In one embodiment, sleep mode is only initiated if no motion is detected.

[0052] Once in stepping mode 325, acceleration data is monitored to count steps according to a predefined set of rules or motion criteria. According to one of these criteria, steps are expected to occur within a set interval (e.g., within a cadence window). When a step is counted within the set interval, then the stepping mode 325 is continued. When a step is not detected within the set interval, an expected step has not occurred, and an exit mode 335 is initiated.

[0053] In exit mode 335, processing logic determines whether a predetermined number of steps (X) are detected at a particular cadence. The predetermined number of steps X may be the same as, or different from, the number of steps N. When X steps are detected in a cadence, stepping mode 325 is reinitiated. When X steps are not detected within a period of time, entry mode 315 is reinitiated.

[0054] **Figure 4** illustrates a flow diagram for a method 400 of operating an electronic device in sleep mode, in accordance with one embodiment of the present invention. In one embodiment, method 400 corresponds to the sleep mode 305 of **Figure 3**. In one embodiment, the method 400 may begin when no relevant acceleration has been detected for a predetermined time interval, or when no steps have been detected for a predetermined time interval. In one embodiment, when no acceleration above a threshold value is detected for a set period of time, the sleep function is initiated. In another embodiment, when a motion signature indicative of an activity that does not need to be monitored is detected, the sleep function is initiated.

For example, when the motion signature of driving is detected, the sleep function may be initiated. The time period that elapses before the sleep mode is initiated may be a fixed value, or it may be adjusted automatically by processing logic or based on user input (e.g. in response to a user selection of desired battery longevity verses desired performance, or based on the last measured cadence window).

[0055] Referring to **Figure 4**, method 400 begins with setting a sleep mode sampling rate (block 405). In one embodiment, a low sampling rate is set. This reduces power consumption and prolongs battery life. In one embodiment, the sleep mode sampling rate is a fixed value. In alternative embodiments, the sleep mode sampling rate can be modified automatically by processing logic based on certain criteria such as time of day, user behavior patterns, etc., or based on user input.

[0056] In one embodiment, a sampling function is periodically executed in sleep mode, wherein the sampling function samples acceleration data at a set sampling rate for a set time period. For example, the sampling function may be executed every ten seconds for a duration of one second, and a sampling rate of fifty measurements per second may be set for that one second of operation. In one embodiment, the sampling function repeats at a relatively slow rate (e.g., once every 10 seconds), and the sampling rate within the sampling function is relatively high (e.g., 50 Hz). The sampling function may be used to detect unwanted motion signatures, or to maintain a device in low power sleep mode, for example, while a user is driving in a car. .

[0057] In one embodiment, the sleep mode sampling rate is set to zero. The sleep mode may be set to zero, for example, when an inertial sensor has 'inertial wakeup' functionality. Inertial wakeup functionality enables processing logic to switch from sleep mode to entry mode when an acceleration exceeding a set threshold is

detected. The inertial wakeup may be used to simultaneously exit sleep mode and power-up additional functionality.

[0058] At block 410, measurements of acceleration data are taken. At block 415, processing logic determines whether or not relevant acceleration is detected. Relevant acceleration includes acceleration that meets certain relevancy criteria. In one embodiment, the relevancy criteria include a lower threshold and an upper threshold. In alternative embodiments, other relevancy criteria may also be used, such as a requirement that acceleration be continuously measured for a preset time period.

[0059] When no relevant acceleration is detected, or when the 'inertial wakeup' pin has not triggered (for inertial sensors having 'inertial wakeup functionality'), sleep mode continues, and further measurements of acceleration data are taken at the set sleep mode sampling rate (block 410). When acceleration is detected, sleep mode is terminated and entry mode is initiated (block 420). In one embodiment, the acceleration that is detected and its rate of change must meet certain criteria to terminate sleep mode.

[0060] **Figure 5** illustrates a flow diagram for a method 500 of operating an electronic device in entry mode, in accordance with one embodiment of the present invention. In one embodiment, method 500 corresponds to the entry mode 315 of **Figure 3**. The entry mode may be initiated when a user first begins an activity in which steps may be detected. In one embodiment, the method 500 begins when any relevant acceleration is detected. In one embodiment, entry mode is initiated when a measurement of acceleration that meets certain criteria has been detected. In one embodiment, method 500 is initiated when a sleep mode is terminated.

[0061] Referring to **Figure 5**, method 500 begins by setting the sampling rate to a stepping sampling rate (block 504). The stepping sampling rate is set to facilitate accurate measurements of steps, and may be a fixed or a dynamically variable rate. A variable sampling rate may automatically adjust depending on a period of a detected stepping cadence, may be user adjusted, may adjust based on applications being run by processing logic, or by other means. The stepping sampling rate may be set to anywhere between about 10 and about 200 Hz. In one embodiment, the stepping sampling rate is set to about 15 to 40 Hz.

[0062] At block 510, a first step is recognized. Since no previous steps have been measured, and there is no cadence window, the first step may be recognized at any time. Once a first step is recognized, a default cadence window is set (block 514). The default cadence window may have a minimum and maximum such that steps will be counted for most or all possible stepping cadences, whether a user is walking slowly or sprinting. In one embodiment, the default cadence window has a minimum of around 325 ms and a maximum of around 1000 ms.

[0063] In one embodiment, an initial default value is set wide enough to accommodate all users, and is then dynamically adjusted to match the specific user in question. Processing logic may 'learn' (adapt to) a particular user, and may become more accurate as steps are counted. Processing logic that has the ability to learn or adapt to different users may create an individualized profile for each user. Multiple profiles may also be created for each user, the different profiles reflecting different user activity. For example, a first profile might be created for a user's running and a second profile may be created for a user's walking. Processing logic may switch between different profiles automatically, or manually based on user input. In one embodiment,

processing logic compares a current cadence and/or motion cycle pattern to stored profiles. When a current cadence or motion cycle pattern matches that of a stored profile, that profile is activated.

[0064] At block 520, a buffered step count is set to one. At block 524, processing logic determines whether an additional step is recognized. An additional step may be recognized if a particular measurement of acceleration meets all the necessary criteria. One embodiment of these criteria is discussed below with reference to **Figure 8**.

[0065] Returning to **Figure 5**, if an additional step is recognized, method 500 continues to block 560. If no additional steps are recognized, then processing logic determines whether the time is still within the cadence window (block 530). If there is still time within the cadence window, the process returns to block 524. If the cadence window has closed, then the buffered step count is reset to zero (block 534). The process then continues to block 540.

[0066] At block 540, processing logic determines whether any relevant acceleration is detected. If no relevant acceleration is detected, then sleep mode is initiated (block 544). If some relevant acceleration is detected, then processing logic returns to block 510 to await recognition of another first step. If at block 540 an additional step was recognized, the process continues to block 560.

