

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 108827-1342-WO1	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2016/064023	International filing date (<i>day/month/year</i>) 29 November 2016 (29-11-2016)	(Earliest) Priority Date (<i>day/month/year</i>) 30 November 2015 (30-11-2015)
Applicant LUMEDYNE TECHNOLOGIES INCORPORATED		

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 5 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. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

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

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:

SYSTEMS AND METHODS FOR DETERMINING INERTIAL PARAMETERS USING INTEGRATION OF PULSE STREAMS

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, 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

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

System and methods are disclosed herein for integrating to determine inertial parameters. A resonator (104) produces an input pulse stream (109) based on the inertial parameter. A window circuit (116) selects a portion of the input pulse stream. An exclusive-or circuit (120) uses an exclusive-or operation to combine the selected portion (118) with a reference pulse stream (144) to produce a combined pulse stream (122). A counter (124) increments a count based on the combined pulse stream (122). A multiplier circuit (154) scales the incremented count to produce an output signal (156) corresponding to the inertial parameter.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/064023

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01C19/5776 G01C21/16 G01P15/08
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G01C G01P

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 925 642 A (ROANTREE JAMES P ET AL) 9 December 1975 (1975-12-09) column 1, line 15 - line 25 column 3, line 41 - column 5, line 65 figures 1-3	1,14,15, 28
X	----- US 2011/041601 A1 (HSU YING [US] ET AL) 24 February 2011 (2011-02-24) paragraphs [0004], [0006], [0013] paragraph [0030] - paragraph [0042] figures 1-3	1-28
X	----- US 5 561 400 A (IGUCHI YUTAKA [JP] ET AL) 1 October 1996 (1996-10-01) column 4, line 10 - line 54 column 5, line 28 - column 7, line 8 figures 1-3,7 ----- -/--	1-28

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search 8 February 2017	Date of mailing of the international search report 20/02/2017
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Yosri, Samir
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/064023

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 2013/249615 A1 (LAI KELVIN YI-TSE [TW] ET AL) 26 September 2013 (2013-09-26) paragraph [0054] - paragraph [0069] figures 3,8 -----	1-28

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2016/064023

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 3925642	A	09-12-1975	CA 1023582 A US 3925642 A	03-01-1978 09-12-1975

US 2011041601	A1	24-02-2011	NONE	

US 5561400	A	01-10-1996	DE 19537006 A1 GB 2293880 A JP 3479853 B2 JP H08105747 A US 5561400 A	11-04-1996 10-04-1996 15-12-2003 23-04-1996 01-10-1996

US 2013249615	A1	26-09-2013	CN 103323037 A TW 201339591 A US 2013249615 A1	25-09-2013 01-10-2013 26-09-2013
