

Hybrid Multimedia Platforms Bring New Revenue Models

Consumers want sophisticated functions in digital multimedia equipment, but they want those functions to be easy to understand and to control. With its latest development, a software solution for set-top boxes (STBs), Oregon Networks, Ltd. of London, England aims to ensure simplicity and economy, as well as advanced performance. Now celebrating its 10th anniversary, the company is a specialist in embedded solutions for digital home entertainment. Its new STB software, known as the Moka platform, offers a solution for hybrid cable, satellite and terrestrial receivers with Internet protocol (IP) connectivity.

Moka combines Web-browsing capabilities with ways to gain access to entertainment programs from a variety of broadcast sources, and with ways to record those programs and distribute them to multiple rooms within the household. Besides simplicity and convenience, the user interface features significantly faster operation than competing systems. Through a single, unified application that offers on-screen TV menus, users can gain access to personal, broadcast and broadband content through the home network, and can share that content through the same network.

Besides the platform, Oregon also offers a system integration kit that is compatible with Adobe Flash designs and with Asynchronous JavaScript and XML (AJAX) for the graphical user interface (GUI).

Renovation Begins in Living Rooms

According to Milya Timergaleva, Vice President of Marketing at Oregon Networks, a battle for the living room is in progress as various kinds of content, including user-generated content, broadcast programs, downloaded material and packaged software vie for consumer attention. At the same time, different "device ecosystems" struggle to become the household



Hybrid platforms give users easy access to a multitude of data, whether using TVs or mobile phones.

media gateway. Users, however, do not care who wins the home gateway battle: They just want an easy way to gain access to all the categories of content in different social situations. For users, the ideal approach means having the ability to shift content seamlessly from one kind of device to another, and from one network to another.

With its ease of use and low cost of entry, the Internet adds a new dimension to the home multimedia market. Additionally, the common standards for content distribution on the Internet generate natural synergies between companies and technologies.

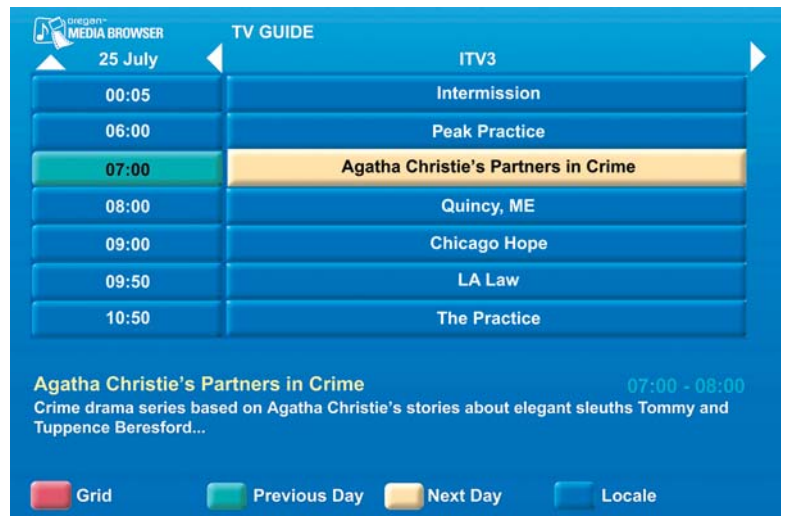
These synergies support the possibility of certain scenarios. For instance, the pay-per-action advertising model might migrate from the personal computer to the TV domain. In turn, this might prompt Google, DoubleClick and other big names in the computer search-and-advertising industry to raise their stakes in TV advertising.

Another possibility could affect the hardware field. Growing numbers of retail-distributed devices like flat-panel TVs now come standard with Ethernet, Universal Plug-and-Play (UPnP) and other systems for home networks. Trends to add these network functions to the set's digital broadcast tuner could cause the role of the operator-subsidized or loaned set-top box to dwindle. Instead, consumers might begin to buy their own personal video recorders (PVRs), gaming consoles and portable media centers.

Hybrids: The New Generation

Among the challenges broadcast operators historically have had to wrestle are the complexities of managing comprehensive delivery solutions. The everyday use of Internet services and widespread familiarity with the advantages of digital formats have made interactive capabilities extremely appealing to subscribers. This increases the challenge for broadcasters, who must find ways to accommodate this trend while tailoring services and experience to each customer's preferences.

Besides requiring increasingly sophisticated features and functions, consumers also are becoming more quality-con-



Sample menu from the Oregon Media Browser

scious than ever before. If traditional and broadband content operators hope to succeed with this new breed of digital consumer, they will have to find ways to deliver best of both worlds. That means adopting hybrid networks, devices and services.

For Oregon Networks, the term "hybrid products" covers any customer premises equipment that combines the ability to access multiple sources of content. This includes IP networks, broadcast media, and storage devices like Universal Serial Bus (USB) drives and memory cards. Along similar lines, hybrid architectures are those that enable content services, do not require dedicated return channels, and enable non-computer devices to leverage the power of Web analytics. Platforms using hybrid architectures allow operators to push large volumes of content, and allow subscribers to pull extensive content archives through Web-based directory and search facilities.

Hybrid Seeds, New Models

These capabilities promise to help operators move out of the traditional content provider "box" and to position them to generate new revenue streams. This is because IP-capable equipment will have access to additional content and will be able to deliver interactive, advertising-sponsored programming. Meanwhile, the transition to digital broadcasting will change the definition of customer premises equipment, and even the design and function of such equipment. This adaptation will affect TVs, gaming consoles and other mainstream consumer electronics.

As broadcasting converges with broadband, it will allow operators to use the Internet bandwidth to push on-demand services with higher-than-usual margins. At the same time, these operators will be able to continue using their digital broadcast media for linear channels.

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Additionally, place-shifting, Web-based advertising and other features resulting from IP technology will enhance service brands by allowing the owners of these brands to reach their customers anytime, anywhere, on any device. This kind of targeted content promises to make interactive services compelling for users, by offering personal and contextual relevance. Using this perspective, some companies may be able to cultivate so-called sticky services, those that attract many customers quickly and keep them coming back for more.

Platform Benefits

Oregon Networks has positioned itself in the center of the computer, pay-TV and mainstream consumer electronics worlds. By using IP architectures, the company aims to enable

delivery and sharing of targeted content across platforms and ecosystems. With the simplicity, economy and performance of its Moka hybrid platform, the company seeks to empower the hybrid strategies of digital broadcasters and vendors of converged consumer electronics.

Besides offering flexibility in the choice of design environment for the graphical user interface, Moka also allows developers to plug in the digital rights management (DRM) and conditional access technologies that the operator requires. Similar plug-ins are possible for other portions of the client-side content delivery system.

The Moka architecture for STBs incorporates a number of cost-reduction mechanisms for increasingly complex, power-hungry features. This is possible because Oregon Networks's software architecture and code efficiency help decrease the CPU resource consumption up to 60 percent when network and

media streaming applications are running. The company also can offer streamlined processes and tools for design, and for branding and customizing media-rendering devices.

Through its technology innovations, Oregon also strives to enhance the consumer experience, by accelerating the device operation and improving the user interface. By adopting a unified, on-screen TV application, the company aims to make it convenient and simple for people to access and share digital multimedia content on the home network.

Also targeting use in STBs is the Oregon Media Browser. The company is working with leading STB manufacturers in Europe to design this browser's features into devices that will incorporate satellite, terrestrial and IP capabilities in a single device. It will work with home network and with Web-based content. Oregon estimates that European shipments of such devices will surpass 1.5 million units in 2008. **JEI**