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(71) Applicant (for all designated States except US): **RF CODE, INC.** [US/US]; 1250 S. CLEARVIEW AVENUE, Suite 104, Mesa, Arizona 85208-3378 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KOERNER, Steve** [US/US]; 2313 N. Sinagua Circle, Mesa, Arizona 85203 (US). **WORTHY, David** [US/US]; 1725 E. Washington Court, Gilbert, Arizona 85234 (US).

(74) Agents: **ROGERS, David, E.** et al.; Squire, Sanders & Demsey L.L.P., Two Renaissance Square, 40 North Central Avenue, Suite 2700, Phoenix, AZ 85004-4498 (US).

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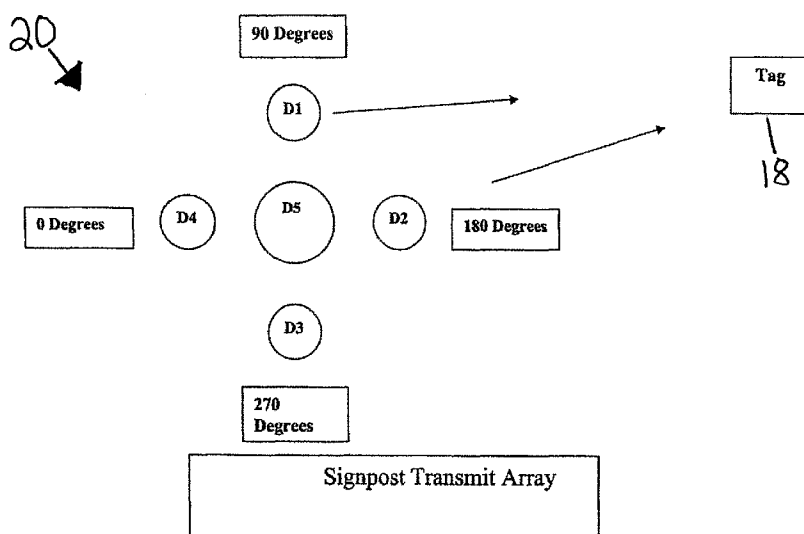
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8 March 2007

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.

(54) Title: RFID SYSTEMS AND METHODS EMPLOYING INFRARED LOCALIZATION



(57) Abstract: A series of radio frequency identification (RFID) systems are delineated. One such RFID system comprises an RFID signpost, and a plurality of infrared transmitters, wherein each infrared transmitter of the plurality of infrared transmitters is arranged to cover, when transmitting, a distinct sector relative to the RFID signpost. Another RFID system comprises an RFID signpost having a transmitter for transmitting signals of a predefined type, and a receiver for receiving signals of the predefined type, wherein the transmitter for transmitting signals of the predefined type cannot transmit until a determination is made that the predefined type of signal is not present at the receiver. Still another RFID system comprises an RFID signpost including a transmitter having a continuous power dissipation rating, and a processor for controlling the transmitter such that peak pulse power of a transmission from the transmitter multiplied by its duty cycle does not exceed the continuous power dissipation rating for the transmitter.

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/015857

A. CLASSIFICATION OF SUBJECT MATTER

INV. G01S1/70

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)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 917 425 A (CRIMMINS ET AL) 29 June 1999 (1999-06-29) abstract; figures 1,8 column 4, line 12 - column 5, line 10 column 6, line 24 - line 36 column 8, line 21 - line 27 column 9, line 29 - line 34 -----	1-3,5
X	US 6 175 308 B1 (TALLMAN ERVEN ET AL) 16 January 2001 (2001-01-16) abstract; figures 9,10 column 5, line 54 - column 6, line 44 column 7, line 47 - line 61 ----- -/-	1-4

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

☒ See patent family annex.

* Special categories of cited documents :

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

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

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

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

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

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

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

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

"&" document member of the same patent family

Date of the actual completion of the international search

29 August 2006

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29. 11. 2006

Name and mailing address of the ISA/

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

Authorized officer

Niemeijer, Reint

INTERNATIONAL SEARCH REPORT

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

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HALIT EREN ET AL: "Accuracy In Position Estimation Of Mobile Robots Based On Coded Infrared Signal Transmission" 1995 IEEE INSTRUMENTATION AND MEASUREMENT TECHNOLOGY CONFERENCE. IMTC/95. WALTHAM, MA., APR. 23 - 26, 1995, PROCEEDINGS OF THE INSTRUMENTATION AND MEASUREMENT TECHNOLOGY CONFERENCE. (IMTC), NEW YORK, IEEE, US, 23 April 1995 (1995-04-23), pages 548-551, XP000534912 ISBN: 0-7803-2616-4 figures 1,5; table 1 page 548 - page 549	1
A	----- EP 1 102 084 A (DEUTSCHES ZENTRUM FUER LUFT- UND RAUMFAHRT E.V) 23 May 2001 (2001-05-23) figure 4 paragraph [0028] -----	1
A	----- EP 1 505 465 A (SAMSUNG ELECTRONICS CO., LTD) 9 February 2005 (2005-02-09) figure 1 paragraph [0006] paragraph [0013] -----	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/015857

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.:

1-6

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: 1-6

Direction finding

2. claims: 7-9

Communication testing

3. claims: 10-12

Power control

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/015857

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5917425	A	29-06-1999	NONE	
US 6175308	B1	16-01-2001	US 5708417 A	13-01-1998
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