Voice Over IP Improving Call Admission Control With Modified Voice Codec A New Approach By K. L. Sarkar

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Abstract

A combination of the codec adaptation algorithm with a Call Admission Control (CAC) mechanism is not only possible but also beneficial for the QoS of the active calls and also for increasing the number of accepted calls and the channel efficiency. We have evaluated the performance of the algorithm under three different scenarios and we have examined a number of decision policies that can tune the codec selection procedure. The main observation that we can extract from the results is that we need to take a number of different metrics into account when deciding which policy performs best. Although some policies minimize dropping probability, they have a direct impact on the average Mean Opinion Score (MOS) of the calls, and vice-versa. So whether to choose one policy over the other depends highly on the parameter that we want to optimize. The trade-off between capacity and quality is evident also here and not always maximizing the capacity is the main scope of a network, especially when dealing with a sensitive VoIP network.

Keywords: Algorithm, Call Admission Control, Voice over IP (VoIP), IEEE 802.11, Mean Opinion Score

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