Title (en)

Medium access control method in point-to-multipoint radio systems adopting peripheral stations with adaptive phy mode

Title (de)

Mediumzugangsteuerverfahren in Punkt-zu-Mehrpunkt Funksystemen mit Randstationen mit adaptiven PHY Modus

Title (fr)

Méthode de commande d'accès au support dans des systèmes point à multipoint utilisant des stations périphériques ayant mode phy adaptif

Publication

EP 1501326 B8 20071017 (EN)

Application

EP 03425412 A 20030625

Priority

EP 03425412 A 20030625

Abstract (en)

[origin: EP1501326A1] A new MAC protocol is implemented in point-to-multipoint radio systems giving support to adaptive PHY mode with FDD duplexing and TDMA by timeslots of variable length in frames of the same duration. The MAC's scheduler is modular. Four scheduling modules are devoted to calculate the bandwidth to be assigned in uplink to as many connection aggregates (CA1, CA2, CA3/4) with different QoS (CBR, VBRrt, VBRnrt, UBR+) the peripheral can transmit from. Each module is connected to a respective priority memory (Table 1, 2, 3, 4) that stores the amount of protocol data units assigned to the active peripheral stations (PS) in sequential order of identifier. An additional scheduling module (Table 6) sums up the various amounts of protocol data units stored in the four priority tables at the rows addressed by the same peripheral station identifier (PID1,... ., PID64), obtaining a cumulative bandwidth for each peripheral. The number of granted PDUs is translated into the equivalent number of symbols for the commanded PHY mode (Table 5). Grant messages to the cumulative bandwidth are written in the rows of an uplink mapping table (Table 6) which is cyclically scanned by the master for granting transmission. The generic peripheral includes buffers to store relevant queues belonging to the connection aggregates with different QoS. Once new data are written in a queue the peripheral sends a transmission request to the master for that aggregate. The peripheral includes an internal uplink scheduler that, on the reception of a cumulative grant, decides the internal queue to transmit from (fig.6c). <IMAGE>

IPC 8 full level

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CPC (source: EP)

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Cited by

KR100709152B1; US7697522B2; US9641456B2; US9807692B2

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