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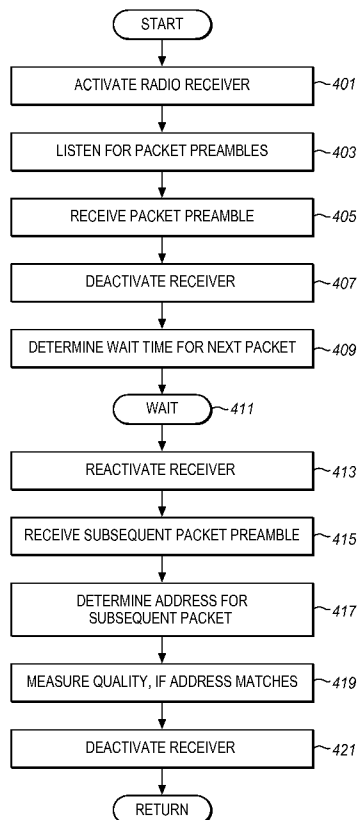
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[Continued on next page]

(54) Title: EARLY RECEIVER SHUTDOWN

FIG. 4



(57) Abstract: A receiver of a mobile device is deactivated and reactivated between frames of a data transmission system. In one example, a radio receiver of a mobile device is activated. The radio receiver listens for preambles of frames transmitted by radio transmitters and receives a frame preamble. The receiver is deactivated upon receiving a frame preamble. The receiver is then reactivated after a time determined based on the received frame preamble to receive a subsequent frame preamble. The receiver receives the subsequent frame preamble, determines an address for the subsequent frame, and receives the subsequent frame, if the address corresponds to the mobile device.

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23 July 2009

**A. CLASSIFICATION OF SUBJECT MATTER*****H04W 52/02(2009.01)i, H04B 1/16(2006.01)i***

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 H04J 3/24, H04R 7/20, H04Q 7/24, H04B 7/212

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

Korean Utility Models and applications for Utility Models since 1975

Japanese Utility Models and applications for Utility Models since 1975

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

e-KIPASS(KIPO internal) &amp; keyword: power, save, sleep and wireless

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                         | Relevant to claim No. |
|-----------|--|-----------------------|
| Y         | US 2006-0072614 A1 (TAKAYUKI OGISO et al.) 06 April 2006<br>See the abstract, figure 16, claims 2 and 10.  | 1, 15                 |
| Y         | US 6522881 B1 (PERETZ M. FEDER et al.) 18 February 2003<br>See the abstract, figure 6, claims 1, 2 and 11. | 1, 15                 |
| A         | US 2007-0121560 A1 (STEPHEN W. EDGE) 31 May 2007<br>See the abstract and claim 1.                          | 1, 2, 10, 15          |
| A         | US 2005-0226204 A1 (TERUAKI UEHARA) 13 October 2005<br>See the abstract, figure 15 and claim 1.            | 1, 2, 10, 15          |

 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

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"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

"&amp;" document member of the same patent family

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**Box No. 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.: 5, 6, 8, 12  
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:  
  
The claims 5, 6, 8 and 12 are difficult to understand because said claims are dependent on multiple dependent claims that do not comply with PCT Rule 6.4(a).
  
3.  Claims Nos.: 3, 4, 7, 9, 11, 13, 14  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. 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:

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.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2008/083050**

| Patent document cited in search report | Publication date | Patent family member(s)  | Publication date   |
|--|------------------|--|--|
| US 2006-0072614 A1                     | 06.04.2006       | KR 10-2005-0118199 A<br>US 7356316 B2  | 15.12.2005<br>08.04.2008   |
| US 6522881 B1                          | 18.02.2003       | AU 2001-24810 A1<br>BR 0100768 A<br>CA 2332392 A1<br>EP 1133208 A2<br>EP 1133208 A3<br>JP 2001-298467 A<br>JP 2006-203941 A<br>KR 10-2001-0088438 A<br>US 6522881 B1 | 13.09.2001<br>06.11.2001<br>08.09.2001<br>12.09.2001<br>30.01.2002<br>26.10.2001<br>03.08.2006<br>26.09.2001<br>18.02.2003 |
| US 2007-0121560 A1                     | 31.05.2007       | None   |  |
| US 2005-0226204 A1                     | 13.10.2005       | US 7382764 B2<br>US 2005-0226204 A1  | 03.06.2008<br>13.10.2005   |