[0067] At block 560, an additional step is added to the buffered step count. Processing logic then checks whether there are M counts in the buffered step count (block 564). In one embodiment, M is an integer value between about 4 and 10. If there are not at least M steps in the buffered step count, then the process returns to block 524.

[0068] If the buffered step count is equal to or greater than M, then the processing logic checks whether the cadence window is set to the default (block 570). If the cadence window is still set to the default, then a new cadence window is set (block 574) based on a stepping cadence of the M steps measured. The process then returns to block 524. If the cadence window is not set to the default, then processing logic continues to block 580. In an alternative embodiment, once there are M steps in the buffered step count, the cadence window may be adjusted for each additional step that is recognized.

[0069] At block 580, processing logic checks whether there are N steps in the buffered step count (block 580), where N may be an integer value greater than M. When there are not yet N steps in the buffered step count, the process returns to block 524 to continue in entry mode. When the number of steps in the buffered step count reaches N, the buffered steps are added to an actual or final step count, and a stepping mode is entered into (block 584).

[0070] **Figure 6** illustrates a flow diagram for a method 600 of operating an electronic device in stepping mode, in accordance with one embodiment of the present invention. In one embodiment, method 600 corresponds to the stepping mode 325 of **Figure 3**. The stepping mode may be initiated when a user has been walking long enough for a buffered step count to fill. In one embodiment, method 600 is initiated when an entry mode is terminated, and/or when an exit mode is terminated.

[0071] Referring to **Figure 6**, method 600 begins by setting a cadence window (block 610). The cadence window may be set based on previous measurement data. In one embodiment, the cadence window is set based on a rolling average of stepping periods. In one embodiment, the cadence window may be identical to the

cadence window used during entry mode. Once the cadence window is set, measurement data is checked to determine whether an additional step is recognized (block 615). If an additional step is recognized, then it is added to the final or actual step count (block 620). If no additional step is recognized, then processing logic determines whether the current measurement was taken within the cadence window (block 625). If the cadence window has not elapsed, the process returns to block 615. If the cadence window has elapsed, then an expected step was not counted, and an exit mode is initiated (block 630).

[0072] **Figure 7** illustrates a flow diagram for a method 700 of operating an electronic device in exit mode, in accordance with one embodiment of the present invention. In one embodiment, method 700 corresponds to the exit mode 335 of **Figure 3**. The exit mode may be entered into when an expected step is not identified in stepping mode.

[0073] In one embodiment, the requirement(s) for changing from exit mode to stepping mode are less strict than the requirement(s) for switching from entry mode to stepping mode. Processing logic may assume that when a user has recently taken a step, the user is most likely to take another step. Processing logic may also assume that if a user has not just taken a step, it is most likely that they will not take one. These assumptions may be implemented by imposing more stringent requirements to switch from entry mode to stepping mode than to change from exit mode to stepping mode.

[0074] An expected step may not be identified, for example, when a user stops walking, when extraneous movements such as gestures are made that interfere with the step count, or when a device orientation is changed as a step occurs. In one

embodiment, the exit mode assumes that a step has been missed, so that if the exit mode determines that a user is still walking, the originally uncounted step is not missed.

[0075] The process begins by initiating a step timer (block 705). The step timer measures the amount of time that has passed since a step has been identified. In one embodiment, the step timer is a countdown timer that terminates exit mode when the timer reaches zero. In one embodiment, the step timer starts counting when a cadence window minimum is reached, and stops counting when a cadence window maximum is reached. In an alternative embodiment, the step timer starts counting as soon as the exit mode is initiated, and stops counting when a cadence window maximum is reached. In one embodiment, the step timer starts counting at 240 ms from the time that the expected step should have occurred.

[0076] At block 710, a step is added to a buffered step count. At block 715, processing logic determines whether the buffered step count is equal to X, where X of the number of identified steps in exit mode. In one embodiment, X is between 3 and 8. If the buffered step count is equal to X, then the buffered steps are added to the actual step count and stepping mode is reinitiated (block 720). If the buffered step count is not equal to X, then processing logic proceeds to block 725.

[0077] At block 725, processing logic determines whether the step timer has timed out (allotted time has elapsed). In one embodiment, the step timer times out when no steps are counted within a cadence window. In one embodiment, the step timer times out when no steps are counted in two or more cadence windows. If the allotted time has elapsed, then the buffered step count is cleared, and entry mode is initiated (block 730). If the allotted time has not elapsed, then processing logic determines whether an additional step is recognized (block 735). If a step is

recognized, then the step timer is reset (block 705), the buffered step count is incremented by one (block 710), and on the process continues to block 715. If a step is not recognized, then processing logic returns to block 725 to determine whether the step timer has elapsed. In an alternative embodiment, the step timer is not reset when an additional step is recognized, and the buffered step count must reach X in the time initially allotted by the step timer. In that instance, the step timer is set at greater than X times the cadence window.

[0078] **Figure 8** illustrates a flow diagram for a method 800 of recognizing a step, in accordance with one embodiment of the present invention. In one embodiment, method 800 may be executed by blocks 510 and 524 of **Figure 5**, block 615 of **Figure 6** and block 735 of **Figure 7**. In one embodiment, method 800 is performed by electronic device 100 of **Figure 1**.

[0079] Referring to **Figure 8**, method 800 begins with measurements of acceleration data being taken (block 805). Measurements are taken according to a sampling rate, which may vary from about one measurement per second to many measurements a second, depending on the operating mode being used.

[0080] At processing block 810, in one embodiment measurements are filtered. Measurements can be filtered to remove high frequency data and/or low frequency data. In one embodiment, what data to filter depends on the type of user activity detected. At processing block 812, in one embodiment the inertial sensor is oriented by assigning a dominant axis. Assigning a dominant axis may include calculating rolling averages of acceleration and assigning the dominant axis based on the rolling averages of acceleration.

[0081] At block 815, processing logic determines whether a measurement is within a cadence window. If the measurement is not within a cadence window, then no step may be recognized or counted for that measurement (block 840). If the measurement is within the cadence window, the process continues to block 820.

[0082] At block 820, processing logic determines whether acceleration along the dominant axis is greater than a lower threshold. If the measurement is not greater than the lower threshold, no step may be recognized or counted for that measurement (block 840). If the measurement is greater than the lower threshold, the processing logic continues to block 825.

[0083] In one embodiment, the measurement may qualify as a step if it is the first measurement that crosses the lower threshold. In an alternative embodiment, the measurement with the greatest acceleration within a cadence window (e.g. a peak) may be counted as a step.

[0084] The lower threshold may be based on a rolling average of accelerations as determined by the rolling average logic 135 of **Figure 1**. In one embodiment, the rolling average of accelerations that is used to set the lower threshold has a sample period that is about twice the stepping period. In alternative embodiments, other sample periods are used for the rolling average.

