

Title (en)
APPARATUS AND METHOD FOR EFFICIENT TDMA BANDWIDTH ALLOCATION FOR TCP/IP SATELLITE-BASED NETWORKS

Title (de)
VORRICHTUNG UND VERFAHREN ZUR EFFEKTIVEN TDMA-BANDBREITENZUTEILUNG IN TCP/IP SATELLITENNETZWERKEN

Title (fr)
APPAREIL ET PROCEDE POUR L'ATTRIBUTION EFFICACE DE LARGEUR DE BANDE AMRT POUR RESEAUX SATELLITAIRES TCP/IP

Publication
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Application
EP 01918285 A 20010301

Priority

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- US 18837500 P 20000310
- US 72293000 A 20001127

Abstract (en)
[origin: WO0169813A2] A communication system balances message traffic between return channel groups and within the groups, so that the user does not control the specific transmission frequency used. Uplink frequencies and bandwidths for the return channels are set by the system in a return channel control message in the broadcast signal so as to account for system and return channel group loading, and to account for user message backlogs. An initial transmission from a remote user may be made using an ALOHA-type burst signal that provides a message backlog to the control station, and is made on a frequency determined from a randomly weighted, load-based frequency selection process. The system, and not the individual users determine the frequency and channel allocations. For large backlogs or priority users, periodic bandwidth is provided. A method for balancing loads among and between groups of return channels in the communication system includes requesting return channel bandwidth in an uplink message from a remote user to a control station. The uplink message may include both a backlog indicator and a bandwidth allocation request provided to a Network Operations Center (NOC) which can be used to set the return channel bandwidth and frequency for the remote uplink. A user message is transmitted on the designated return channel frequency using bandwidth allocated in accordance with the backlog indicator and a bandwidth allocation request so that traffic loads are maintained in balance between established return channel frequency groups, and within each return channel frequency group.

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