The long-promised age of interactive TV finally dawns
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On Saturday afternoon May 28 as 2pm approached, tennis fans watching the No. 1 seed, Spain's Rafael Nadal, cruising in his third-round French Open match against unseeded Croatian Antonio Veic on the Court Philippe Chatrier at Roland-Garros, might have been curious about the concurrent match being more tightly contested on Court Suzanne Lenglen. Britain's Andy Murray, the No. 4 seed, had sprained an ankle 10 minutes earlier and just had his serve broken by unseeded Michael Berrer of Germany. But fans watching the France Télévisions broadcast on certain Internet-connected TVs, were able to monitor the Murray-Berrer match – which Murray ultimately won on route to his semi-final showdown with Nadal – in real-time, complete with live match statistics, without ever turning away from the Nadal-Veic action.

The Connected TV Phenomenon

The concept of the connected TV is not new. This year more than 25% of all flat panel TVs shipped worldwide are expected to have some form of Internet connectivity. And that proportion is projected to grow to nearly half by 2015, or an estimated 138 million units, according to the most recent quarterly forecast by DisplaySearch. Research firm Strategy Analytics projects even greater market penetration, with 67% of all flat panel TVs sold in 2015 to be connected TVs. Connected TVs represent one of the biggest growth opportunities over the next five years as major vendors, including Samsung, LG and Sony, push their Smart TV initiatives. Global connected TV device revenues will total more than $95 billion in 2015, Strategy Analytics forecasts.

“Connected Television is a Tsunami in the making,” French Minister of Communications Frederic Mitterand told a gathering at the MIPTV conference in Cannes in April. He expects the proportion of connected TV sold in France to reach 70% by just 2013.

The connected TV, whether a set with built-in Internet access or connected through a set-top box, is growing in popularity for the array of so-called over-the-top (OTT) video services available today, from streaming movies and video on-demand services to user-generated video on YouTube and TV catch-up services from a range of broadcasters and other companies. The ranks of connected TVs are also growing thanks to consumer electronics (CE) manufacturers that offer Internet connectivity through ubiquitous gaming consoles such as the X-box, Wii and Playstation, as well as Blu-ray disc players, digital video recorders, media players and countless other ancillary electronics connected to TV sets worldwide.
Netherlands

Dutch public broadcasters will launch their first HbbTV pilot in September, freeing them from developing interactive applications for specific devices, according to a senior policy advisor for Netherlands Public Broadcasting [NPO, Nederlandse Publieke Omroep]. HbbTV ‘red button’ applications will be transmitted with all three national public networks, Nederland 1, 2 and 3. Bram Tullemans, senior policy advisor for research and development at NPO told an audience at the Telecompaper Connected TV conference in Utrecht in April. These could include an EPG for the public channels, with ‘now’ and ‘next’ information, access to catch-up TV and other functions, including the ability to create a personalised EPG to linear and on-demand programming.

Also potentially in the works is the ability to add social media functions, including Twitter, Facebook and Hyves. “But users have complete control over this, not everyone will want to use social media,” Tullemans reportedly added.

The pilot will link to existing broadcaster web pages. The NPO, the umbrella organisation of the public broadcasters, has developed a prototype ‘lean back navigation’ with two cross bars, one for left to right and one for up and down navigation.

“We have chosen HbbTV as it is the de facto standard – and because of the fast uptake,” said Tullemans. “Also, because it is a single development platform.”

Dutch public broadcasters have been particularly successful with the catch-up TV service “Uitzending Gemist”, which offers about 16 hours of new programming every day. The service is available on the web and on most cable and IPTV platforms.12
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As patterns of video consumption change and consumers grow more accustomed to viewing entertainment on-demand and in a personalized and often social ways, a deeper convergence of television and the Internet is emerging. Broadcasters and media companies that ignore these advances do so at their peril.

“The Internet is fundamental to the future of television for one simple reason: because it's what people want,” asserted Google Executive Chairman Eric Schmidt, giving the MacTaggart Lecture at the MediaGuardian Edinburgh International Television Festival in August. Technologically, the Internet is a platform for things that traditional TV cannot support. It makes TV more personal, more participative, more pertinent.”

