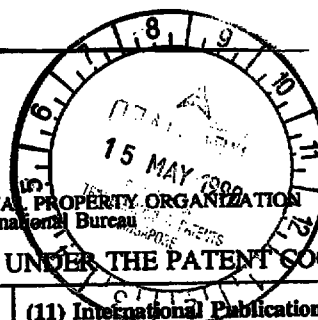
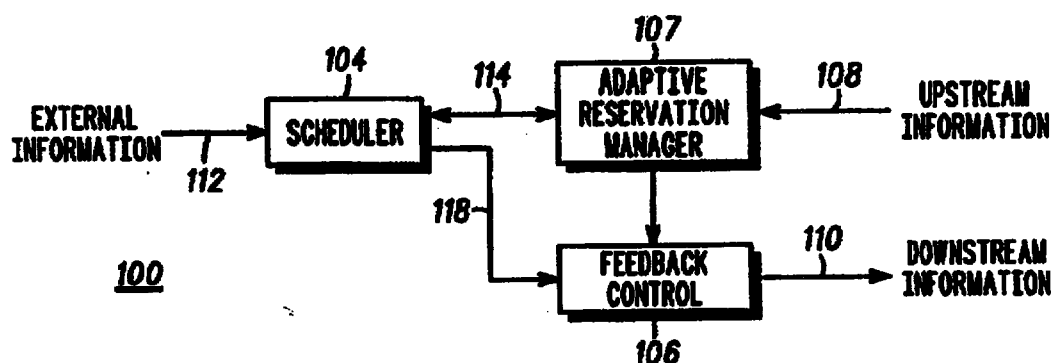


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(54) Title: DEVICE, ROUTER, METHOD AND SYSTEM FOR PROVIDING A HYBRID MULTIPLE ACCESS PROTOCOL FOR USERS WITH MULTIPLE PRIORITIES



(57) Abstract

A system, device (100), router and method (200) implement a hybrid multiple access protocol for users with multiple priorities that provides efficient reservation of channel resources to accommodate users with randomly transmitted requests wherein the users have multiple priorities. The present invention provides the following benefits over existing solutions: 1) support of multiple service categories; 2) insurance that all users admitted to the system receive their negotiated service guarantee appropriate for their service category; 3) achieves an overall system performance that is comparable to centralized algorithms at high system loads, while allowing desirable performance levels of distributed access protocols at low system loads; 4) allows transmission of variable number of packets each with variable size when access is granted to a user; and 5) reduces the number of instances a user needs to contend for access, thereby reducing collisions and overhead due to contention slots and improving system performance.