

MANAGING GROWTH IN ENTERPRISES: CONTENT DELIVERY

When Content Is King

With audio and video becoming commonplace online, enterprises are racing to deliver rich content to a global audience.

LIKE OTHER TECHNOLOGIES THAT made it big—stereo, color film, computer graphics—the Internet is “going Hollywood.” Static Website images and generic text are giving way to streaming video, live Webcasts and user-targeted entertainment such as music podcasts and sports videos.

This trend is hardly surprising. Eye-catching content can help turn pedestrian Websites into compelling destinations with up-to-the-minute news feeds and user-defined features. But even with sizable advances in network transmission rates, media and its high bandwidth requirements place a heavy burden on enterprises attempting to deliver dynamic content to online visitors. Moreover, the advent of the global economy has changed the nature of e-commerce.

These days a Website request can come from practically anywhere on the planet. But contrary to common assumption, when it comes to serving a Web page, closer is almost always better. Indeed, delivering rich content to a desktop in, say, Morocco can test the expertise of a U.S. business with a single data center in Minnesota.

To speed the flow of rich content over any distance, companies are turning to a new type of data distribution architecture. Known as a Content Delivery Network (CDN), it features geographically dispersed networked servers, called points of presence, which store and distribute media-bearing Web pages and services to site visitors



As consumers grow accustomed to streaming video, live Webcasts and individual features, CDNs satisfy demand.

worldwide. In essence, the servers mirror a client’s site. When a user requests content from that site, the material is sent via the closest server, generally enabling faster delivery. With these faster and more capacious broadband networks now in place, video clips and audio files can be downloaded within seconds.

“Content Delivery Networks essentially prepackage and keep content, such as frequently accessed video or data files, close to users,” says David A. Kelly, president of Upside Research, an enterprise technology research firm. That way, when a site visitor



New solutions serve up rich Web content with improved speed and flexibility.

requests a particular file, it will usually be delivered much more quickly than if it has to be retrieved from a central server.

During the past few years, some large enterprises have set up their own CDNs. Entertainment companies—broadcast networks and sports leagues, for instance—tend to maintain their own content delivery systems. The same is true for businesses that specialize in delivering rich media over the Web, such as Yahoo! or YouTube. Typically, these companies are eager to maintain as much flexibility as possible when serving up Web pages. “You can tune an in-house CDN specifically for your needs,” Kelly notes, “and then modify it as those needs change.”

Five-to-One Edge

Rich-content strategies can yield impressive returns. In a recent survey, online advertising research company DoubleClick found that visitors to Websites click on video ads about five times as often as they do on static pictures or graphics. In fact, most users have come to expect streaming video and live audio on corporate sites. “Media content is no longer a novelty,” says Steve Vonder Haar, research director for Interactive Media Strategies, a media consulting firm. “Enterprises need to take content delivery seriously.”

Still, for most businesses setting up a proprietary CDN may qualify as technology overkill. “It’s expensive,” cautions Paul A. Palumbo, re-

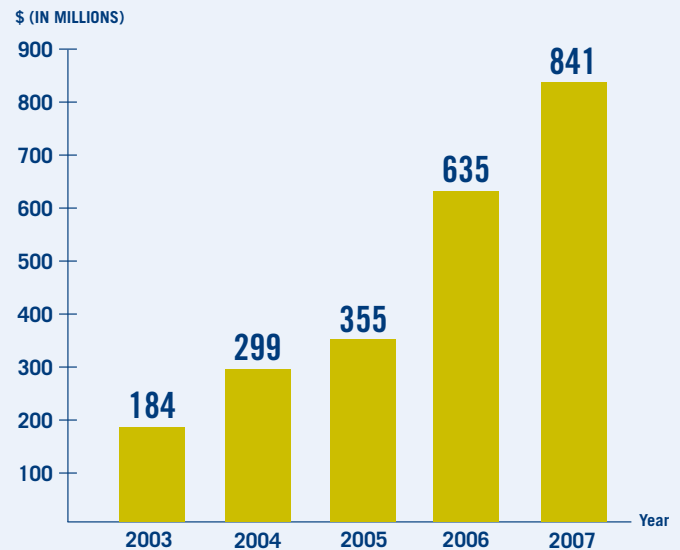
search director at AccuStream iMedia Research, a streaming and download media research firm. “[Operating] a CDN also requires dedicated, sustained capital investment in technical, operative and administrative areas.”

Instead, many large companies are contracting with third parties to deliver rich content. Typically, these vendors operate a host of far-flung, state-of-the-art data centers, usually connected by high-speed data transmission lines. They also deploy sophisticated software to better manage and direct content.

These companies can help provide stellar Web experiences for site visitors, eventually turning them into loyal customers. Certainly, a frustrating Web experience—slow downloads, stop-and-start video, static content and the like—tends to turn off prospective customers. “In many cases, up to 80% to 90% of the end-user response time is spent

Streams of Revenue

The combined commercial market value* for dynamic Web content—including streaming video and audio—continues to skyrocket.



