

## Yahoo ramping up mobile video offerings

By [Dan Butcher](#)

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*Yahoo is betting that mobile video advertising will be a cash cow*

Yahoo's online video experience covers a multitude of topics, from fast-breaking news to sports and entertainment, and its strategy is to transfer that same online experience to mobile.

Yahoo is a global leader in online and mobile news and content, and video is playing an ever-increasing role in their product mix. Yahoo tapped Dilithium to provide the technology back-end for its mobile video platform.

"Yahoo has had a very strong online and broadband presence and they were looking to expand to mobile," said Paul Zuber, CEO of Dilithium, Petaluma, CA. "Like a lot of companies coming from the broadband world, they found that the PC world is a lot simpler than the mobile world, because there's not a huge number of devices or media, whereas in the mobile world there are various standards, bit-rates and screen-sizes to factor in.

"They tried to develop something internally, but decided it wouldn't have the scalability they wanted, so they tested our solution, which is compliant with 98 percent of devices they wanted to support right away," he said. "Yahoo had both a technical requirement and an economical requirement—budget considerations.

"In the mobile world, people really want that immediacy, and you can't get around the problem by storing content in hundreds of different formats—the way we work, you can store content in one format and optimize for the mobile device on the fly in real time."



*The sky's the limit for mobile video*

[Yahoo](#) has a consistent approach to online and [mobile video](#). The company leads off with an advertisement followed up by a sequence of three-to-four-minute video clips.

Once a consumer starts watching, the clips keep coming. Yahoo keeps eyeballs focused on Yahoo by playing a continuous line-up of relevant content and monetized with an occasional targeted advertisement.

[Dilithium](#) specializes in mobile video adaptation and delivery. Dilithium products are deployed in more than 160 companies worldwide.



*Paul Zuber is the CEO of Dilithium*

### **The challenge**

Yahoo had built up a formidable online video presence when the decision was made to go after the mobile space.

That decision came with a multitude of challenges, including the need to support an easy-to-maintain interface consistent with the Yahoo look and feel and the need for highly scalable streaming facilities.

Yahoo also needs the ability to manage constant content churn across at least 15 categories and the ability and control to queue up advertisements and content playlists on mobile.

Yahoo needs to adapt content to nearly 40 different formats to cover the handset mix and deliver video via RTSP and HTTP-progressive download from a single platform. In addition, Yahoo needs to provide a quality experience over EDGE, 3G and WiFi networks.

Yahoo first assembled a batch tool chain to ingest, transcode and deliver the content.

As simple as it sounds, it was quickly confirmed that it required too much effort to produce the 30-40 required outputs per content.

Furthermore, the pace of change in the content lineup made it clear that automation and real-time content determination and on-demand transcoding had to drive the mobile video platform.

While the homegrown platform produced good high-quality results, it was clear that it was not going to scale into a production system. So, Yahoo set about searching for a vendor to partner with to power its mobile video platform.

Yahoo was looking for a programmable service that could ingest almost any source content and deliver it to nearly any handset on the market.

The platform needed to initially serve 5,000 concurrent sessions and keep growing and had to be flexible enough to support and integrate into the Yahoo experience and support a wide range of wireless devices.

Real-time targeting of content and ads was also key. The service had to allow Yahoo to determine which content and targeted ads to use per user in real time.

The platform also had to automate the transcoding of nearly 40 outputs per clip and it had to be customizable by Yahoo to provide usage analytics in real-time and integrate with their proprietary content security.

The software-only service had to run on existing, inexpensive off-the-shelf hardware.

### **DCA**

The Dilithium Content Adaptor met Yahoo's requirements. The DCA enables Yahoo to deliver a dynamic video experience across a wide variety of handsets

The DCA was built from the ground up to perform real-time, on-demand transcoding for mobile devices. For Yahoo that means automation of the nearly 40 content transcodings per clip.

Since DCA transcodes on-demand, the first user to request new content automatically triggers the transcoding. On-demand preserves the time sensitivity of news items and reduces pressure on operation centers.

The software-based service runs on off-the-shelf servers, eliminating the need to add more hardware and complexity to the network.

The DCA's transcoding capabilities mean that Yahoo can support all the popular Internet-enabled handsets from a single platform.

This expanded Yahoo's reach to Apple's iPhone OS 2.0, RIM's BlackBerry, Google's Android, Palm, Nokia's Symbian, Samsung and most other 2.5 and 3G handsets.

The DCA provides smart caching as a part of its scaling service. In order to reach maximum session capacity per server, the DCA remembers what it has transcoded.

Once content has been adapted to one of the 40 outputs, it is stored in cache. All future requests are served from cache resulting in a much higher server throughput.

The DCA's ability to stream clip after clip as a playlist rather than returning the user to the WAP interface again and again gave Yahoo the ability to match the key online viewing experience on mobile.

The DCA's URL-based API and scriptable interfaces provided Yahoo the ability to serve targeted ads and custom playlists in real time on a per-user/per-call basis.

According to Dilithium, the same API lets Yahoo serve content at different bit rates, frame rates and codecs to provide a quality experience for all networks—EDGE, 3G and WiFi.

The DCA's clientless approach to all mobile delivery allowed Yahoo to design and maintain a WAP application of their choice.

Then, through standard HTTP and URL coding, Yahoo could invoke the DCA to serve content as needed.

Due to the open platform approach, Yahoo was able to integrate their content security scheme on the DCA without professional services.

And the DCA grows as Yahoo video traffic grows.

DCA is deployed on standard Intel-based servers with no custom hardware or expensive DSP requirements. This lets Yahoo optimize and plan their server resources more effectively.

Dilithium claims that the DCA was the first to support real-time streaming to the iPhone. The DCA made any content streamable to iPhone version 2.0—the version that did not support streaming.

## **Results**

Yahoo's goal was to provide compelling mobile video content to keep its 600 million customers visiting every day and generate revenue via advertising.

The DCA supported the Yahoo mobile strategy by providing real-time, on-demand any-to-any content adaptation, enabling delivery of the widest range of content to the widest range of devices.

Yahoo taps the DCA to support new wireless devices and new releases for existing devices.

Dilithium claims that savings in storage were achieved as content no longer needed to be stored in multiple formats and continually transcoded.

The DCA smart caching ability allowed for much higher server throughput.

Finally, no additional or new hardware needed to be added to the network since the DCA runs on off the shelf servers.

Yahoo continues to evolve its mobile video strategy.

Dilithium's DCA is enabling Yahoo to deploy additional revenue-generating services and applications with technical features such as live streaming, caching, stream splitting, dynamic bit-rate adaptation and full-featured iPhone OS3 support.

"They have their own advertising mechanisms, and whatever they decide to deploy now or in the future, we can support," Mr. Zuber said. "Whether it's preroll, postroll, interstitial or whatever, to us it's just another video stream."

*Staff Reporter Dan Butcher covers ad networks, banking and payments, carrier networks, manufacturers, and software and technology. Reach him at [dan@mobilemarketer.com](mailto:dan@mobilemarketer.com).*

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