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New IPTV App Paradigm Delivers Potent Mix of TV and Web Assets

Innovations by Minerva And Microsoft Open Door On New App Development Era

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The days of bifurcation between what is TV and what is Web content are about to end with the coming of middleware platforms that blend assets from the two media sources on the fly.

Until now, the thinking about bringing Web content to the TV has been all about simply enabling a formatting process that translates over-the-top content to TV viewing, with some variations that visualize deeper adaptation of Web video for the TV experience through intermediary manipulations on the part of service providers or others. But a true blend of the two that can dynamically tap specific assets from any source and combine them into a single viewing experience that scales to millions of viewers and changes swiftly with new ad and programming cycles has been impossible.

"The ingredients are in place for IPTV operators to finally take advantage of the Internet and really deliver on the promise of TV 2.0," says Mauro Bonomi, CEO of middleware supplier Minerva Networks. "If you look ahead, a number of platform providers including Microsoft, Minerva and others are creating the environment that will allow service providers to begin exploiting these capabilities in the second half of this year."

Minerva, with the forthcoming release of version 4.0 of its platform, and Microsoft, with general release of what it calls the Presentation Framework component of its Mediaroom middleware at the start of this

year, are transforming the applications development environment by allowing developers to position apps in the cloud as Web services. Typically, such apps include widgets (chunks of code) that can be pulled into IPTV content streams by commands from the middleware. Once the widgets are embedded in the content stream, users can engage with the applications as if they resided on the set-top.

"Unlike many other app engines, with Presentation Framework there's no software stack sitting in the client," says Shari Barnett, director of media services at Microsoft's Connected TV unit. "It's all in the network, leveraging the set-top as a Web-connected device."

Hints of what's in store have been on view at demonstrations offered by Microsoft and its content partners starting last year in September at the IBC conference in Amsterdam, following beta release of Presentation Framework to 100 developers, and extending to the recent NAB conference in Las Vegas. Using the framework building blocks, Associated Press, for example, unveiled a new applications strategy at the CES show in January which it hopes will seed its news content into the TV entertainment environment, vastly expanding its reach and exposure.

AP, working with Canadian applications developer ES3, built an automated AP news ticker that delivers headlines directly through the Mediaroom TV Dashboard, allowing IPTV subscribers to access local news and information while watching other TV programming content. AP is also offering a "red carpet" feed featuring news, photos and video clips from high-profile celebrity events. Both applications can be implemented by Mediaroom-based service providers who contract directly with AP.

"With Microsoft Mediaroom, AP is crossing a significant milestone in its mission to



Mauro Bonomi, CEO,
Minerva Networks

explore new digital outlets for AP and its member news organizations," notes Jeffrey Litvack, AP's general manager for mobile and emerging products. "With these applications, viewers could simultaneously access breaking news from across the nation without missing a second of their favorite television program, movie, live entertainment or sporting event."

"These AP applications are accessing existing Web servers and bringing the content to the TV," Barnett notes. "Options presented to the viewer allow you to pick and choose bits and pieces from AP. There's nothing pre-set in the content stream; no need for the IPTV content and the app to talk to each other."

BBC, too, is shopping Web-based ITV apps developed in cooperation with emuse on the Microsoft platform to promote wider distribution of a car-themed sitcom called "Top Gear." The apps allow viewers to tap Web-based clips, car reviews and other information and even entire past shows. And Turner Sports

and PGA of America, working with ES3, have developed an application that allows viewers to switch dynamically between camera feeds, watch golfing instructional videos and click from static to video advertisements.

As seen in demonstrations, these ITV experiences are compellingly rendered in a seamless, latency-free way that's a far cry from the early days of ITV. That it is all being done through on-the-fly compilation of content residing on the Web with the IPTV content is all the more impressive. "These aren't canned demos," Barnett says. "It's all happening in real time using Web assets."

Barnett's group is in the process of rewriting the Mediaroom user interface to exploit the functionalities of the Presentation Framework, she notes. "We're evolving our on-demand UI right now," she says.

Where, today, developers can't get to the metadata that lives on the VOD server, the new UI will expose APIs that make the metadata accessible, thereby allowing developers to create applications that don't have to be embedded in the UI. With the positioning of the entire UI in Presentation Framework the Mediaroom guide will

essentially be distributed as an application that can be frequently changed, whereas it originally was hard coded to pull data in a set way. "For us, in terms of how we evolve the guide going forward, it's the difference between tweaking and having to recode every time we want to do something different," Barnett says.

While these are early days in the transition to this new approach to ITV, Bonomi believes there's an explosive potential for service differentiation in the IPTV space following the app-store model that has swept the mobile phone market. "You need three things – a large applications base, a set of widgets and an open commercial environment like the Apple iPhone app store," he says.

"The concept that the platform vendor can host a set of applications that can be delivered over the top to a managed network is very appealing," he continues. By working through such app stores with multiple platform vendors developers will be able to maximize the reach of their Web-based apps, thereby overcoming the restrictions now imposed in one-to-one development scenarios.

The IPTV footprint is expanding at an

accelerating pace. In the case of Mediaroom, its reach hit the 1.5-million household mark last September and now stands at three million. AT&T, already pushing the app envelope with whole-home DVR, TV-based Yellow Pages, scheduling of DVR recordings via mobile and much else in the U-verse space, is upgrading its Mediaroom foundation to accommodate Presentation Framework throughout its service area, Barnett notes. There are now about 60 development companies worldwide working with Mediaroom's 20 or so service provider customers to create applications.

Bonomi notes the new Web-based app paradigm will also allow widgets to be used to bring Web-based social networking applications to the TV. "There's no reason not to bring all the social experience of the Web to the TV set," he says. "With a simple click of the remote you could share with your friends, via a social networking site, information about what you are watching."

"The key is to tap into relevant Internet data to enhance the viewing experience," Bonomi says. "This is a powerful way for an IPTV operator to deliver a better television service." ■