

Surge in video brings new challenges

The rapidly expanding range of video and multimedia applications is enabling operators and new entrants to boost market share, revenue and customer loyalty. Players across the value chain, however, face substantial challenges sorting out everything from the user experience to network interoperability

by Mitch Lewis

While the sudden uptake of video and multimedia services has been boon for consumers and the industry in general, aggregators/ASPs, broadcasters and content owners (ABCs) face significant challenges as well as opportunities in the 3G, broadband video and multimedia services market.

By the end of 2006, the number of 3G/UMTS subscribers worldwide will hit 100 million and jump to 884 million by 2011, according to Informa Telecoms and Media. Today over 110 UMTS/W-CDMA networks have launched commercially in 48 countries with more than 350 different W-CDMA devices launched or announced. With 175 commercial licenses granted in 80 countries, the opportunities for further 3G rollouts and development over the coming years are immense.

While the number of 3G subscribers is impressive, the number of current broadband subscribers is even more staggering – the current 300 million broadband and cable subs are forecast to increase to over 500 million by 2009. Video now accounts for more than 62% of peer-to-peer traffic on Internet networks, according to CacheLogic, and is by far the largest “bandwidth hog” – far outstripping audio and data.

Video and multimedia traffic presents significant challenges for the mobile and broadband operators that are providing the underlying infrastructure, but also presents key opportunities for others to capture revenue in this market. It is estimated that by the end of the

decade, more than 400 million people will regularly use SIP-based services across IP multimedia (IMS) networks.

A number of key multimedia applications and services have emerged as initially popular for 3G and broadband networks targeted toward specific customer groups. They include video portal and streaming,

video mail and messaging, video conferencing and chat, video telephony, video/media ringback tones, video call centers and video help desks, video blogging/exchange, and video surveillance.

Multimedia challenges

As noted by John Chambers, CEO of Cisco, “video is hard”. It’s hard for many reasons. The challenges include providing a quality user experience, sorting out handset and network interoperability issues and creating direct customer contact and management for aggregators, broadcasters and content companies.

A number of technical solutions will solve most if not all of the perceived customer experience issues. Technologies such as Unicoding and VideoRefresh address video corruption, lip synchronization and other transmission delay issues. The new ITU standard (Annex K of the H.324M standard and known as “MONA”) is based substantially on the underpinnings of AnswerFast Plus and reduces call set up times from an average of 5-8 seconds or more to less than 1 second.

Other customer experience issues other than quality are even more annoying and have so far prevented more substantial take-up of services. Downloading videos and other content over WAP interfaces can

require customers to click more than three to six times. Industry research shows that every click reduces the number of people who continue surfing by 10% or more.

Using 64-kb dedicated streaming portal centers and simple-to-use DTMF menu systems make it much easier for customers to navigate and go directly to content. Additionally, many operators control what Web sites their customers can go to – “walled gardens”. In the 64-kb portal set up, customers can go directly to sites operated and promoted by aggregators, broadcasters and/or content owners.

End-to-end network interoperability is difficult enough in a multi-vendor, multi-access, multi-service voice and data environment.

However, in a complete system predicated on real-time and non real-time video and multimedia files, this requirement becomes even more critical.

There are hundreds of different types of handsets and devices, end-points, video conferencing equipment, MSCs, softswitches, SIP proxy servers, application servers, etc. The role of the multimedia gateway becomes very important in this video environment as it sits at the center of the network and has to negotiate different size files, video and audio codecs, with accurate billing and network management through the various components. Additionally, the ability of the multimedia gateway to do native SIP and evolve to SIP IMS and other SIP components is an absolute necessity.

One of the key requirements for today’s multimedia gateway is that it can scale from about 30 simultaneous video call sessions to 120 simultaneous video call sessions.

However, with most studies

forecasting “video-active” subscribers climbing from 3% to 5% of 3G subscribers to over 20%, multimedia gateways will need to be capable of handling over 1,000 simultaneous video call sessions by early 2007, with the ability to scale up to 5,000 or 10,000 ongoing sessions.

Many of the tenders coming in from China, India and Southeast Asia are requesting capabilities of this size.

Direct customer access

One of the issues that ABCs bring up is the inability to have direct customer access in 3G and mobile networks when they are beholden to large incumbent mobile network operators through their WAP and IP portals. Though they recognize the benefits of this relationship, many of them would like to complement this access method with their own direct customer contacts.

Through premium SMS numbers that the ABC’s can manage, customers come in directly to content owners and aggregators that are able to bill directly and can keep a much larger portion of the revenue stream. Additionally, through these 64-kb direct portals, companies are able to better synchronize their mobile and Internet sites, creating a seamless customer experience, rather than adapting for a WAP portal that belongs to an operator.

One of the immediate benefits for ABCs is to not have to store content in multiple sizes for multiple types of handsets. Using multimedia gateways that employ Unicoding can reduce storage cost by 35%.

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