

Multi-channel medium access protocols.

by

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We consider extensions to the basic Aloha medium-access protocol in a setting where there are multiple orthogonal channels. We consider a model where each user entering the system wishes to transmit, not a single packet, but a file consisting of a large number of packets. It is well-known that Aloha has a maximum throughput of  $1/e$ , approximately 37%. We propose a medium-access protocol whose throughput approaches 100% as file sizes grow large.