



Cisco Digital Video Networking Strategy for Video-on-Demand Services

Q. What is the Cisco® video strategy for North American cable operators?

A. Cisco Systems® is committed to providing cable operators with next-generation digital video networking solutions and services that will enable them to easily and cost-effectively deliver new, profitable, and scalable digital video services. Cisco is providing its customers with digital video networking solutions for digital video services that take advantage of the entire portfolio of Cisco products.

In doing so, the Cisco next-generation digital video network:

- Enables delivery of video content to where it is needed, when it is needed
- Protects investments by providing flexibility to evolving architectures and services
- Scales from small networks to large networks with a "pay as you grow" capital-investment model that allows operators to purchase new equipment as they generate revenue to support those purchases
- Reduces overall network complexity and operational costs by building intelligence into the network

Cisco also coordinates and verifies the interoperability requirements with members of its Video Partner Program to help ensure a fully tested, end-to-end solution for customers.

Q. What is expected to influence the growth in the VoD market?

A. VoD growth will be driven by:

- Cable operators' interest in increasing services and service innovation (stimulated by competition from satellite TV service and digital tier churn)
- Availability of desirable content (which is improving rapidly)
- Easy-to-use and easy-to-navigate electronic program guides
- End-to-end, standards-based architectures and solutions
- Consumer shift in television viewing habits from traditional "watch it when it is on" models to "watch what I want when I want" models

Q. How does Cisco believe the video network will evolve over time?

A. The Cable operator video networks will evolve to integrate multiple video services over a common, intelligent, open-standards-based digital video network infrastructure. In the case of VoD services, Cisco believes that this will allow cable operators to capture the benefits of having a switched network infrastructure between the headend and the distribution hub—where before there was a point-to-point direct connection. Key among these benefits will allow cable operators to more easily & economically deliver content to where its needed, when its needed; investment protection by providing a flexible video networking system which embraces evolving architectures and services; the reduction of operating costs and complexity by building intelligence into the network; and support for multi-vendor interoperability with an open, non-proprietary architecture. In addition, Cisco believes that the open network will encourage cable operators to integrate multiple video (and potentially other) services on a single network.

Q. What business models are required for cable operators to be successful in offering VoD?

A. Cisco recognizes that cable operators require a next-generation digital video network that helps reduce customer turnover and increase subscriber acquisition and retention, and also enables the delivery of scalable, on-demand video services. The solution must dramatically reduce costs to improve profitability and increase the return on investment (ROI) while providing an efficient network that allows them to scale with subscriber demand.

Q. Does Cisco have signed marketing agreements with any video companies?

A. Cisco has marketing agreements with members of the company's formal Video Partner Program. Member companies are major suppliers of VoD infrastructure. The marketing agreement with Cisco helps ensure that the two companies' products interoperate with the appropriate level of testing. In addition, Cisco will work with select companies to develop together the technologies and solutions that improve the value of the video network for mutual customers.

Q. What is the Cisco competitive advantage and value proposition in the video market?

A. Cisco is building on its strong heritage of open systems to bring its networking expertise and industry leadership in Gigabit Ethernet networking technologies to solve the VoD infrastructure challenges faced by cable operators. The recognizable benefits that Cisco brings for on-demand video services include:

- Industry-leading Gigabit Ethernet products
- Delivering "interoperable" solutions for digital video networking
- Award-winning support services

Q. Has Cisco announced any new products?

A. Yes. As described in the press release of January 13, 2004, Cisco is introducing products for next-generation digital video networks with its offering of two high-density, Gigabit Ethernet-optimized video QAM devices: the Cisco uMG9820 QAM Gateway and the Cisco uMG9850 QAM Module.

Q. Do any other vendors have a Gigabit Ethernet video QAM device?

A. Yes. However, as an industry leader in Gigabit Ethernet networking, Cisco is bringing its considerable expertise and support to the cable operator's VoD service architecture. This is particularly important as the VoD deployments migrate from hardwired point-to-point architectures to networked Gigabit Ethernet architectures, providing a flexible, standards-based video networking solution that embraces the evolving architectures and future services of the cable operator. Cisco is offering products specifically optimized for Gigabit Ethernet networking which takes full advantage of this technology. By simplifying the challenges faced by cable operators, Cisco offers modular products that allow QAM densities to grow and scale with their new digital video services.

Q. Why is Gigabit Ethernet-optimized technology so important?

A. There is a fundamental shift in the cable operators' core business moving from a broadcast model to a model that now must support unicast streams for on-demand content. The networks that must support the thousands of "bandwidth-intensive" VoD streams must be flexible to scale as more digital services are launched. Therefore, the cable industry is now migrating to Gigabit Ethernet technology. Both the Cisco uMG9850 QAM Module and the Cisco uMG9820 QAM Gateway products are optimized for

Gigabit Ethernet technology and can directly accept full line-rate Gigabit Ethernet transport feeds from video servers, providing optimum efficiency. Other products on the market today that are not optimized for Gigabit Ethernet require the devices to be daisy-chained in order to utilize the full capacity of a Gigabit Ethernet link, and this will introduce a single point of failure in the architecture.

Q. How does the Cisco uMG9800 Series lower the TCO of cable operators?

A. Both the Cisco uMG9820 QAM Gateway and the Cisco uMG9850 QAM Module are high-density products that provide product flexibility for customers to incrementally increase QAM densities. The Cisco uMG9800 Series extends the life of existing capital investments by enabling operators to purchase equipment as service demands increase, thereby reducing the cost to scale. Adding more QAM modules rather than requiring the need to purchase entire fixed-configured systems reduces the number of devices to manage and brings down the overall cost per video stream.

Q. Are there any cable operators currently in trials or deploying Cisco VOD solutions or Cisco uMG9800 Series products? If so, who are they and may I speak with them?

A. Yes. Cisco has been closely engaged with the VoD service deployments at Comcast and Time Warner Cable and will provide reference contacts upon request.

Q. Have the Cisco uMG9820 QAM Gateway and the Cisco uMG9850 QAM Module been tested for interoperability by the VoD server vendors?

A. Both of the Cisco uMG9800 Series products have gone through interoperability testing with multiple VoD server vendors in Cisco's labs, as well as through formal interoperability testing at SeaChange, Concurrent, and nCube.

Q. Are there any cable operators currently trialing or in deployment with the uMG9800 series products?

A. Both of the Cisco uMG9800 Series products will start shipping to customers in March 2004, and are currently in trials at several cable operators in North America.

Customer inquiries can be directed to Mandy Knotts in Cisco Public Relations at 408 526-6889 or mknotts@cisco.com.



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