Strategy Analytics agrees, predicting that in the long term, Internet distributed television and connected TVs will reshape the entire television ecosystem and fundamentally disrupt and transform the traditional television distribution model.

A hybrid standard emerges

The advancing technology offers both opportunities and threats for the various broadcasters, cable and satellite providers, CE manufacturers, software developers and media companies that constitute the ecosystem. New life can be injected into traditional broadcast TV with the accessibility of rich content and interactive services, while at the same time a door is opened to new competitors that can now distribute content directly to consumers.

Spain

In June Spanish broadcaster Mediaset España (Telecinco) teamed with incumbent communications operator Telefónica to launch the country’s first HbbTV pilot. Telecinco's mid-day and prime time news programme (Informativos de Telecinco), fiction series (Piratas, Ángel o demonio, Vida loca, La que se avecina), entertainment shows (La Noria, Más allá de la vida) and products specifically designed for Internet (Becari@s, Novios y residentes en Malaguita) were the first programmes to be broadcast using HbbTV technology. The pilot system enables viewers to access additional information from the Internet about each of the shows as well as access social networks – all through the television screen.

In the initial HbbTV trial, compatible TV screens include a side bar that provides access via the TV remote to interactive applications containing additional information and links to social networks. After this initial stage of compatibility testing, Telecinco plans to add content from Telefónica’s OTT VOD services such as Movistar Imagenio, Movistar Videoclub and Terra TV. Mediaset is developing applications, including a special version of the ‘Mi Mundo’ (My World) portal from Telefonica’s Movistar Imagenio. Mediaset España also plans to make video content from its Internet sites – such as the portals Telecinco and Cuatro MiTele and Play Cuatro as well as Telefónica’s web TV service Terra TV – previously accessible only from a PC or tablet, available to HbbTV-compatible TVs.

Mediaset and Telefonica said the platform is open to all audio-visual providers in Spain. The pilot was launched June 18, less than one month after the companies publically announced their partnership in May.

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As the connected world extended its boundaries to embrace the home television, industry leaders saw the need to for standards to facilitate rapid adoption while ensuring a compelling consumer experience. In June 2009 a pan-European, cross-industry consortium formed, bringing together two similar French and German projects, into the Hybrid broadband broadcast TV (HbbTV) initiative, aimed at harmonising the broadcast and broadband delivery of entertainment, news and information to consumers through connected TVs and set-top boxes.

And since then, the initiative has advanced at Internet speed. The Consortium submitted its specification – based on elements of existing standards and web technologies including OIPF (Open IPTV Forum), CEA, DVB and W3C – to the European Telecommunications Standards Institute (ETSI) in December 2009, and also conducted its first interoperability workshop.7 Version 1.1.1 of the specification was approved by ETSI (as ETSI TS 102 796) in June 2010.

Germany was among the first to deploy HbbTV in 2010, adding “teletext” service – sending enhanced program guides (EPGs) and other information – on ten channels via satellite (DVB-S). Eighteen months later French national broadcaster France Télévisions deployed live HbbTV nationwide applications at the French Open Tennis tournament at Roland-Garros in May. The broadcast featured real-time scores of simultaneous matches, full match statistics, bios of all tournament players, news, photos and a Twitter stream of all tournament action, accessible from a single button on the remote of HbbTV-capable TV sets.

Germany

On the heels of Germany’s deployment of satellite HbbTV service last year, in May Tele Columbus, a leading German cable operator, announced plans to launch a new HbbTV service. In addition to its existing free and pay-TV offerings, Tele Columbus will make supplementary content and services available to subscribers, including video streaming and regional programming, the company said.

