Object-Based Audio Visual Terminal

Technology #ms97-01-27

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MultiMedia Delivery Tools Limit Potential of Video/Audio Experience:
Multi-media computing includes the continuous delivery of object-based services. Delivering these services to an end user terminal (e.g. personal computers, set-top boxes, or mobile phones) consists of decoding a bitstream, which plays video and audio and also decodes ‘object’ data. Bitstream design separates data from video and audio content. MPEG-4 is one of these multi-media architectures – capable of decoding everything from simple audio-video content to complex 3D worlds. However, many bitstream architectures have had limited object controls and interfaces. Improving the tools developers use to deliver multi-media objects will make for a richer and more dynamic end-user experience, like in-line editing. This technology introduces the concept of persistent objects and the reuse of persistent objects.

Object-Based Multimedia Architecture Improves Play Station, iPod, DVD:
This technology is a novel, object-based audio-visual terminal architecture. This allows for an object-oriented bitstream to be edited (using cut/paste, insert/delete, grouping, and special effects actions) during playback. This is done by separating objects from video information into distinct delivery channels. The architecture routes bitstream components on these channels into cache memory or to decoders which either persist the object in display or simply render it. A simple two-packet approach is used to accomplish this, eliminating the need for headers in the bitstream and making network delivery more efficient.

Applications:
• Play Station Portable
• iPod
• Nero Digital Products
• Mac OS X v10.4
• HD DVD
• Blu-Ray

Advantages:
• Efficient bitstream
• Low bandwidth delivery
• Editable bitstream
• Improved end-user experience

Patent Status: Patent (US 7199836) ~ see link below.

Licensing Status: Available for Licensing and Sponsored Research Support

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