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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a
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- of inventorship (Rule 4.17(iv)) for US only

Published:

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- before the expiration of the time limit for amending the
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: LASER PERIMETER AWARENESS SYSTEM

(57) Abstract: A method of laser scanning a perimeter zone of a target site for the detection of potential threats comprises: scanning a pulsed laser beam across the perimeter zone; receiving echoes from the pulsed laser beam and forming for a plurality of perimeter zone scans to form scene images. In addition, a method of authenticating a potential threat detected in a perimeter zone of a target site comprises: detecting the potential threat, interrogating the potential threat by a wireless transmission; declaring the potential threat unauthorized if no response is transmitted within a predetermined time interval or if the received response is determined not to comprise the proper access code.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/014223

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01S17/42 G01S17/58 G01S17/89 G01S17/66 G01S7/48

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 7 G01S

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

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	US 2002/005778 A1 (JOHNSON WENDELL C ET AL) 17 January 2002 (2002-01-17)	1-3, 5, 8, 9, 13-19, 23
Y	paragraphs '0163! - '0169!; figures 5, 16 paragraphs '0236! - '0241! ----- -/--	4, 6, 10-12, 20-22, 51-65

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

☒ Patent family members are listed in annex.

* Special categories of cited documents:

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

E earlier document but published on or after the international filing date

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

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

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

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

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

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

Z document member of the same patent family

Date of the actual completion of the international search

1 September 2004

Date of mailing of the international search report

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Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 304 321 B1 (MCCONNELL II ROBERT E ET AL) 16 October 2001 (2001-10-16) column 11, line 40 - column 15, line 50; figures 9,10 column 18, line 57 - column 19, line 43	1-3,5,8, 9,13-19, 23
Y		4,6, 10-12, 20-22, 51-65
X	----- US 5 787 369 A (KNAAK THEODORE F) 28 July 1998 (1998-07-28) column 6, lines 1-42; figure 1	1,3,5, 12-14
Y		51-64
Y	----- US 2003/043058 A1 (RAY MARK D ET AL) 6 March 2003 (2003-03-06) cited in the application paragraphs '0087! - '0090!; figures 30-37 column 15, line 1 - column 21, line 12 paragraphs '0140! - '0148!	10,11, 20-22,59
Y	----- US 5 465 142 A (KRUMES ROLF ET AL) 7 November 1995 (1995-11-07) column 3, line 42 - column 6, line 20; figures 1A,1B,14,17 column 15, line 1 - column 18, line 32	4,6,12
Y	----- US H1 231 H (SECRETARY OF THE NAVY, USA) 7 September 1993 (1993-09-07) abstract; figures 1,2	51-65
Y	----- EP 0 698 550 A (HUGHES AIRCRAFT CO) 28 February 1996 (1996-02-28) column 3, line 51 - column 4, line 33; figures 1-3 -----	51-65

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/014223

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-23, 51-65

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1 - 23, 51 - 65

Method and system for detecting objects in a perimeter zone by means of scene images formed by a scanning pulsed laser beam.

2. claims: 24 - 50

Method and system for wireless authentication of a potential threat detected by a laser object awareness system.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/014223

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