9805093-3
IPD 56
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PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H04Q 7/22, 7/08 — A1

(11) International Publication Number: WO 97/36435

(43) International Publication Date: 2 October 1997 (02.10.97)

(21) International Application Number: PCT/US97/04915

(22) International Filing Date: 24 March 1997 (24.03.97)

(30) Priority Data: 08/622,438 — 25 March 1996 (25.03.96) — US

(71) Applicant: BELLSOUTH CORPORATION [US/US]; 1155 Peachtree Street, N.E., Atlanta, GA 30367 (US). see PF24

(72) Inventors: COMER, Edward, Irby; 4688 Amberwood Trail, Marietta, GA 30062 (US). ROACH, Peter, Owen, Jr.; 3279 Hampton Green Way, Atlanta, GA 30340 (US).

(74) Agents: PETTY, W., Scott et al.; Jones & Askew, L.L.P., 37th floor, 191 Peachtree Street, N.E., Atlanta, GA 30303 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: METHODS AND APPARATUS FOR COMMUNICATING DATA VIA A CELLULAR MOBILE RADIOTELEPHONE SYSTEM

(57) Abstract

A system for communicating data via a cellular network control channel of a cellular mobile radiotelephone system (CMR). A data message system for communicating data collected from remote data sources includes sets of reporting devices, at least one mobile switching center (MSC) of a CMR system, and a data collection system connected to said MSC via a first communications link. Each recording device monitors a remote data source to obtain selected data and thereafter transmits a data message containing the selected data. The MSC receives data messages via the cellular network control channel from reporting devices operating within coverage areas of the array of cells and forwards the data messages via the first communications link to the data collection system. In response, the data collection system stores the data messages and processes the selected data. A paging acknowledgment system is also provided for communicating both (1) paging messages and (2) acknowledgment messages to confirm reception of the paging messages. The paging acknowledgment system includes at least one communications system, remote communications devices, and at least one MSC of a CMR system. In response to a paging message from a paging party, the communications system transmits data messages corresponding to the paging message via a communications link. The data message contains the type of data that is normally supplied with a conventional paging message and an acknowledgment code that uniquely identifies said data message. A remote communications device responds to a data message containing its particular address by transmitting an acknowledgment message containing the acknowledgment code to the MSC via a cellular network control channel of the CMR system. The MSC forwards the acknowledgment message to the communications system via a first communications link. The communications system confirms reception of the data message by comparing the acknowledgment code of the acknowledgment message to the acknowledgment codes associated with the paging messages.

