

Information Technology: A new world standard for multimedia communications – MPEG4

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ISO establishes standards in all areas where several solutions exist for the same problem. This is certainly true in the field of audiovisual communications. The first standards, MPEG1 and MPEG2, developed by ISO/IEC's MPEG (Moving Picture Experts Group) were very specific standards. MPEG1 for recordings on CD-ROM came out of the development of compact disc (CD) technology. With a little tinkering, MPEG1 engendered MPEG2 for digital television and high-definition television. These standards only make it possible to upgrade from traditional analog to digital television and to increase, by compression, the number of channels offered to the viewing public.

In addition to compression, MPEG4 introduces several new developments. Data representation is based on objects and not on corresponding image points or rectangular image format – it is thus possible to replace one object with another in a photo or video. In this way, global broadcasts can be adapted to the local culture while retaining the main points in the event presented. The standard

enables users to have universal access to multimedia information. In other words, the user is not dependent on any one distribution system (network, radio relay, micro wave beam or satellite system, wireless, etc.) because the information is transmitted in exactly the same format through all of these channels. Viewers can therefore see their favourite programmes anywhere at any time. The standard also enables users to interact with the information provided: they will be able to surf around inside the video the same way they can navigate inside the Web. Moreover, it will be possible to exchange entertainment programmes (games) from several different suppliers. Finally, it should be pointed

Surrounded by an electronic environment, the young today can find relaxation and fun with their equipment; International Standards are helping to provide tools with extraordinary potential. Users will be able to take an active role in handling information; not only will they be able to interact in the context of the information they receive, but it will be possible for them to go and look for what they want, in the same way they can today in working with text on the Web.

out that – for the first time – an open standard has been made available, which could generate new developments, not yet invented or imagined.

This standard will have an impact on the general public in many different ways. It will stimulate each user's creativity in producing audiovisual material. Everyone will have access to complex studio techniques for cutting and editing. For example, users will be able to redesign their holiday films and create new films. They will take an active role in handling information: not only will they be able to interact in the context of the information they receive, but it will be possible for them to go and look for what they want, in the same way they can today in working with text on the Web. And to top it all off, they will be able to do this anywhere at any time, as long as they have an access terminal available. These opportunities will stimulate the imagination.

In relation to its predecessors, the open nature of MPEG4 will surely give it a long life. Any new service offered in this field, any new audiovisual information, should benefit from this standard – the door is wide open on future prospects. The only limits to applicability are in our imagination.

