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Research Article

Implementing Statistical Multiplexing in DVB-H

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Abstract

A novel technique for implementing statistical multiplexing (StatMux) of broadcast services over Digital Video Broadcasting for Handhelds (DVB-H) channels is proposed. DVB-H uses a time-sliced transmission scheme to reduce the power consumption used for radio reception part in DVB-H receivers. Due to the time-sliced transmission scheme, the implementation of known StatMux methods for DVB-H application presents some challenges which are addressed in this paper. The proposed StatMux technique is implemented in conjunction with the time-slicing transmission scheme. The combination is similar to a time division multiplexing (TDM) scheme. The proposed StatMux method considerably decreases the end-to-end delay of DVB-H services while it maximizes the usage of available bandwidth. Moreover, the proposed method can effectively decrease the channel switching delay of DVB-H services. Simulation results show a high performance for the proposed StatMux method.