[0085] In one embodiment, the lower threshold is set such that an absolute value of a measurement must exceed an absolute value of the rolling average to be counted as a step. Multiple lower thresholds may be set, and a current measurement may be compared to one or more of the lower thresholds depending on operating conditions. For example, a negative lower threshold may be used if acceleration is detected in a negative direction (e.g., when device is upside down), and a positive lower

threshold may be used if acceleration is detected in a positive direction (e.g., device is right-side up). In one embodiment, absolute values may be used.

[0086] In one embodiment, the measurement must exceed the rolling average by a set margin. The margin may be set automatically by processing logic, or it may vary based on the orientation of the electronic device or inertial sensor(s), user input, and/or other criteria.

[0087] In one embodiment, the lower threshold is adjusted based on an orientation of the electronic device and/or an orientation of the inertial sensor(s) within the electronic device. If an axis is closely aligned with gravity, a first threshold may be used. If no axes are closely aligned to gravity, other thresholds may be used. In one embodiment, a variable threshold is used, the variable threshold having a larger value when an axis is closely aligned to gravity, and progressively lower values as an axis most closely aligned with gravity is moved out of line with gravity. The variable threshold can be implemented using a data structure (e.g., a lookup table, hash table, adjacency matrix, etc.), comparison to a virtual axis, or by performing trigonometric calculations.

[0088] At block 825, processing logic determines whether acceleration along the dominant axis is greater than previous measurements. In one embodiment, acceleration along the dominant axis for a present measurement is compared to the previous 1 to 4 measurements.

[0089] In one embodiment, the absolute value of the present measurement is compared to the absolute value of the previous measurement or measurements. By comparing the absolute value of acceleration along the dominant axis to previous absolute value(s) of acceleration, processing logic may determine whether the

acceleration of a user is moving away from the influence of gravity (e.g. whether a person is lifting a foot from the ground rather than planting it on the ground). In one embodiment, a measurement qualifies as a step when it reflects that the acceleration of a user is moving away from gravity. Alternatively, a current measurement may qualify as a step if it has an absolute value that is less than absolute values of the previous measurements, indicating that the acceleration of a user is moving towards gravity.

[0090] If the absolute value of the current measurement is not greater than the absolute values of the measurements compared to, then no step may be recognized or counted for that measurement (block 840). If the absolute value of the measurement is greater than the absolute values of previous measurements, then the process continues to block 830.

[0091] At block 830, processing logic determines whether acceleration for a particular measurement is lower than an upper threshold. In one embodiment, only acceleration along the dominant axis is compared to the upper threshold. In one embodiment, accelerations along all axes are compared to the upper threshold. If the current measurement is not lower than the upper threshold, then no step may be recognized or counted for that measurement (block 840). If the measurement is lower than the upper threshold, then a step may be counted (block 835). The upper threshold may be set to prevent sudden accelerations such as taps from being counted as steps.

[0092] Blocks 815, 820, 825 and 830 show four criteria that may be used to accurately determine whether user has walked or run one step. These criteria may be dynamic motion criteria that are updated continuously as current conditions change (e.g., as an inertial sensor changes orientation, as a user changes cadence, etc.).

Alternatively, these criteria may be static criteria that are preset, or criteria that may be changed through user input.

[0093] As noted above, though embodiments of the present invention are described in reference to steps, the present invention equally applies to other periodic human motions. Other criteria may also be used in addition to, or in place of, those listed above. These criteria may reduce or eliminate the number of false steps counted and/or the number of missed steps. Examples of other criteria include specific rates of change in acceleration between measurements, specific shapes and/or sharpness of acceleration peaks for motion cycles, particular amplitudes of periodic human motions, etc. These and other criteria may be applied to embodiments of the present invention.

[0094] **Figure 9** illustrates a flow diagram for one embodiment of a method 900 of orienting an inertial sensor. In one embodiment, the method 900 is executed by block 812 of **Figure 8**.

[0095] Referring to **Figure 9**, method 900 begins with detecting a stepping period (block 910). In one embodiment, the method 900 may begin by detecting a stepping cadence. At block 915, rolling averages of accelerations are created. The rolling averages of accelerations may be created based on the stepping period (or stepping cadence). In one embodiment, multiple rolling averages of accelerations are created.

[0096] At block 920, a dominant axis is assigned. In one embodiment, the dominant axis is assigned after identifying a gravitational influence. The gravitational influence may be identified by calculating total acceleration based upon the acceleration on each axis. In one embodiment, the percentage of the total acceleration

can then be assigned to each axis and an approximate device orientation can be determined.

[0097] In the foregoing description, numerous specific details have been set forth such as examples of specific systems, languages, components, etc. in order to provide a thorough understanding of the present invention. It will be apparent, however, to one skilled in the art that these specific details need not be employed to practice the present invention. In other instances, well known materials or methods have not been described in detail in order to avoid unnecessarily obscuring the present invention.

[0098] The present invention may be performed by hardware components or may be embodied in machine-executable instructions, which may be used to cause a general-purpose or special-purpose processor programmed with the instructions to perform the method described above. Alternatively, the method may be performed by a combination of hardware and software.

[0099] The present invention may be provided as a computer program product, or software, that may include a machine-readable medium having stored thereon instructions, which may be used to program a computer system (or other electronic devices) to perform a process according to the present invention. The machine-readable medium may include, but is not limited to, floppy diskettes, optical disks, CD-ROMs, and magneto-optical disks, ROMs, RAMs, EPROMs, EEPROMs, magnetic or optical cards, flash memory, or other type of media or machine-readable mediums suitable for storing electronic instructions.

[00100] In the foregoing specification, the invention has been described with reference to specific exemplary embodiments thereof. It will, however, be evident that

various modifications and changes may be made thereto without departing from the broader spirit and scope of the invention as set forth in the appended claims. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

CLAIMS

What is claimed is:

1. A method of monitoring human activity using an inertial sensor, comprising:
continuously determining an orientation of the inertial sensor;
assigning a dominant axis;
updating the dominant axis as the orientation of the inertial sensor changes; and
counting periodic human motions by monitoring accelerations relative to the dominant axis.
2. The method of claim 1, further comprising:
using acceleration measurements along only the dominant axis to count steps.
3. The method of claim 1, further comprising:
maintaining a cadence window, wherein the cadence window is continuously updated as an actual cadence changes; and
counting a periodic human motion when an acceleration measurement that meets motion criteria is within the cadence window.
4. The method of claim 3, wherein at least one of the motion criteria is a dynamic motion criterion, the dynamic motion criterion being continuously updated to reflect current conditions.

5. The method of claim 4, wherein the dynamic motion criteria includes at least a lower threshold, wherein the lower threshold is adjusted based on at least one of a rolling average of accelerations and the orientation of the inertial sensor.

