WHERE TO SPEND THE BITS? EFFICIENCY OF SOURCE AND CHANNEL CODING IN MBMS (WedAmPO4)

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Abstract :

In its Release 6, the Third Generation Partnership Project (3GPP) is defining a new service known as Multimedia Broadcast/Multicast (MBMS) that enables a number of new applications. Due to its nature, no feedback link from the receiver to the sender exists in MBMS. Hence no retrans−mission techniques can be employed to cope with the under−lying erroneous wireless channel. Instead, 3GPP is adopting a channel coding technique based on a Forward Error Cor−rection (FEC) scheme at the application layer. In this work, we are trying to find a good balance of source and channel coding to achieve the best video quality under MBMS con−ditions. We use a simulation environment that closely repre−sents the channel behaviour of the 3GPP wireless link and compare cases with different FEC overheads at different error rates. Experiments show that careful selection of FEC overhead yields to significantly better video quality.

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