HOW DIGITAL TELEVISION IS REVOLUTIONIZING CONTENT OUTPUT

Digital Television

The steady uptake of digital television in UK households has caused a surge in the number channels and other digital interactive services available to viewers. In fact, it is estimated that by 2007, 3 in every 4 households will have digital television. Mediasurface looks at the corresponding requirement to control and manage the vast amount of content output this will inevitably create.

Overview

Over 98% of households in the UK have one or more televisions of which 56% use digital television. Digital television changes the way people think about television by offering more choice and interaction. It is predicted that up to 75% of UK households will have digital television by 2007.

Clearly, with the rapid uptake in broadband services (there are currently over 6 million broadband subscriptions in the UK), digital interactive services delivered using digital television will become more and more important to business and the community.

Naturally with the increase in content being delivered and the digital channels being published to, comes the need to centralize, manage and re-purpose content in as easy a way as possible.

Technologies in use:

As you can imagine, with multiple operators there are multiple technologies in delivering content to set-top boxes. This currently means that content on one platform is not easily re-purposed to another.
To understand what the differences are, below is a list of the technologies used by the operators:

Sky

Initially Sky built interactive services using OpenTV. One of the main disadvantages of this was a lack of return path therefore limiting interaction between user and the service provider.
Sky now use the Sky WML Microbrowser to run applications on their set-top boxes. This works like a normal browser on a PC but uses a markup language called "WTVML" (this is based on the Wireless Application Protocol, WAP). The markup language has tags specific to set-top box applications e.g. advert banners.

If a user wants to access a site using Sky, the internal modem dials for a connection which is then used to send and retrieve information for the site in the same way a dial-up modem is used for browsing the internet. At this point in time, a user is restricted to Sky delivered sites.

NTL/ Telewest

Cable providers like NTL and Telewest use the Liberate platform to run applications on their set-top boxes. Again, as with Sky, this works by using a browser (called the "TV Navigator Client Standard") running on the set-top box.

The markup language used for developing sites on the Liberate platform is HTML and JavaScript, which means web developers can quickly build applications for the platform using their existing skills. Each set-top box has an in-built cable modem, meaning no dial-up is required for accessing services. Again, users are limited to NTL/Telewest delivered sites.

Freeview

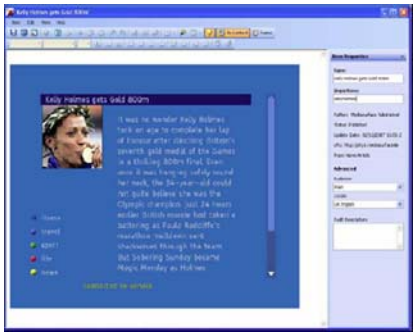
Freeview set-top boxes run applications using the MHEG-5 (Multimedia and Hypermedia information coding Expert Group) standard. Each Freeview set-top has a MHEG-5 engine which extracts the multimedia/hypermedia from the incoming digital stream, interprets the data, and displays on the subscribers television screen.

Applications are loaded differently to the Sky/Cable platforms in that rather than using a modem, applications are downloaded via the digital stream (or "carousel") to the set-top box which are consequently run. Only one application may be running at a time. However, as no modem exists in a Freeview set-top box there is no return path meaning an enhanced TV experience rather than an interactive one.

Morello's role

Clearly, Mediasurface's Web Content Management system (WCM) Morello, sits perfectly with the technologies used by Sky and NTL/Telewest as they use browser type applications. A user requests a page from a site and the page returned is rendered by the browser on the set-top box. They both use markup languages to render pages (WTVML for Sky and HTML/Javascript for NTL/Telewest) that can be created using the Morello application and Java Server Pages. Morello goes a step further with the Sky platform for creating sites. Using an ActiveX plug-in and Morello, pages can be created and then previewed as to how they would look on a Sky set-top box.

Sites can be built in the same way on the Liberate platform (NTL/Telewest) and can then be previewed using an emulator available from the Liberate site. The MHEG-5 standard (used for Freeview) is a little different. Rather than pages being requested by the user, each time a user makes a request a new application is downloaded from the carousel via the broadcaster and run. Although there are some similarities in how pages work e.g. data can be passed between applications, the MHEG applications need to be within the broadcaster's carousel.



One possible way of utilizing Morello with the MHEG platform would be to create templates that generate MHEG applications i.e. code. These applications would then need to be loaded into the carousel by the broadcaster, awaiting download by Freeview set-top boxes. Previewing for the MHEG platform can be achieved using an emulator. There does not seem to be one freely available at the moment but emulators are available for purchase. So, to re-cap, Morello can be used to run create and run sites, not only on the web, voice, WAP etc., but on all three digital TV platforms.

Summary

Morello allows companies to build interactive applications for all available digital TV platforms now. This, coupled with ability to contribute once and publish everywhere sits perfectly within the "Content Everywhere" era we currently live in. Morello is only limited by the platforms available now and the technologies consumers and businesses use for the creation and consumption of content.

As interactive TV becomes truly "interactive", it will be even more important that companies can deliver scalable applications with re-usable content across as many digital channels as possible. The television will become the device that people use to get at content rather than the PC.

MS-MO-BF0088-EN-1.1

MEDIASURFACE®

UNITED KINGDOM (HQ)
Mediasurface Europe Limited
T: +44 (0)1635 262000
E: info@mediasurface.com
W: www.mediasurface.co.uk

CONTINENTAL EUROPE
Mediasurface B.V.
T: +31 (0)35 625 7890
E: info@nl.mediasurface.com
W: www.mediasurface.nl

NETHERLANDS
Mediasurface B.V.
T: +31 (0)35 625 7890
E: info@nl.mediasurface.com
W: www.mediasurface.nl

BELGIUM
Mediasurface Belgium
T: +32 (0)2 403 1215
E: info@be.mediasurface.com
W: www.mediasurface.be

UNITED STATES (East Coast)
Mediasurface Inc.
T: +1 (203) 653 9090
E: info@us.mediasurface.com
W: www.mediasurface.com

UNITED STATES (West Coast)
Mediasurface Inc.
T: +1 (949) 936 2658
E: info@us.mediasurface.com
W: www.mediasurface.com

ASIA-PACIFIC
Mediasurface Australia
T: +61 2 9968 2449
E: info@au.mediasurface.com
W: www.mediasurface.com

INDIA
Mediasurface India
T: +91 8025 210 740
E: info@in.mediasurface.com
W: www.mediasurface.com