Tele Columbus plans to work with content owners, publishing houses, web portals and regional companies to create the addition of value-added content and application-based services for the Tele Columbus network. The cable company provides partners with an HbbTV application interface template that can be tailored to their requirements and populated with content. The new applications can either be made available across the entire Tele Columbus HbbTV network or targeted to specific regions and local areas, the company said.10

“The new HbbTV service will complement our linear and interactive TV product world as one of the most advanced offerings in the German market,” said Dietmar Schickel, Chief Commercial Officer at Tele Columbus.11 “We have prepared this step carefully through the launch of a new hybrid receiver at the beginning of 2010.”
The long-promised age of interactive TV finally dawns. The HbbTV standard provides the features and functionality required to deliver feature-rich broadcast and Internet services. Yet by utilizing standard Internet technology, it enables rapid application development, defining the minimum requirements and thus simplifying implementation. It leaves room for differentiation, while limiting the investment required by CE manufacturers to build compliant devices. The specification does not depend on a particular broadcast or IP link. Applicable to either connection, it provides maximum capability by integrating both broadcast and broadband.

“A social layer is something viewers – or at least a substantial number – clearly want,” Schmidt told UK broadcasters. “It’s also great for broadcasters. Trending hashtags raise awareness of shows, helping boost ratings. It can be metric for viewer engagement, a vehicle for instant feedback, a channel for reaching people outside broadcast times.”

France

Game, set & match for HbbTV

Working closely in collaboration IBM, broadcaster France Télévisions launched the first live HbbTV service broadcast in France for the duration of the French Open Tennis tournament at Roland-Garros in May.

The Federation Française du Tennis (FFT) and the Roland-Garros have a long-established and successful history of identifying innovative technology solutions, and IBM has been an innovation partner to the FFT for more than a quarter of a century. The HbbTV interactive services and programs broadcast simultaneously during the French Open allowed tennis fans with HbbTV-capable TVs to access a wealth of additional content and information, operated from their TV remote control, all while simultaneously enjoying the broadcast feed and not missing one second of the exciting action taking place on the courts.

Similar to the “Red Button” services in the UK, the HbbTV broadcast in France used a single button to allow for enhanced viewing, supplementary data and interactivity on HbbTV-enabled TVs currently available from a range of manufacturers including Sony, Samsung, Philips, LG Electronics, Loewe, Panasonic and Toshiba. During the broadcast of the tournament on the two France Télévisions channels, a small on-screen logo indicated the availability of HbbTV content. Viewers could then launch a menu of available data and services that were arranged around the resized window of live action.

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An open platform
Aimed at providing an alternative to proprietary technologies and an open platform for broadcasters to deliver value added on-demand services to viewers, HbbTV is designed to offer a seamless entertainment experience with the combined richness of broadcast and broadband. Proponents note that the experience will be delivered with the simplicity of one remote control, on one screen and with the ease-of-use television viewers are accustomed to.

France (continued)
Among the available information was:
- Real-time match statistics, based on IBM’s highly regarded Pointstream service;
- Scores of simultaneous matches;
- Bios of all tournament players;
- News, photos and a Twitter stream of tournament action;
- On-demand 3D videos of certain matches (only available on 3D-capable TV sets).

IBM developed a set of cloud-based services to ‘feed’ information to the interactive applications and worked with French interactive television services developer WizTiv on the interface. The entire set of applications was effectively designed, developed, deployed and monitored in a matter of weeks, using the agile IBM Web2.0 development platform, Websphere sMash.

The service needed to be deployed nation-wide from day one and required the elasticity and scalability to cope with the event-driven and hard to predict usage patterns. The IBM public cloud environment – IBM SmartCloud Enterprise Plus – allowed both the dynamic scalability and the ability to decommission the applications at tournament’s ended in a cost-effective manner.

HbbTV-compatible devices will let consumers access new services from entertainment providers such as broadcasters, online providers and CE manufacturers – including catch-up TV, video on demand (VoD), interactive advertising, personalisation, in-show voting, games and social networking, as well as programme-related services such as digital text and EPGs. HbbTV products and services are being developed for all broadcasting technologies including satellite, cable and terrestrial networks.
HbbTV applications go beyond the current state of the art in convergence – simply allowing viewers to access the Internet (content and services) on a TV screen using its remote. Such features are widely available on Internet-connected TVs and from devices like TiVo DVRs, Blu-ray disc players and gaming consoles. Such Internet content and services are not contextual to or integrated with broadcast content. HbbTV defines standards for delivering Internet transmission in parallel with broadcast transmission, so that Internet content can be accessed and watched simultaneously with a TV program, allowing broadcasters to augment broadcasts with relevant information from the Internet.

