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(54) Title: DISTRIBUTED MANAGEMENT OF KEEP-ALIVE MESSAGE SIGNALING FOR MOBILE NETWORK RESOURCE CONSERVATION AND OPTIMIZATION

FIG. 2C

(57) Abstract: Systems and methods for distributed management of keep-alive message signaling for mobile network resource conservation and optimization are disclosed. In one aspect, embodiments of the present disclosure include a method, which may be implemented on a system, of monitoring rates of data communications with a mobile device, sending a periodic message to indicate operational state to the mobile device in response to a decrease in the rates of data communications with the mobile device, sending subsequent periodic messages to indicate operational state to the mobile device at increasing intervals between the subsequent periodic messages to decrease a number of periodic messages sent over the wireless network, and acknowledging to the mobile device that the subsequent periodic messages will be sent at increased intervals, or in a manner that conserves use of the mobile network.
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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)

H04W 52/02; G06F 15/16; H04J 3/16

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

Japanese utility models and applications for utility models

Electronic database consulted during the international search (name of database and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: keepalive, proxy, content change rate, adjust

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<th>Category</th>
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<td>US 7634558 B1 (MANISH MANGAL et al.) 15 December 2009 Describe internal column 9, line 25-1 line 54.</td>
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