

Streaming Media Market Trends

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Preview

Streaming media technologies enable the real-time or on-demand distribution of audio, video, and multimedia content over the Internet, and have evolved into an integral part of the Internet experience for both consumers and enterprise users. At the enterprise level, where streaming is employed for e-learning and advertising, the streaming media market, estimated at \$3.2 billion in 2008, is expected to triple to \$14.4 billion by 2014.

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Executive Summary

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Streaming media technologies enable the real-time or on-demand distribution of audio, video, and multimedia content over the Internet, and have evolved into an integral part of the Internet experience for both consumers and enterprise users.

Normally delivered at broadband speed, streaming media allows users to receive audio, video, and multimedia presentations without the need to download files to their computers, saving time and storage, and providing media owners with built-in copy protection.

Today, streaming media is being used to replace other, static content forms, like CDs and DVDs, facilitate e-learning initiatives, and produce powerful advertising campaigns.

Streaming media technologies include:

- Content creation;
- Media players; and
- Content delivery networks (CDNs).

The content creation and media player markets are led by Apple, Adobe, Microsoft, and RealNetworks, while the major content delivery networks are dominated by Akamai, CDNetworks, and Limelight Networks.

At the enterprise level, the market for streaming media, estimated at \$3.2 billion in 2008, is expected to triple to \$14.4 billion by 2014, largely "in response to new technology that makes streaming more efficient than file transfer. (Streamed videos can play almost as soon as the Internet transfer is commenced.)"¹

Market Dynamics

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First appearing in the mid 90s, streaming media enables the real-time or on-demand distribution of audio, video, and multimedia content over the Internet. Streaming media was designed to eliminate the lengthy wait times involved in downloading audio and video files, since streamed media, especially streamed videos, can play almost as soon as the Internet transfer is commenced. The widespread availability of broadband access has accelerated the use of streaming media, furthering reducing content delivery lag time, and improving the user's experience.

Probably the biggest driver in the streaming media industry is the insatiable demand among consumers, particularly young consumers, for music and video. Despite controversies surrounding peer-to-peer networking and users' rights to share copyrighted material, streaming music has become a business phenomenon.

Another major driver is webcasting, in which organizations transmit visual and/or audio presentations over the Internet. Since anyone with a PC and a high-speed Internet connection -- virtually everyone -- can participate in a webcast, webcasting is gradually replacing more traditional forms of infrastructure-intensive audio and video conferencing.

In addition to conventional webcasting, "enterprise marketing departments have determined that they can leverage social networking [sites] and You Tube to introduce products and [gain] visibility for a marketing effort."²

One of the major problems affecting the adoption of streaming media, interoperability, is being eliminated through the introduction of communications standards. For example, MPEG (pronounced M-peg), which stands for Moving Picture Experts Group, is a family of standards used for coding audio-visual information (e.g., movies, video, music) in a digital compressed format. The latest standard, MPEG-4, promises to create interoperability for video delivered over the Internet and other distribution

channels. MPEG-4 will play back on many different devices -- from satellite television to wireless devices.

The streaming media market is generally divided into two segments:

- **Content creation and media players**, led by Apple, Adobe, Microsoft, and RealNetworks, and
- **Content delivery networks (CDNs)**, dominated by Akamai, CDNetworks, and Limelight Networks.

At the enterprise level -- where businesses are discovering the benefits of streaming media, particularly for training and advertising -- the market for streaming media, estimated at \$3.2 billion in 2008, is expected to triple to \$14.4 billion by 2014.

Market Leaders

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Within the streaming media market space, the content creation and media player markets are led by Apple, Adobe, Microsoft, and RealNetworks, while the major content delivery networks (CDNs) are dominated by Akamai, CDNetworks, and Limelight Networks.

Media Players

Apple QuickTime -- First developed for the Macintosh, but now equally popular for Microsoft Windows, QuickTime was the architecture upon which the MPEG-4 codec was based. Apple boasts that QuickTime offers strong support for standards, but in actuality, the standard has been formulated from the product. In addition to Macintosh and Windows downloads, the QuickTime player is also distributed in digital cameras; software for the education and entertainment markets; music CDs that also include some video; as part of AOL; and also as part of other Apple software products.

Adobe Flash -- While Flash is a plug-in and not a technically a desktop media player, its ubiquitous use justifies its inclusion in this category. Who has not witnessed a Flash presentation upon arriving at a Web site? Flash is readily customizable, allowing developers to control their audio and video presentations' appearance.

Microsoft Media Player -- As with so many other technologies produced by Microsoft, its Windows Media Player is the market leader, primarily because it's bundled as part of the various Windows operating systems. Microsoft encourages business users to deploy the Player with customized settings throughout their organization or business, distribute the Player with applications or Web sites, or develop custom products and services based on the Player.

RealNetworks RealPlayer -- The RealPlayer plays all major media formats including RealVideo, RealAudio, Windows Media, and Quicktime. This makes it easier for end users to decide on the media they want to access, not the format or software. RealNetworks takes universality a step further by providing RealPlayers for Windows, Macintosh, Linux, Unix, mobile phones, portable devices, set top

boxes, DVD players, and gaming consoles. RealPlayer Enterprise, or RealPlayer for Businesses, Schools and Government, provides business users with the best of the RealPlayer but without advertising, without requiring registration, and without consumer features businesses may not want in the workplace.

