Mobile content production—major issues

Ramesh Jain highlighted the importance of the judicious use of multimedia in presentation material in his article “Sensory Overloading in Documents” (IEEE MultiMedia, vol. 5, no. 4, 1998, pp. 1, 5). He alluded to the need for “elements of style” for preparing (multimedia) presentations along the lines of the immensely popular book *The Elements of Style* by William Strunk and E.B. White. This need is relevant in the context of an impending explosion in mobile multimedia content, resulting from the deployments of third generation (3G) and beyond 3G (B3G) mobile systems and services. Several factors should be taken into account in the production of content for mobile devices.

The major constraints of mobility to be considered during mobile content production are

- communications-related constraints, such as higher error rates, more disconnections and dropped packets, and (relatively) reduced bandwidths;

- device-related constraints, such as modest processing power, limited battery power, relatively small memory capacity, smaller display size, and smaller and fewer buttons; and

- user-related constraints, such as limited attention spans, along with changing locations and contexts.

Mobile content should be designed for rendering on a vast array of (more than 2,000 different models of) mobile devices. The content needs to be produced for various levels of detail and make judicious use of various media combinations to suit different contexts, attention spans, and mobility situations (for example, only audio while driving, an audio-video combination while walking, and then text, in addition to audio and video, while stationary). The content should be customized for varying user tastes, preferences, and comprehension levels. Even for the same user, the preferences might change based on the time of day, the available devices, and so on.

Mobile content must also cater to the changing locations and contexts. The context could denote things. For example, it could be user-related (based on the user’s current mood or activity); the network conditions (such as fading signals or congestion); surroundings (being indoors or in a crowd); or physical environment (such as the brightness).

One of the most important factors to ensure user satisfaction is the provision of simple and effective interfaces, as clearly demonstrated by the immense popularity of iPods and iTunes. In addition to broadcast content, mobile content will increasingly be on demand with high interactivity in most situations. Additionally, it’s highly desirable for our community to design mobile content with easy-to-use interfaces, faster interactions using auditory and visual cues, and with fewer keystrokes.