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Authors:

Ghaida A. Al-suhail

Sarah A. Subber

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Abstract

Artificial Neural Network (ANN) has proven capability in wireless communications. Therefore it has been used for a variety of purposes and in different ways. This proposal strives to address QoS of video streaming for the cellular clients in Universal Mobile Telecommunication System (UMTS) through adaptive FEC based on ANN. The model aims to present the idea of configure and recover the corrupted packets in the video flow with a suitable Forward Error Correction (FEC) code addressed by the ANN. The adaptation of the FEC scheme is based on predefined probability equations which are derived from the data loss rates related to the recovery rates at the clients. The client-side is responsible to relay information to the BS by the feedback channel via RTT of TCPFriendly Rate Control Protocol (TFRC). For each video, the neural network will be trained on the precise data. The simulation results show that a video quality can be adaptable to the tuned optimal FEC codes from ANN via the packet loss probability of the wireless feedback environment.

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Index Terms

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