CDN Providers

Akamai -- Akamai Streaming Services combines proprietary streaming technology with the reach and capacity of the Akamai platform -- the world's largest fault-tolerant network including 40,000 servers in 70 countries -- to stream content both live and on-demand in any format. For on-demand requests, Akamai identifies the server closest to the user, routes the streams there and delivers them from the "edge" of the Internet. For live streaming, to avoid the "jerkiness" caused by packet loss, Akamai sends multiple copies of the same stream over different routes that are combined to form one complete stream for the highest quality streaming experience. Akamai supports Apple QuickTime, Microsoft Windows Media, RealSystem G2, and Adobe Flash Streaming, for both narrowband and broadband use.

CDNetworks -- CDNetworks offers a complete global network infrastructure including North America, Asia, and Europe, featuring 63 server farms and a 600+ Gbps service capacity. CDNetworks provides advanced services, based on state-of-the-art technologies -- such as traffic balancing technology (GSLB) and file synchronization. CDNetworks supports a range of file formats, such as Windows Media, Flash Video, DivX/H.264, etc.

Limelight Networks -- Limelight Networks boasts direct connections to nearly 900 user access networks around the world. And since most of these "edge" connections use superfast 10Gb Ethernet technology, content is delivered in the fastest way possible -- in most cases, straight to the networks the content audiences use every day, bypassing the often-congested Internet. Limelight Networks supports Windows Media, Flash, RealPlayer, Quicktime, and 3GPP.

Market Trends

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Within the enterprise, streaming media technologies are most often employed for knowledge sharing, e-learning (also known as distance learning), and, increasingly, sales and marketing.

Knowledge Sharing

Customer service and support has become an important segment of the streaming media market. Upon the advent of the Internet, businesses quickly learned that self-service customer support saved them money. Posting service-related documents where customers could easily locate them precluded the need for intervention by service personnel. These savings, and customers' problem-solving capabilities, have been increased by the use of streaming media. Instead of interminable call center wait times, customers prefer watching explanatory video clips online. Using streaming video and audio to explain product functions benefits both businesses and customers, saving money and increasing satisfaction.

E-Learning

Businesses can utilize streaming media to deliver seminars, presentations, and training to employees via their desktop, either live or on-demand, reducing both travel time and expenses. Similarly, educational institutions can provide coursework online, and the use of on-demand content further expands their educational reach. Adding voice and/or video demonstrations to static presentations has been proven to reduce the learning curve associated with even the most difficult to understand material. With the reduction in cost and improvement in features, e-learning software has reached beyond universities to include general business training.

Advertising

In spite of the negativity spawned by such Internet phenomena as viruses, spam, and fraudulent ad clicks, Web advertising has proven enormously successful. "Video ads are becoming more and more pervasive, and advertisers have more options than ever in the types of ads they deliver:

- **"On-Page"** -- Banner ads or "floating" Flash ads that are actually part of the webpage stream.
- **"Pre-roll"** -- Short video ads played before the requested video stream begins.
- **"Interstitial"** -- Short video ads played at regular intervals throughout the delivery of a live or long-form stream.
- **"Overlay"** -- New, sexy, and still emerging, overlay ads provide some form of animated textual or graphic content which is displayed as a layer overlaying the video. The upside is that they don't generally interrupt the underlying video, so the user continues a relatively uninterrupted experience. However they do distract from the video and are unpopular in many circles."³

Strategic Planning Implications

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According to one estimate, information is doubling at the rate of once every seven (7) months, and the rate is increasing. Streaming media promises to exacerbate this problem, particularly as enterprises:

- Leverage social networking sites and You Tube to introduce and promote products and gain market visibility;
- Turn to the Internet as a major marketing medium, on the par with television;
- Create increasingly sophisticated high-content and high-bandwidth video streams for advertising and e-learning;
- Increase their investment in webcasting to mitigate corporate travel expenses, especially during a global economic recession; and

- Replace high-volume media, like CDs and DVDs, with streamed education and entertainment content. (Music CDs are on the verge of extinction thanks to the music downloading.)

Just as e-mail forced information technology (IT) departments to expand their data storage and transmission capacity, streaming media will compel IT professionals to consider how media is produced, stored, and processed.

In addition, policies for the "Acceptable Use of Streaming Media" will emerge, addressing issues like:

- Media versioning and retention to save storage space;
- The judicious use of copyrighted material to prevent intellectual property violations; and
- Advertising standards to curtail the type of "in your face" product "placement" that alienates enterprise clients -- and prospective clients.

Within the enterprise, streaming media should be considered a critical asset, and streaming media planning should be conducted in full view of IT, Security, Risk Management, and Legal Department officials.

References

¹ "Video's Role In The Enterprise Accelerates Streaming Media Market Shares Market Strategy, and Market Forecasts, 2009-2015." WinterGreen Research. 2008.

² Ibid.

³ Dom Robinson. "Hitchhiker's Guide to Streaming Media: Online Video Advertising." StreamingMedia.com. September 30, 2008.

Web Links

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Akamai: <http://www.akamai.com/>

Apple Computer: <http://www.apple.com/>

Adobe: <http://www.adobe.com/>

CDNetworks: <http://www.cdnetworks.com/>

Limelight Networks: <http://www.limelightnetworks.com>

Microsoft: <http://www.microsoft.com/>

RealNetworks: <http://www.realnetworks.com/>

About the Authors

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