The standard allows for both broadcast-dependent interactive applications and broadcast-independent applications. Such services – known as over-the-top (OTT), delivered by the likes of LoveFilm, MTG’s Viaplay, BSkyB’s Sky Anytime+, Deutsche Telekom’s Videoload, Telecom Italia’s Cubovision and many others – are growing increasingly popular. HbbTV enables delivering such services with an open distribution model and with no need for a dedicated operator network or a proprietary set-top box.

Telecom operators, which are starting to see the benefits of such over-the-OTT services in Europe, are adapting to the opportunities offered by connected TVs. In Italy, for example, Telecom Italia has partnered with TV manufacturer Samsung to launch an “app” specifically designed and developed for the Samsung Smart TV. When consumers in Italy connect a Samsung TV to the Internet, the app enables them to access content offered by Telecom Italia – whether or not they are Telecom Italia broadband customers. The connected TV app extends Telecom Italia’s reach potentially to every household in Italy with a broadband connection. Telecom Italia has also announced plans to be allow other content services and owners to use its “trusted gateway,” providing them aggregation and billing services.

Now much of Europe – including Germany, France, Spain, Italy, Switzerland, the Netherlands and the Czech Republic – have begun pilots or announced plans to deploy HbbTV. One exception is in the UK, where the alternative YouView platform (formerly Project Canvas) is backed by BBC as well as incumbent telecom BT, TalkTalk and Vodafone UK and others. YouView, however, is reportedly still a year away from launch.9

**Transforming an audience into customers**

Over the relatively short time they have been available, Internet-connected TVs have grown widely accepted by consumers, broadcasters, communications service providers and a range of other broadband service providers. As leading CE manufacturers have shifted their output almost exclusively to the connected TV, the trend should only accelerate.

Although Samsung has established an early lead with a strong lineup of content and applications on its connected TV platform, incumbent broadcasters, communications service providers, pay-TV providers, OTT services and Internet companies are not standing idly by as hybrid systems emerge. U.S. powerhouse Netflix announced in August that it will launch service in Spain in January, and Google TV will be launched in Europe within six months.15 The call to innovation applies equally to all broadcasters, content providers and device makers in the emerging ecosystems surrounding the connected TV. The market is nascent, yet developing at a blistering pace.

Mitterand’s ‘Tsunami in the making’ is a disruptive force – enabling an ever-increasing number of new entrants and niche players into the content-delivery value chain, directly reaching consumers via the home TV screen. As the television and IP services converge, which new value added services will deliver the greatest returns?
Through HbbTV broadcasters can extend and enhance the linear viewing experience – most notably for sports and other live events but also for movies and other programs – providing new, interactive advertising models to complement traditional advertising. Compelling personalized services could unlock the promise of home shopping and e-commerce, as well as bring customized catch-up and replay services directly to viewers, who can share viewing experiences, content recommendations and other interactions via social networks. The new world of interactive TV promises to transform the traditional TV audience into millions of individual customers.

Yet to fully exploit this potential, broadcasters and other providers will need to complement the standard with a range of new capabilities – not the least of which will be sophisticated viewer analytics and cloud-based interactive services. Taking a page from the success manual of Amazon, advanced viewer profiling and consumer analytics can pave the way toward direct, one-to-one relationships with viewers.

Getting the business and consumer analytics right will be a key to competing in the ever-more crowded marketplace for compelling and personalized content delivery. Providers will also need access to new cloud-based service-delivery platforms to accommodate the vast catalogs of on-demand content. They must be individually personalized and integrated with new services – including payment processing where appropriate – which are key to securing the necessary return and maintaining competitive advantage.

Cloud-based services promise the flexibility and agility needed, while minimizing costly, dedicated infrastructure. The evolution of the connected TV towards an open HbbTV standard will enable providers to compete on content and services rather than on technology and devices. How each player fits into this evolving ecosystem will go a long way toward determining its long-term prosperity.
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Thank you to the following contributors:
Jean-Charles Cointot, Communications Service Provider Industry Leader, France
Jean-Luc Collet, Lead Architect for Video Solutions, IBM La Gaude Business Solution Center, France

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11. Ibid.


