Next Generation Codecs

Streaming Media Solutions

Content Management

- Choice and Flexibility
- Sophisticated on demand media systems and digital advertising systems
- Powerful, scalable on demand management and technical business tools

Overview

As consumer demand for digital video grows, cable and Telco operators are recognizing the need for next-generation codecs (MPEG-4 ASP, WM9, and H.264) as an efficient means to deliver digital content. The new codecs are capable of delivering high-quality digital video while using the least amount of bandwidth. VOD bandwidth is a concern for operators delivering, for example, HD content over digital cable, or SD content over existing DSL.

With a number of competing next-generation codecs on the horizon, operators are watching carefully to see which emerge as industry standards and whether VOD delivery vendors will support them with all the functionality needed to meet consumer expectations and operators' business requirements. Support for next-generation codecs is one part of ARRIS' total solution – scalable delivery, real-time systems, and business management that offer the lowest total cost of ownership in the industry, and the ability to achieve maximum revenue in each Designated Market Area. ARRIS solutions are designed for smooth, profitable business growth in a dynamic and emerging market.

Codecs Without Compromise

Moving to a new codec should not compromise any services and applications available with MPEG-2 either today or in the near future. A number of industries are looking at delivering next-generation codecs via an installed base of MPEG-2 transport streams, and a number of streaming media vendors can demonstrate this capability. But the server output is a small fraction of a complete VOD solution. For codecs such as MPEG-4 to become viable for delivering On Demand content and services, the On Demand delivery systems must support them without compromising features such as visual trickplay. They must also integrate transparently with all the business functions necessary to a VOD service offering – billing, provisioning, technical operations management, automated content workflows and asset management, and operational and marketing reports.

The Next Step Towards Everything On Demand

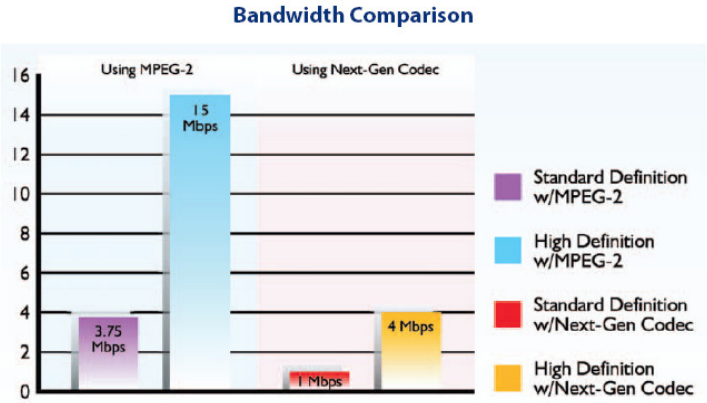
Codecs such as MPEG-4 reduce the amount of bandwidth required to provide On Demand products in the home, allowing operators to offer more products. Because of this, next-generation codecs will play a key role in the development of Everything On Demand (EOD) products and services. For example, MPEG-4 can deliver High-Definition programming at 30% of the current footprint (HD MPEG-4 at 4Mbps versus MPEG-2 at 12 to 15 Mbps), leaving room for growth in content delivery. For cable operators, this means more available bandwidth for HD channels or HD On Demand content.

The smaller footprint of new codecs such as MPEG-4 offers IP service providers the opportunity to provide high-margin services over their existing Universal DSL (or G.Lite) networks. Today, it is extremely difficult to deliver compelling, revenue-generating video services with MPEG-2 transport at 1.5 to 2 Mbps. Bandwidth-intensive codecs can starve simultaneous broadband Internet access, and content providers will be hesitant to license content without a guarantee of consumer-quality delivery over DSL connections to the home. Concerns to date have led a number of content providers towards a download service such as MovieLink. With codecs like MPEG-4, operators can deliver video plus Internet service while maintaining quality and enabling them to profit from new business models such as the "digital home" where the PC serves as the home media center.

The Total On Demand Solution

To play in the emerging On Demand market, operators need streaming media solutions that support growth in content, subscribership, and new business models, no matter what transport protocol the operator chooses. ARRIS delivers complete On Demand solutions designed to grow and evolve transparently with streaming media technology and markets. ARRIS On Demand solutions are well suited to support new codecs, so the move to next-generation codecs such as MPEG-4 will be transparent to systems and subscribers.

ARRIS solutions provide complete On Demand functionality; stream control and session setup, server-side trick play, different file formats, DRM, and security – and they support the full range of business functions, regardless of transport protocol. By providing the lowest total cost of ownership in the industry and the real-time control to achieve maximum revenue in each designated market area, ARRIS solutions help operators achieve smooth, profitable business growth in a dynamic and emerging market.



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