



**(43) International Publication Date**  
**18 March 2004 (18.03.2004)**

## PCT

**(10) International Publication Number**  
**WO 2004/023415 A3**

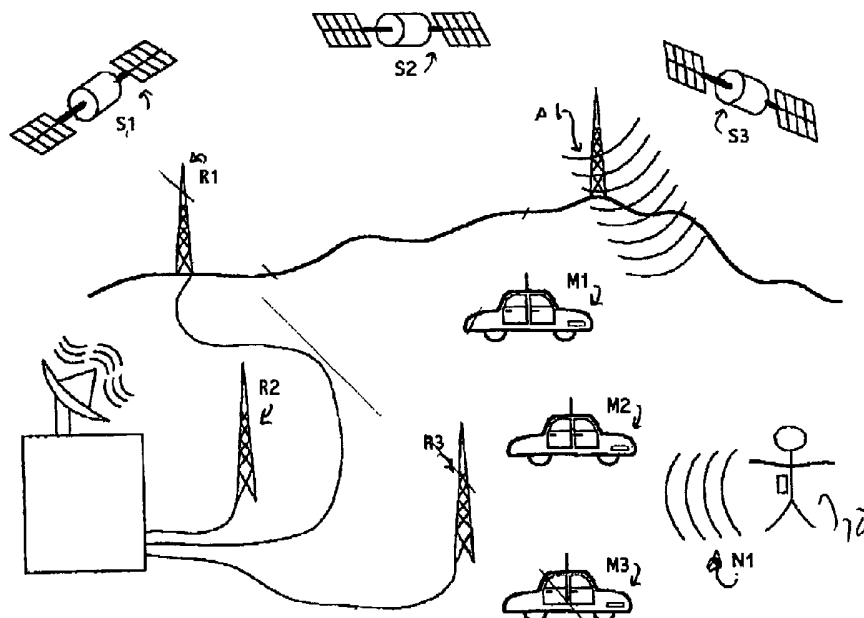
- |  |   |
|--|---|
| <p><b>(51) International Patent Classification<sup>7</sup>:</b><br/>23/00, 5/22, A61B 10/00</p> <p><b>(21) International Application Number:</b><br/>PCT/US2003/027751</p> <p><b>(22) International Filing Date:</b><br/>5 September 2003 (05.09.2003)</p> <p><b>(25) Filing Language:</b><br/>English</p> <p><b>(26) Publication Language:</b><br/>English</p> <p><b>(30) Priority Data:</b><br/>60/409,610      9 September 2002 (09.09.2002)      US<br/>10/651,635      29 August 2003 (29.08.2003)      US</p> <p><b>(71) Applicant: PERSEPHONE, INC.</b> [US/US]; 780 Hobart Street, Menlo Park, CA 94025 (US).</p> <p><b>(72) Inventors: EDELSTEIN, Peter, Seth, M., D.;</b> 780 Hobart Street, Menlo Park, CA 94025 (US). <b>NORDELL, Benjamin, Theodore, II;</b> 328 Landfair Avenue, San Mateo, CA 94403 (US).</p> | <p><b>(74) Agents: GLENN, Michael, A. et al.;</b> Glenn Patent Group, 3475 Edison Way, Ste L, Menlo Park, CA 94025 (US).</p> <p><b>(81) Designated States (<i>national</i>):</b> AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.</p> <p><b>(84) Designated States (<i>regional</i>):</b> ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Declaration under Rule 4.17:</b><br/>— <i>as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,</i></p> |
|--|---|

**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,

[Continued on next page]

- (54) Title:** METHOD AND APPARATUS FOR LOCATING AND TRACKING PERSONS



- (57) Abstract:** The invention relates to a method and apparatus for locating and tracking persons by use of an implantable device (10) composed of biocompatible materials in all areas where contact with organic tissue occurs. The gross anatomic site of the device (10) includes any limb, the torso, including back and perineum, the neck, and the head. The surgical anatomic site of the device (10) includes: 1) Supramuscular: for examples, deep in the epidermis, dermis, and subcutaneous fat, on or attached to muscle and/or muscle fascia; 2) Intramuscular: for example, within or between the muscles of a limb; 3) Submuscular: for example, deep in a large muscle; 4) Intraluminal: for example, within the lumen of an organ which has a naturally occurring orifice; and 5) Intracavitary: for example, intrathoracic or intraperitoneal.



CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

**(88) Date of publication of the international search report:**

26 August 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/27751

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G08B 1/08, 23/00, 5/22; A61B 10/00

US CL : 340/539.13, 539.12, 573.1, 573.4, 825.49; 128/903

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)

U.S. : 340/539.13, 539.12, 573.1, 573.4, 825.49; 128/903

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)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,334,073 A (LEVINE) 25 December 2001 (25.12.2001), whole document.	1-40.
Y	US 6,239,705 A (GLEN) 29 May 2001 (05.29.2001), see Abstract; Fig. 7 and corresponding disclosure; col. 5, lines 62-65.	1-40
Y	US 6,198,390 A (SCHLAGER et al.) 06 March 2001 (03.06.2001), see Fig. 21.	37-38.
A	US 4,952,928 A (CARROLL et al.) 28 August 1990 (28.08.1990), Fig. 7; col. 8, lines 56-66.	1-40.
A	US 5,314,450 A (THOMPSON) 24 May 1994 (24.05.1994), see Abstract and Fig. 1.	1-40.
A	US 4,706,689 A (MAN) 17 November 1987 (17.11.1987), see Abstract and Figs. 1-2.	1-40.
A	US 5,218,343 A (STOBBE et al.) 08 June 1993 (08.06.1993), see Abstract and Fig. 1.	1-40.
A	US 5,010,893 A (SHOLDER) 30 April 1991 (30.04.1991), see Abstract and Fig. 1.	1-40.
A	US 6,160,481 A (TAYLOR, JR.) 12 December 2000 (12.12.2000), see Abstract.	1-40.

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

☐ See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"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	

Date of the actual completion of the international search

10 June 2004 (10.06.2004)

Date of mailing of the international search report

01 JUL 2004

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. (703)305-3230

Authorized officer

Benjamin C. Lee  
Telephone No. (703) 305-8576

# INTERNATIONAL SEARCH REPORT

PCT/US03/27751

## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,731,757 A (LAYSON, JR.) 24 March 1998 (24.03.1998), see Abstract and figures.	1-40.
A	US 5,940,004 A (FULTON) 17 August 1999 (17.08.1999), see Abstract and Figs. 3-5.	1-40.
A	US 5,936,529 A (REISMAN et al.) 10 August 1999 (10.08.1999), see Abstract and Figs. 1-4.	1-40.
A	US 5,218,344 A (RICKETTS) 08 June 1993 (08.06.1993), see Abstract and Figs. 1 & 3.	1-40.
A	US 5,196,825 A (YOUNG) 23 March 1993 (23.03.1993), see Abstract and Fig. 2.	1-40.
A	US 6,239,700 A (HOFFMAN et al.) 29 May 2001 (29.05.2001), see Abstract and Figs. 1, 5 & 6.	1-40.