6. A method of monitoring human activity using an inertial sensor, comprising:
running a device that includes the inertial sensor in a non-active mode, in which periodic human motions are buffered;
switching the device from the non-active mode to an active mode, after identifying a number of periodic human motions within appropriate cadence windows;
and
during the active mode, counting each of the periodic human motions to enable the monitoring of human activity.

7. The method of claim 6, wherein running the device in a non-active mode comprises running the device in one of an exit mode and an entry mode.

8. The method of claim 7, wherein:
a requirement for switching the device from the exit mode to the active mode is lower than a requirement for switching the device from the entry mode to the active mode.

9. The method of claim 6, further comprising:

switching the device from the active mode to the non-active mode when a number of expected periodic human motions are not identified in the appropriate cadence windows.

10. The method of claim 6, further comprising:

switching from a sleep mode to the non-active mode of operation when an acceleration is detected.

11. An inertial sensor based device, comprising:

a dominant axis logic, to continuously determine an orientation of a device, to assign a dominant axis, and to update the dominant axis as the orientation of the device changes; and

a counting logic to count periodic human motions by monitoring accelerations relative to the dominant axis.

12. The device of claim 11, wherein:

The counting logic uses acceleration measurements along only the dominant axis to count steps.

13. The device of claim 11, further comprising:

a cadence logic to continuously update a dynamic cadence window; and
the counting logic to count a periodic human motion when an acceleration measurement that meets motion criteria is taken within the cadence window.

14. The device of claim 11, further comprising:

a comparator, to compare measurements of acceleration to dynamic motion criteria, the dynamic motion criteria being continuously updated to reflect current conditions; and

the counting logic to count a periodic human motion when the measurements of acceleration satisfy the dynamic motion criteria.

15. A device including an inertial sensor, comprising:

a counting logic, to identify and count periodic human motions;

a mode logic, to switch the device from a non-active mode to an active mode after a number of periodic human motions are detected within appropriate cadence windows by the counting logic; and

a buffer, to buffer periodic human motions when the device is in the non-active mode.

16. The device of claim 15, wherein the non-active mode comprises one of an exit mode and an entry mode.

17. The device of claim 16, wherein:

a requirement for the mode logic to switch the device from the exit mode to the active mode is lower than a requirement for the mode logic to switch the device from the entry mode to the active mode.

18. The device of claim 15, wherein:

the mode logic to switch the device from the active mode to the non-active mode when a number of expected periodic human motions are not identified in the appropriate cadence windows.

19. The device of claim 15, further comprising:

a cadence logic, to set the appropriate cadence windows.

20. The device of claim 19, wherein the cadence logic adjusts the cadence windows based on a measured cadence associated with the periodic human motion.

ABSTRACT

A method for monitoring human activity using an inertial sensor includes continuously determining an orientation of the inertial sensor, assigning a dominant axis, updating the dominant axis as the orientation of the inertial sensor changes, and counting periodic human motions by monitoring accelerations relative to the dominant axis.

