Multimedia in Satellites

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Abstract

This talk will focus on methods for achieving reliable multimedia transmission over future broadband satellite communications systems. Problems encountered in video transmission in Ka-band systems operating in geostationary orbit are emphasized, where high reliability must be achieved, coding delay must be minimized and where ARQ-type data transmission protocols cannot be easily integrated with >interactive applications. Although being transported by packet-based networks, compressed voice and/or video should ideally exploit the fact that lossy compression can be tolerated. After reviewing certain aspects of broadband multimedia satellite transmission, we introduce a novel video transmission approach that seems promising in this context, called "transmitter receiver identical reference frame" (TRIRF) based coding. This scheme is being considered as an additional inter-frame mode compatible with motion-compensation based predictive coding standards.