



Why Video Shouldn't Kill the Communication

The battery-life of mobile devices is no longer a barrier to video content wherever you go. André Pagnac, CEO of Actimagine explains.

Less than a decade ago, the advertising slogan for a leading internet service provider was 'where do you want to go today?'. It meant this figuratively, of course, with the implication that by visiting any site in the world, you were travelling there yourself.

The revolution in mobile technology now means that the literal opposite is true. Now you *can* go wherever you wish and still be connected to whatever you wish to access via the internet. In terms of mobility, we have now moved beyond the concept of the office in your pocket, this year is about taking your entire house wherever you go. In addition to business applications such as email and web, the latest development is of course video content on mobile devices.

Until very recently, however, there have been barriers for consumers in accepting some new technology. One major challenge for many customers is the size of files they have to download and the capacity these consume. This is exacerbated by having to pay for content by the kilobyte.

Another obstacle is the drain on the batteries of applications such as video streaming. The MPEG4 ASP is something of a chief culprit of both of these problems if it is to maintain the DVD-quality of 24 frames per second (FPS).

To demonstrate this in real terms, take a modern mobile phone handset using MPEG4 ASP to play video content. After just 90 minutes, it would run completely out of juice. That would be before the user had made a single call, sent a text or checked their diary.

Quality vs. Consumption

The debate continues to rage about whether or not mobile video content has a future, particularly in the UK. This, however, is not what the debate should be. It is already clear that it does indeed have a bright future.

For example, there is already an influx of LCD colour screens with improved quality, resolution, power consumption and lower prices. Meanwhile, network bandwidth continues to increase with no real limit on high-speed wireless networks at home, work or public locations.

Yet although consumers are already used to IT, their incomes are rising slower than advances in IT. However, they do have money to spend and the trend is to create their own content as well as to download that of others. Whether for their own personal communication, entertainment, download to other sites or even 'citizen journalism', users of mobile devices are undoubtedly taking well to mobile video.

Consequently, they are sophisticated and discerning about user experience, available content and usage and in their choice of products. The debate should therefore be on how manufacturers can create the best user experience.

This means that the major business model challenge is for network operators as they strive to achieve further uptake of the potentially prosperous mobile video services. How can they reduce power consumption and file size of video content without compromising on quality?

Codec Wars

Original video source files in the uncompressed form are usually very big, and hard to manage. That is why compression is necessary for more efficient storage and transmission of the video. Therefore, the key is to select the right codec.

Most mobile phones today use ARM-based CPUs, operating at about 100Mhz to 400Mhz. In such environments, most other video codecs struggle to deliver smooth, DVD-quality video. Video compression and decompression are highly computation-intensive processes, with lots of calculations being done on a tremendous amount of data every second.

The current de-facto standard, MPEG2, is now becoming antiquated, so network providers and content creators alike are now seeking the next generation in compression technology.

We have already discussed the disadvantages of MPEG4, which, owing to its name, had initially been considered the natural successor. One of the latest market entrants, Mobiclip™ offers an alternative on all counts, including price, capacity and power consumption.

For example, compared with Mobiclip, MPEG4 files need to be 30 per cent bigger for the same picture and sound quality and so consume more memory on a mobile device. Running content in MPEG4 also requires four times as much battery power as it would to run the same clip at the same quality using Mobiclip.

Of course, reducing power consumption and capacity requirements severely impacts on user experience, which manufacturers must avoid. So, where MPEG4 would allow a user to experience mobile content for just 90 minutes, Mobiclip would allow the same mobile device to play seven hours of video, in even higher quality.

This means that, where someone might not even get to the end of their film using MPEG4, they could view two movies using Mobiclip and still be able to make calls and send texts.

The Outlook

So we see that the technology is there. Demand is there. So the debate is how to make creating and using mobile content as enjoyable an experience as possible. That was why it was invented and that is why consumers want it.

Consequently, Ovum predicts that 2007 will see the real start of the mobile-TV era. In the next 12 months, we will see mobile phones fulfil their potential as 'video iPods' and become the 'third medium' of entertainment after TV and cinema.

For this to happen and for the market to reach its tipping point, manufacturers must ensure they select the right technologies to make the experience for users as positive as it was always intended to be. That is, users can go anywhere and still have access to all the information and content they want.

-ends-