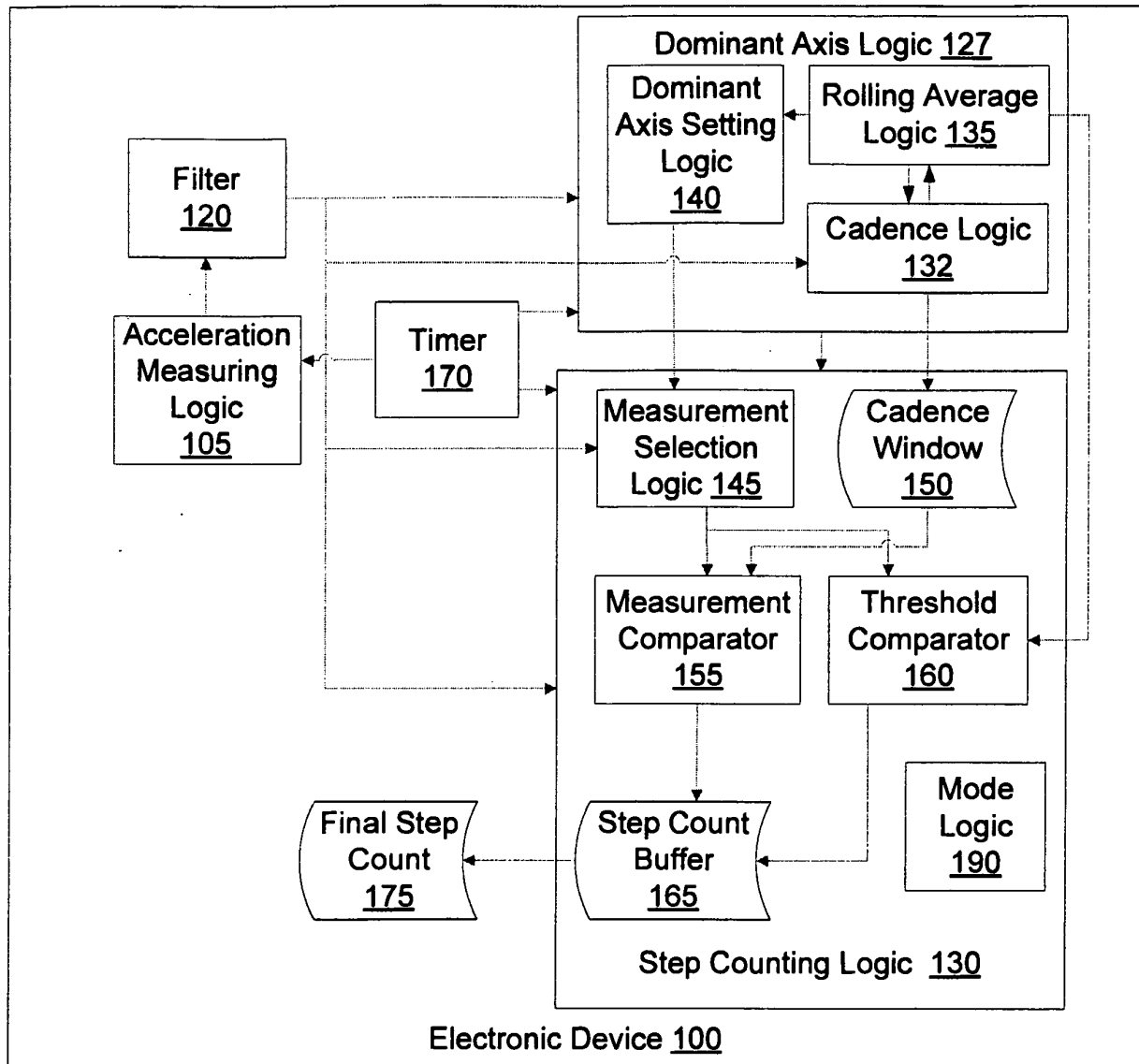


Figure 1

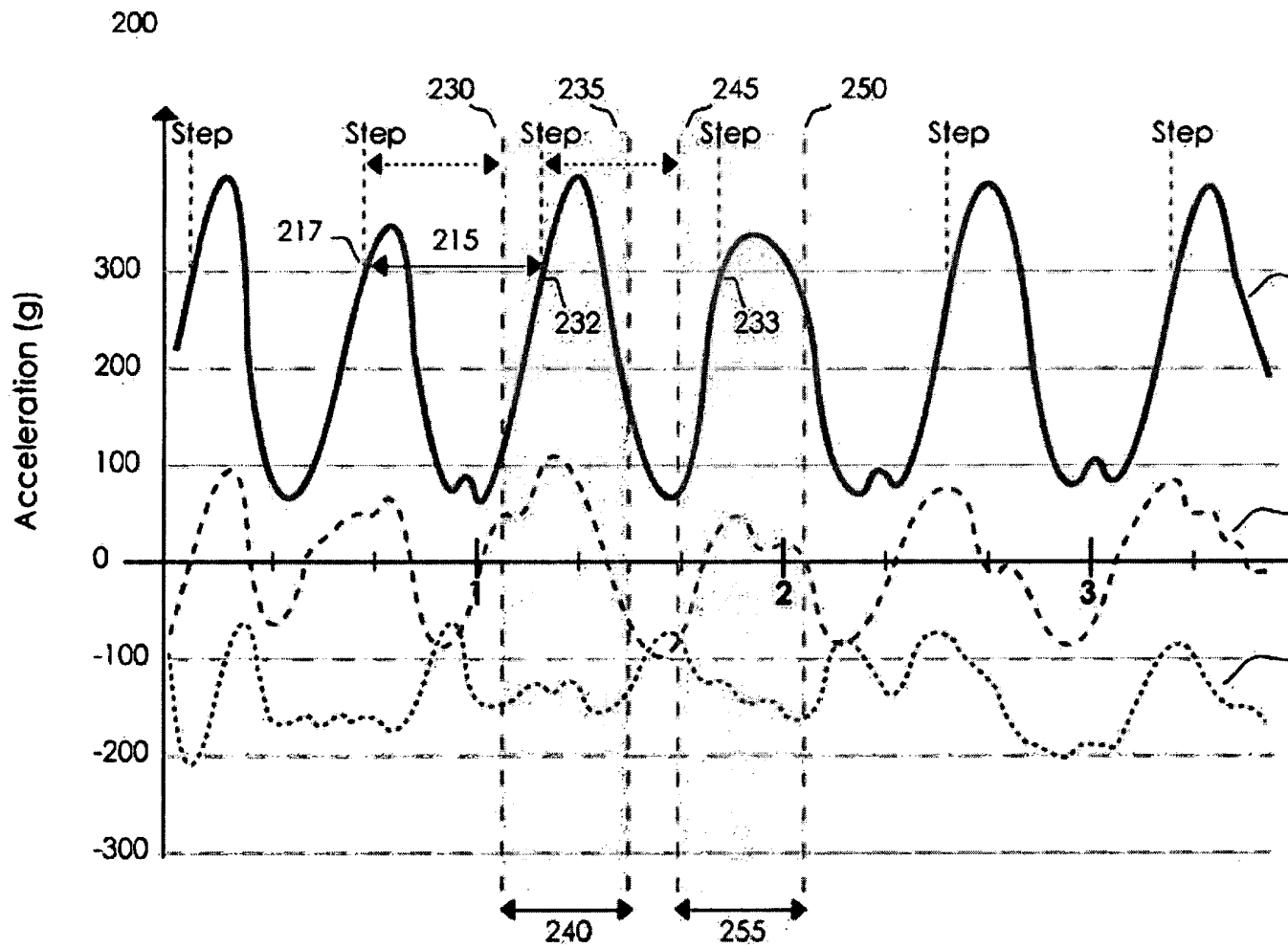


Figure 2

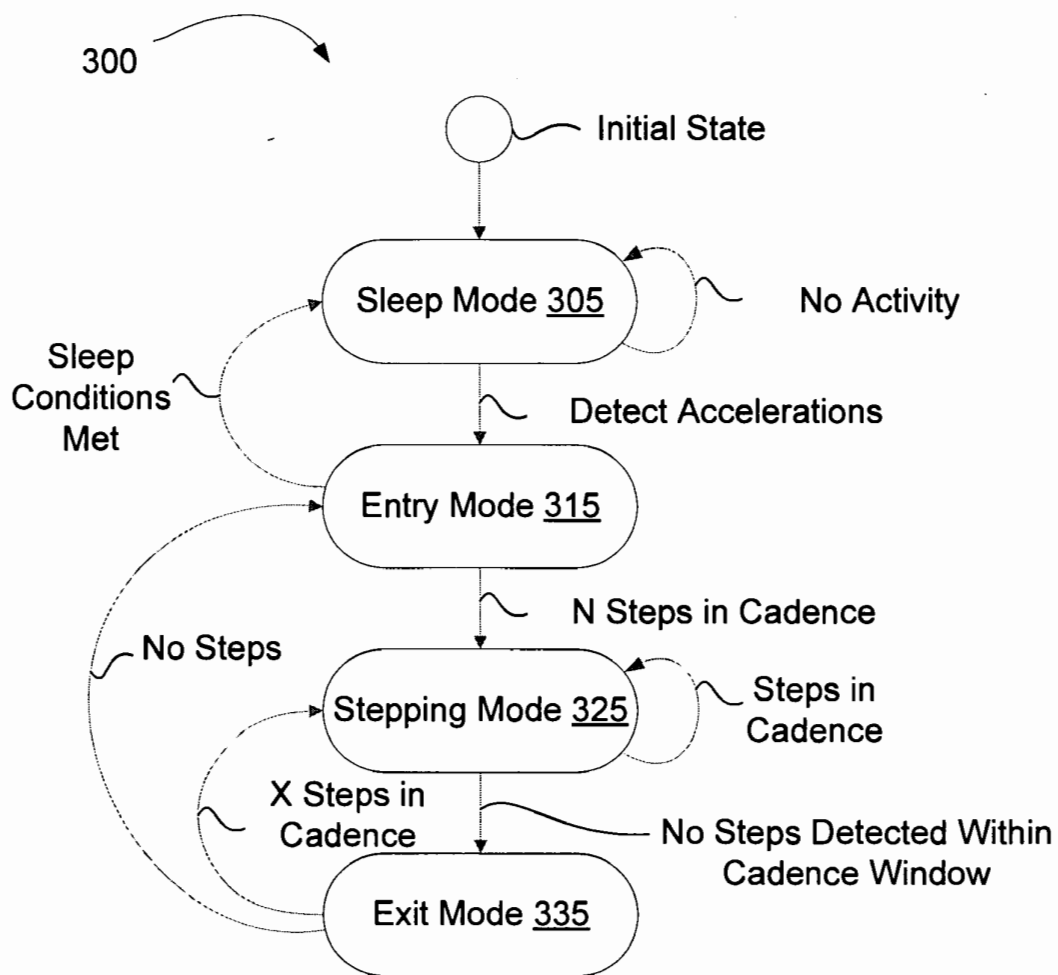


Figure 3

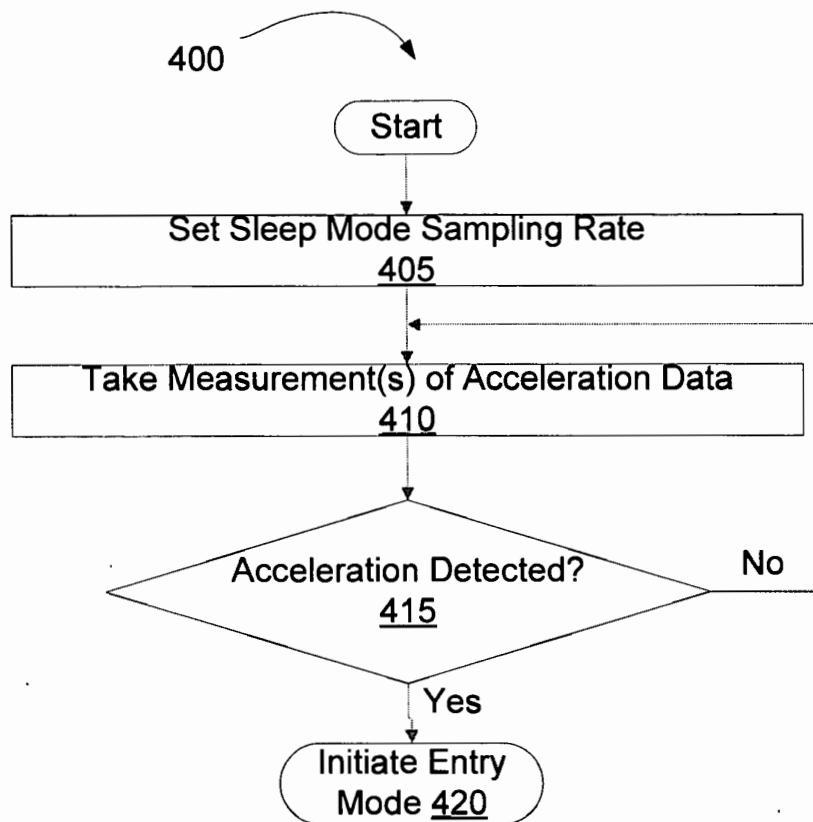


Figure 4

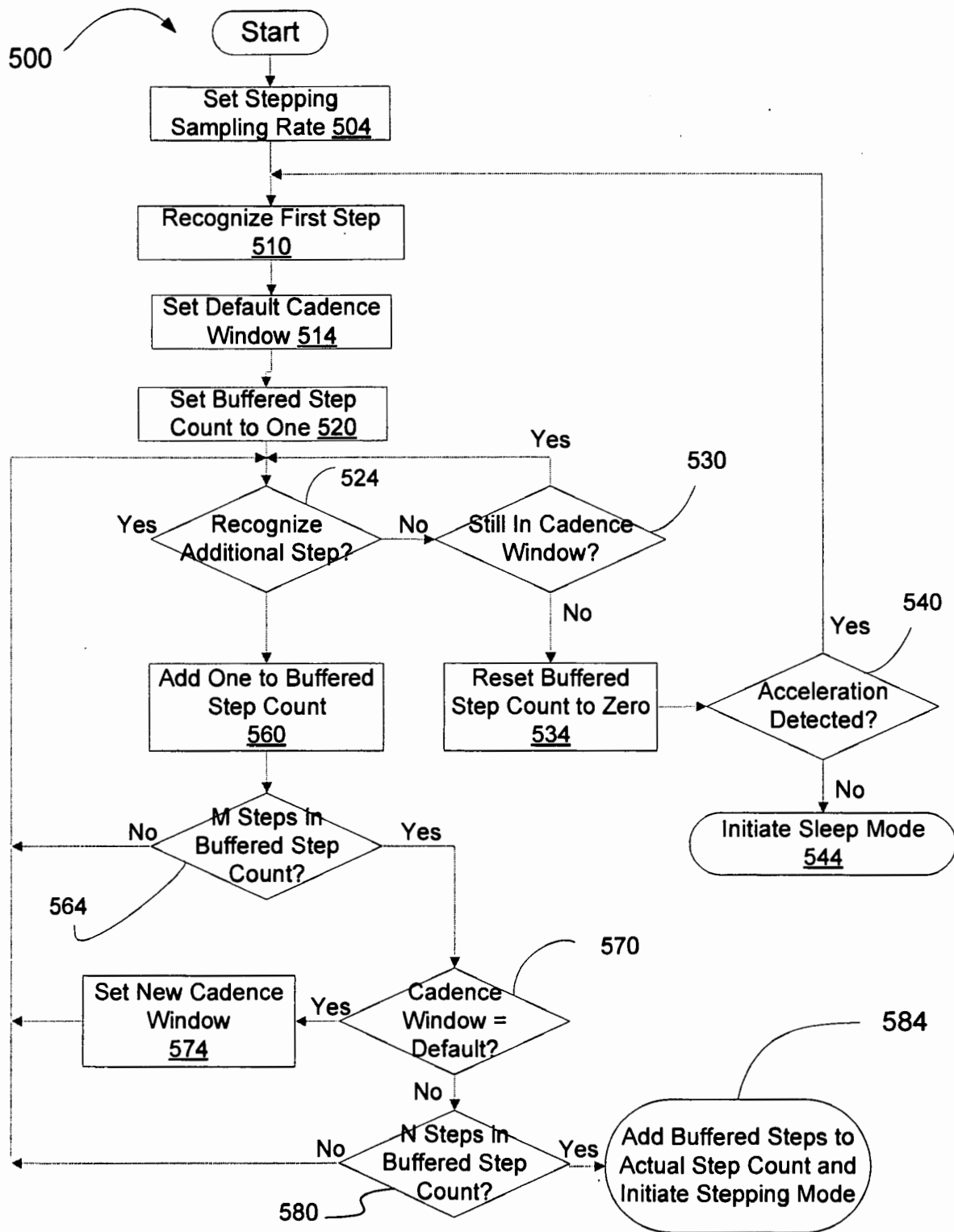


Figure 5

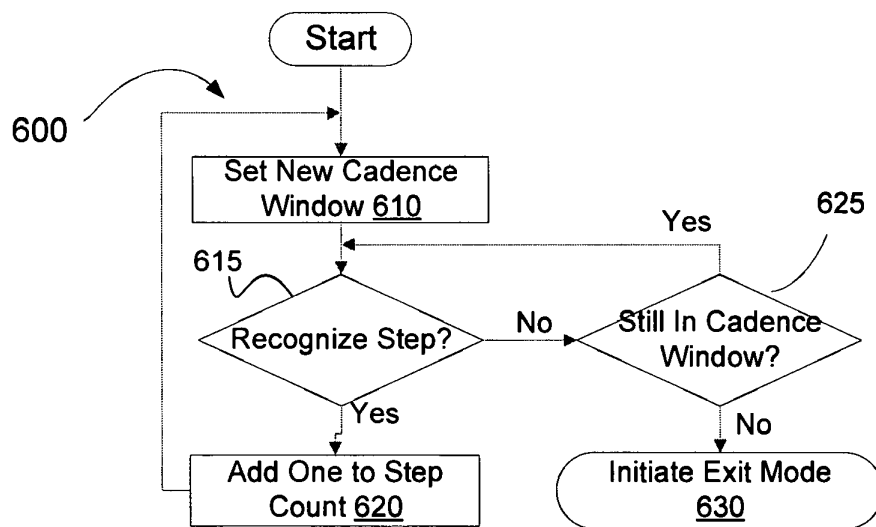


Figure 6

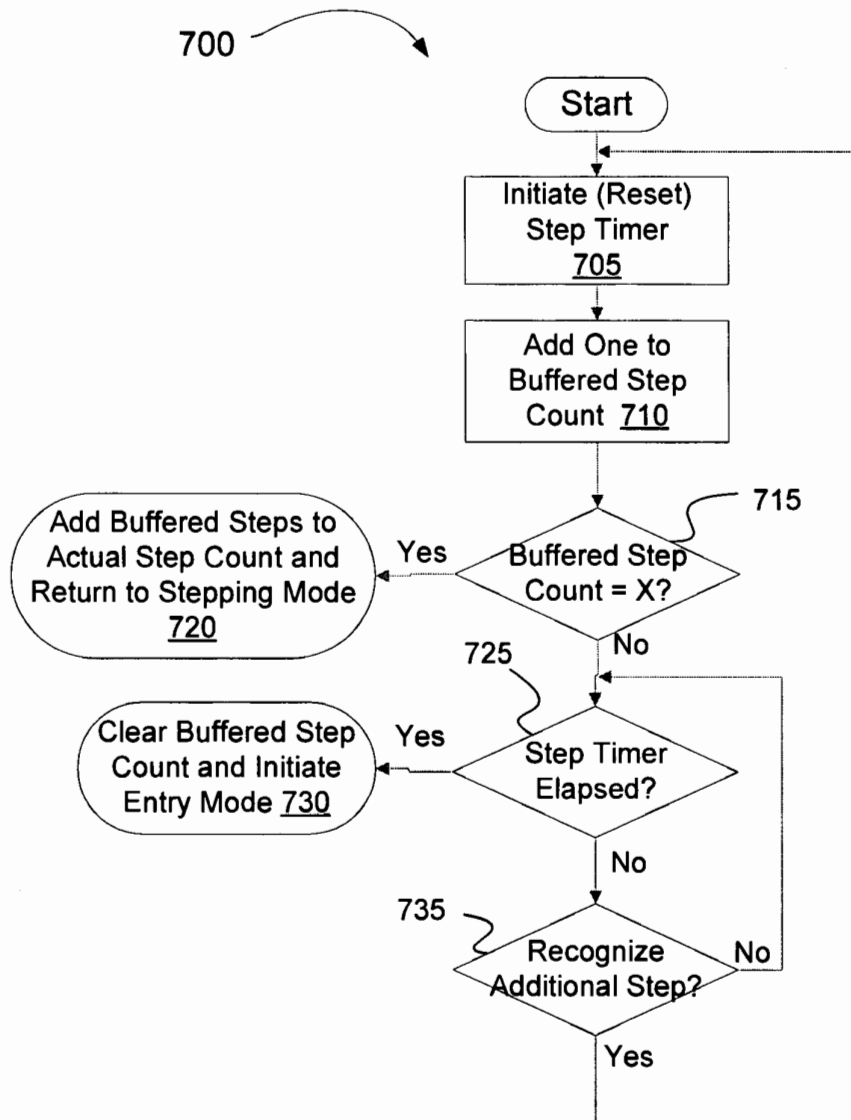


Figure 7

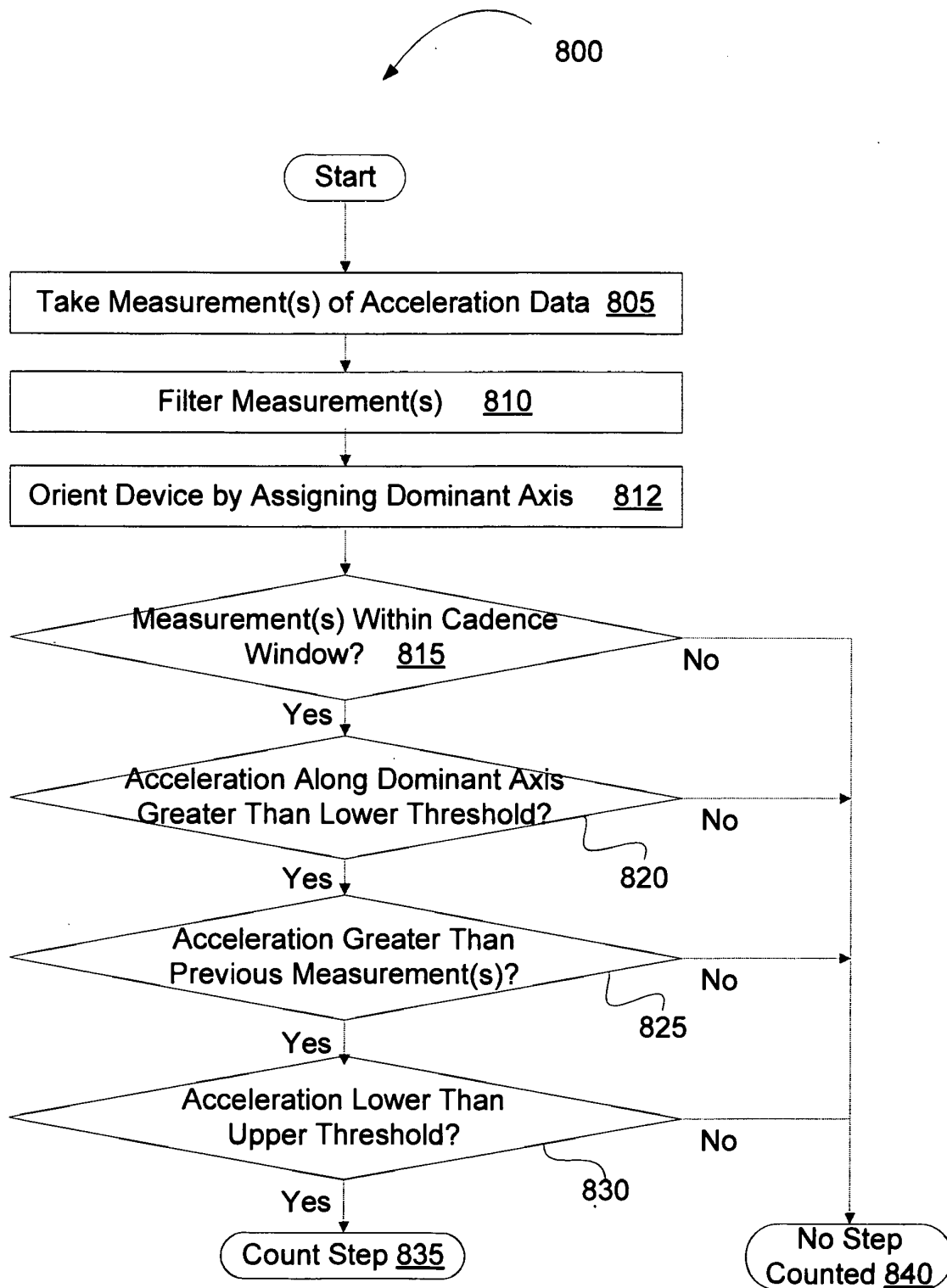


Figure 8

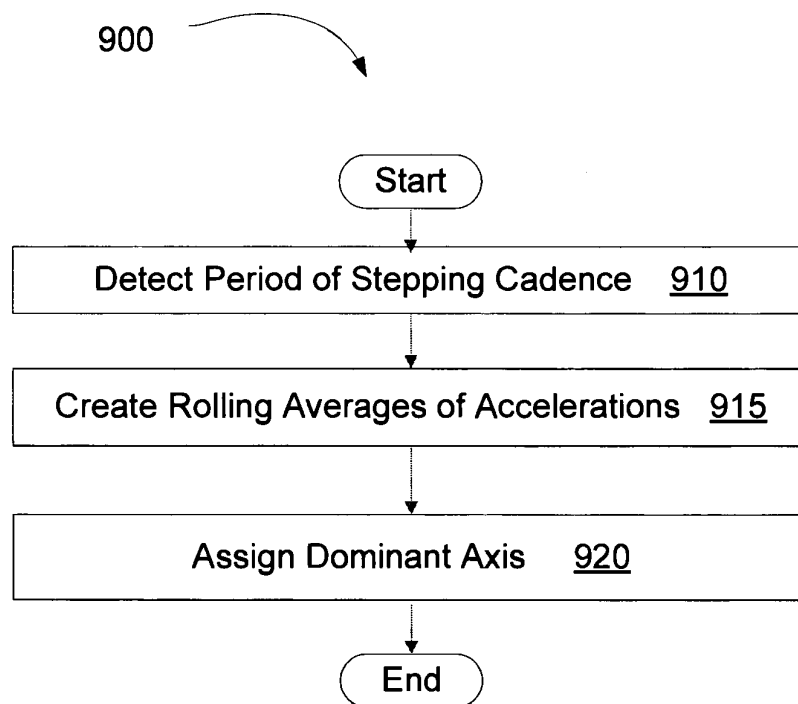


Figure 9

Attorney Docket No.: 7538.P027

Patent

First Named Inventor: Philippe Kahn

Check One:

☒ Declaration Submitted with
Initial Filing OR
☐ Declaration Submitted After
Initial Filing (Surcharge under
37 C.F.R. § 1.16(e) Required).

Complete If Known:

Application No.: Not yet assigned
Filing Date: Herewith
Art Unit: Not yet assigned
Examiner Name: Not yet assigned

DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

HUMAN ACTIVITY MONITORING DEVICE
(Title of the Invention)

the specification of which

