Revolutionizing the Development of IPTV

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Orca Interactive, a member of the Emblaze Group and global market leader in developing applications for IPTV, today announced its new Set-Top-Box Fit Client Architecture, thus revolutionizing the development of IPTV applications SUI (Subscriber UI) on Set-Top-Boxes (STBs).

Orca will present the new Fit Client Architecture at IBC 2004 during September 10-14, in Hall 2, stand #2230. The presentation will include a live demonstration of the new product and on-the-spot development and customization.

The new Fit Client Architecture is part of Orca Interactive's RiGHTv(TM) applications software solutions that include RiGHTv(TM) XVOD, RiGHTv(TM) XBIP (Broadcast services) and RiGHTv(TM) XPVR. The Fit Client Architecture includes a runtime environment (SUI Framework) transparently portable to any STB, a software development kit (SDK), and a reference implementation. The Fit Client Architecture is based on the industry-proven MVC (Model-View-Controller) Design Pattern, and is designed to enable System Integrators, Service Providers and STB manufacturers to customize and develop their own SUI applications. The reference implementation, known as "Ruby SUI", has already been ported to Amino AmiNet110 and Kreatel IP-STB 1510 STBs. The Fit Client architecture has already been used by GooMe Interactive for developing a SUI application after winning an RFP issued by iVISJON. The major R&D effort needed to develop the Fit Client was jointly financed by Orca Interactive and by the Israeli Office of Chief Scientist. The joint financing agreement was approved after a thorough evaluation of the innovation, originality, and novelty of the new

product, and its future impact on development of IPTV applications.

The development of STB middleware for IPTV started over six years ago using thick clients in the "c" programming language by North American middleware companies. The pioneers of the IPTV technology were forced into this course mainly due to the immaturity of STBs and the lack of STB infrastructure and browser software. Such thick client middleware had very little customization capabilities, and its porting to new STBs was a long and expensive task.

A few years later, Orca Interactive and other companies adopted the thin client approach mostly due to economical reasons. This approach leveraged on the increasing standardization in browsers and STBs. While this more modern approach provided for much better customization and porting capabilities, it had its own drawbacks, such as a high dependency on the server and the network in order to provide service.

The next step on the evolutionary ladder is here: Orca Interactive now combines the best of both worlds into a best-of-breed Fit Client Architecture. It combines the advantages of a thick client such as robustness, data caching, standalone operation, and optimized network usage, with the benefits of the thin client such as portability, easy customization, rapid development, and openness to system integrators.

Orca's new Fit Client provides the following benefits:

-- Quick and easy portability between IP-based STBs;

-- Full thick-client functionality, including data caching on the STB;

-- Standalone high-availability mode, which provides channel zapping and EPG capabilities even when communications to the server is down;

-- Complete customization using RiGHTv SUI SDK, allowing system integrators, service providers, and STB manufacturers to modify and enhance the SUI according to their needs;

-- Third-party development capabilities using the SDK, allowing system integrators to port existing SUI to new STBs, add features to an existing SUI, and even build a SUI from scratch.

The Fit Client Architecture is based on the industry-proven Model-View-Controller (MVC) design pattern adapted to the special needs and the small-footprint of the STB environment (such as a weak CPU, limited memory, and no hard disk). The Fit Client contains the following components:

-- The model is a distributed data cache that resides both on the STB and on the RiGHTv servers. Essential and frequently accessed information is cached on the STB for quick access and high-availability. Rarely used data is fetched from the server on demand, allowing unlimited data scalability even for low-end set-top boxes with limited RAM.

-- The controller provides an advanced and highly structured state machine that manages the flow of the SUI. The controller handles screen transitions, subscriber and system events, and exceptions.

-- The view handles the presentation aspects of the application. By changing only the view, the SUI developer can change graphical aspects of the application and port the application from one STB to another.

-- Several libraries of out-of-the-box API, which handles remote-control events, video events, and exception events. The API saves the SUI developer from dealing with the specifics of the STB, and provides an additional abstraction layer for porting.

-- A software development kit (SDK) that allows any third-party SUI developer (system integrator, STB manufacturer, or customer) to quickly extend and customize SUI applications, port between STBs, or even build a new SUI from scratch. The SDK is fully documented and includes a step-by-step tutorial and training material.

-- A server-side logging tool that allows centralized debugging of STB activities.

-- A reference implementation providing a fully operational SUI, including EPG, VOD, PVR, personalized information, and more.

"Orca's new Fit Client Architecture not only combines the best of both worlds - thick client and thin client - but also provides capabilities never before seen on IP STBs. It allows for unmatched portability, customizability, and service availability. It is the first product of its kind, designed from the ground up for the development of IPTV applications by system integrators," said Dotan Naveh, Vice President of Research and Development for Orca Interactive. "The Fit Client contains features that were only available on cable or satellite platforms until today. Its short learning curve and SDK provide strong revenue opportunities for system integrators."

Fit Client complements Orca Interactive's Telco-grade IPTV environment by enhancing the high-availability and scalability of the solution. It also adds an important aspect to Orca's "System-Integrator-Enabled" platform, making SUI development easier and more cost-effective.

GooMe Interactive (www.goome.com) has already used Orca's capabilities and has independently developed a SUI for iVISJON (www.ivisjon.no) on top of the RiGHTv platform. The combined solution is operational in Norway, providing VOD, live TV, games on

demand, and other interactive services. "Orca's platform facilitates a revenue stream for system integrators by enabling them to completely develop and maintain an IPTV SUI application for their customers," said Danny Peled, CEO of GooMe Interactive. "By working on top of the RiGHTv SUI SDK, we were able to develop an entire TV application that utilizes all the benefits and features of Orca's middleware."

"Amino collaborates with middleware vendors to develop innovative, robust, and customizable STB applications. Together with Orca, we have pioneered technologies such as SUI based on Macromedia Flash," said Mike Greenall of Amino Communications. "The Fit Client allows for very quick customization by local system integrators, using our flexibility and multi-language features, and results in excellent support for international markets. Its small footprint gives maximum choice to the service providers, who can flexibly select hardware and software components to tailor the STB to their cost-performance requirements."

"Orca and Kreatel have a long history of cooperation and mutual development, resulting in leading IPTV applications running on Kreatel IP set-top boxes", said Lars Bengtsson, President and CEO of Kreatel. "Now with their Fit Client Architecture, Orca can better utilize advanced Kreatel features, such as our ADK (Application Development Kit), in order to create applications that are more robust, customizable, and feature-rich. The Fit Client allows standards-based development of IPTV applications by system integrators and operators, which is in line with Kreatel's strategy of investing heavily in SDKs and providing a wide range of options and maximum flexibility to external developers."

The original press release can be found here.

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