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(54) Title: CONTENTION PROTOCOLS FOR WIRELESS MEDIUM ACCESS IN COMMUNICATION NETWORKS

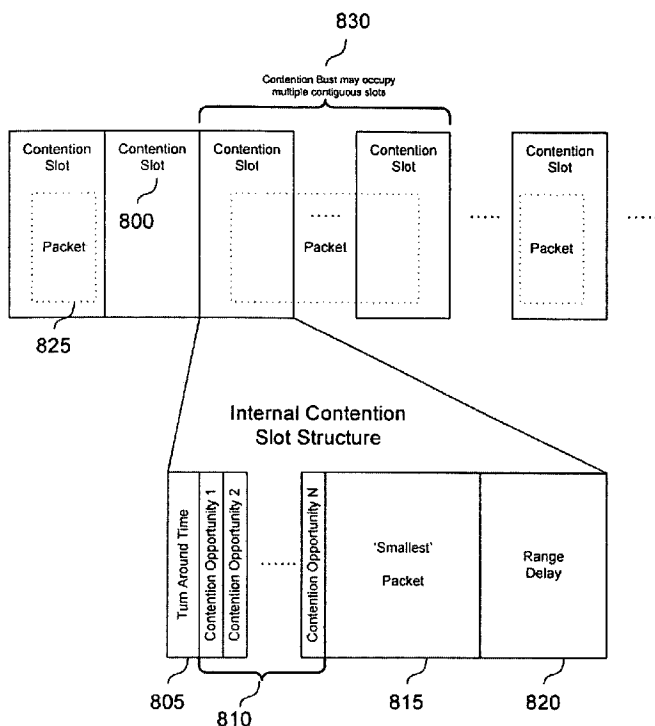


FIG. 8

(57) Abstract: Wireless medium access in a communication network having a number of terminals is controlled by defining protocol message units for transmission by a given terminal which units correspond to operational states of at least one of the terminal and the medium. A number of time slots are allocated for transmission of packets from each terminal, and a number of contention opportunities are defined at the beginning of each time slot. Priority and backoff mechanisms are defined and applied at each terminal during the contention opportunities in the slots. Packets are then transmitted by the terminal within the slots while (1) minimizing the occurrence of empty slots at times when packets are available for transmission, and (2) minimizing the number of slots during which two or more packets are detected on the medium simultaneously at the terminal.

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TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(8) - G06F 15/173 (2009.01)
 USPC - 709/225
 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)
 USPC: 709/225

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 USPC: 709/225, 227; 713/170; 455/435.1 (text search)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 PubWEST (USPT, PGPB, EPAB, JPAB), and GOOGLE
 Search Terms Used: contention window, occupancy window, OFDM time slot, interval, period, length, duration, minimize, avoid, collision, collide, prioritization, priority, header, OH, overhead, controlling, backoff, contending, CTS, RTS, ACK, QoS, QoC, delay, range, opportunity

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,408,009 B1 (Campbell et al.) 18 June 2002 (18.06.2002), entire document, especially; col 1, ln 1-65, col 2, ln 25-50, col 3, ln 5-55, col 4, ln 5-20, col 5, ln 5-35, col 6, ln 15-35, col 8, ln 15-30, col 9, ln 1-67, col 10, ln 1-30, col 14, ln 1-30, col 16, ln 50-65, col 17, ln 5-25, col 24, ln 35-50, abstract, Fig. 1-4	1 - 25
Y	US 7,184,393 B1 (Singh et al.) 27 February 2007 (27.02.2007), entire document, especially; col 3, ln 25-50, col 5, ln 5-50, col 8, ln 5-35, Abstract, Fig. 1, 2 3	1 - 25
Y	US 4,815,071 A (Shimizu) 21 March 1989 (21.03.1989), entire document, especially; col 6, ln 1-35, col 8, ln 35-55, col 9, ln 10-25	6, 7
Y	US 7,242,694 B2 (Beser) 10 July 2007 (10.07.2007), entire document, especially; col 9, ln 1-30, col 15, ln 35-65	22, 23

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

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

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