

# Multimedia Transmission over Wireless Networks

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Third generation mobile networks and terminals will be available within the next few years. The mobile phone will have the ability to send and receive very much more data than it currently does. This will allow new video applications, such as: Video on Demand and Videophone, when video sequences and high-quality audio are downloaded to the mobile device. MPEG-4 is a standard defining ways to represent, integrate and exchange the next generation audio-visual information. MPEG-4 is suitable for wireless audio-visual applications because of two main features: video compression down to very low bit rates, and error resilience and error concealment capability. This paper discusses the issue of adapting video streams to different type of terminals with different terminal capabilities. Such devices include laptops and mobile handheld devices. Each of these terminals may support a variety of different video formats. Furthermore, the access networks are often characterized by different bandwidth constraints, and the terminals themselves vary in display capabilities, processing power and memory capacity. Therefore, it is required to convert and deliver the content according to the network and terminal characteristics. Transcoding is known as the process of converting a coded bit stream to another bit stream to match a destination profile in terms of: media formats (MPEG-2, H.264), resolutions (Spatial and Temporal), and bit rates. This work present the basic video transcoding model as well as different ways of improving this model.