*BACKHAUL, RETAIL, SELF-HOSTING
SOURCE: ACCUSTREAM IMEDIA RESEARCH, “CDN MARKET DYNAMICS, METRICS AND SHARE: 2006–2007,” MAY 2007

COMSTOCK IMAGES/JUPITER IMAGES

downloading Web page components such as images, videos, graphics and so on,” Kelly says. “CDNs can deliver these important page components efficiently by selecting the server with the fewest hops or with the quickest response times.”

Corporate interest in CDNs appears to be growing. The trend can be seen in the revenue growth in the CDN sector. According to Wainhouse Research, a rich-media consulting firm, the fledgling content delivery market is already showing significant strength and growth in revenue from both existing customers (as they increase their usage) and new customers.

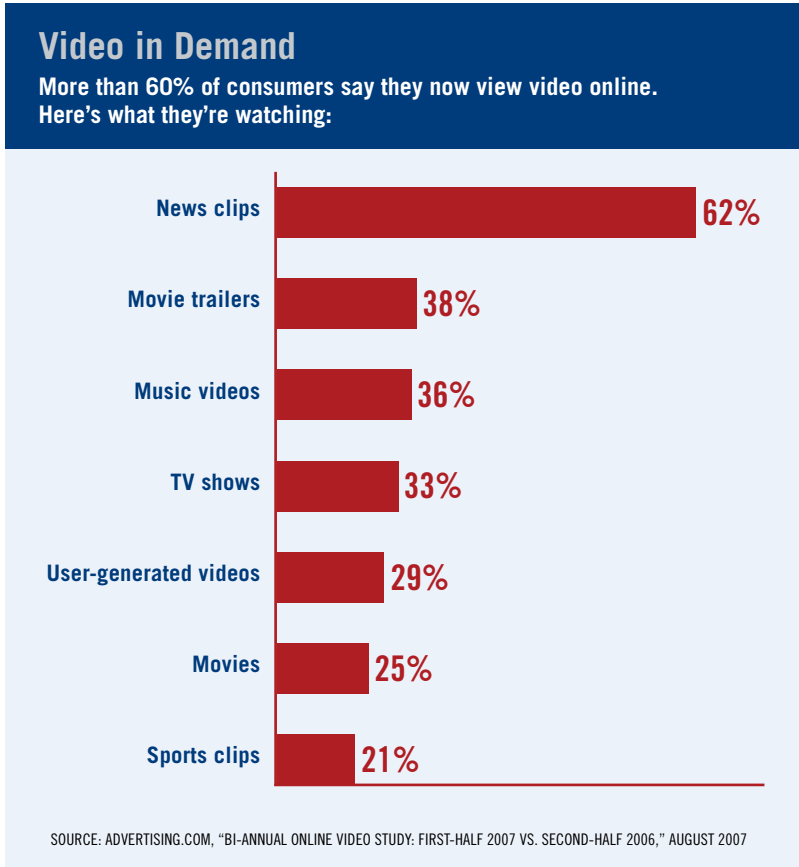
For a Limited Time Only

When choosing a CDN vendor, IT managers must examine specialized network design factors in addition to the vendor’s stability and longevity. The number of servers and their location is particularly important. “Points of presence reflect the size and reach of the CDN and its impact,” Vonder Haar explains. In other words, if an enterprise plans to serve up rich media to customers worldwide, it may not be wise to select a CDN that’s limited to a handful of servers in North America—no matter what the price.

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Beyond network scope, Wainhouse senior analyst and partner Ira Weinstein notes that it is vital to pick a CDN provider that has smart routing technologies. Such tools enable the vendor to send prioritized data packets from servers to end users—quickly and reliably. Adds Vonder Haar: “Look behind the gloss to see what the provider really offers.”

The same advice applies to rates charged by CDNs. Fees for



content delivery services vary widely. In general, consultants advise corporate IT managers to be wary of rock-bottom rates. Deloitte Consulting principal Doug Shoupp says prospective buyers should pay particular attention to what he calls the CDN hurdle rate—the point at which bandwidth usage hits a specified level, thus triggering a rate increase. Like credit-card companies that entice consumers with low introductory interest rates that later skyrocket, some CDNs entice enterprises with bargain-basement pricing. But those charges often rise to market levels—or beyond—once bandwidth hits the hurdle rate.

Service Level Agreements (SLAs) also call for close scrutiny. Most providers offer an SLA covering different aspects of network performance, including speed, bandwidth and disruptions. Enterprise IT managers should carefully analyze all aspects of an SLA and negotiate the details that are not acceptable. “Know what your needs and goals are up front before talking to a CDN,” Palumbo suggests. “They’re experts at distribution, not figuring out your business model.”