☒ is attached hereto OR
☐ was filed on (MM/DD/YYYY) Herewith
as United States Application Number Not yet assigned
or PCT International Application Number _____
and was amended on (MM/DD/YYYY) _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above.

I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application. I do not know and do not believe that the claimed invention was in public use or on sale in the United States of America more than one year prior to this application, nor do I know or believe that the invention has been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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(Given Name (First and Middle [if any]), Family Name (or Surname), and Suffix [if any])

Inventor's Signature _____ Date _____

Residence _____ Citizenship _____
(City, State, Country) (Country)

Mailing Address _____

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

12/27/2006 MWOLDGE1 00000044 11644455

01 FC:1011	300.00 OP
02 FC:1111	500.00 OP
03 FC:1311	200.00 OP
04 FC:1201	200.00 OP

PTO-1556
(5/87)

U.S. Government Printing Office: 2002 — 480-267/80033

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875 Effective December 8, 2004

Application or Docket Number

11644455

APPLICATION AS FILED - PART I

(Column 1)

(Column 2)

SMALL ENTITY

OR

**OTHER THAN
SMALL ENTITY**

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(a), (b), or (d))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	1
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))		

RATE (\$)	FEE (\$)
N/A	150.00
N/A	\$250
N/A	\$100
X\$ 25 =	
X100 =	
+180=	
TOTAL	

OR

RATE (\$)	FEE (\$)
N/A	300.00
N/A	\$500
N/A	\$200
X\$50 =	
X200 =	200
+360=	
TOTAL	1200

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

**OTHER THAN
SMALL ENTITY**

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
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	Independent (37 CFR 1.16(h))		Minus	***	=
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FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					

RATE (\$)	ADDITIONAL FEE (\$)
X\$ 25 =	
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TOTAL ADD'L FEE	

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OR

OR

OR

OR

RATE (\$)	ADDITIONAL FEE (\$)
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TOTAL ADD'L FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
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RATE (\$)	ADDITIONAL FEE (\$)
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TOTAL ADD'L FEE	

OR

OR

OR

OR

OR

RATE (\$)	ADDITIONAL FEE (\$)
X\$50 =	
X200 =	
+360=	
TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT APPLICATION SERIAL NO. 11/644,455

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01/30/2007 BHABTEM 00000021 122325 11644555
01 FC:1202 50.00 DA

12/27/2006 MBIZUNES 00000035 122325 11644555

01 FC:1011	300.00 DA
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U.S. Government Printing Office: 2002 — 486-867/80033