Arqiva – Connected Broadcasting

Preliminary White Paper:

What is Connected Broadcasting?

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Introduction

Any cursory scan of the trade press will show that we are in a period of persistent technological innovation within the TV industry. As the TV converges with the web, new service and device innovations appear to launch weekly. The rapid take-up of this new technology is slowly changing the nature of broadcast TV; both its delivery and consumption.

TV audiences are beginning to complement their linear broadcast viewing with a combination of time-shifting on a personal video recorder (PVR) or some form of on-demand. Likewise, smart broadband-connected devices, used either in or out of the home, have liberated TV from a single ‘main’ set, onto multiple devices and onto multiple screens.

Understandably, broadcasters and content distributors have had to adapt in order to address a wide variety of new challenges in order to deliver a high quality experience in this evolved landscape. As long-standing infrastructure developers dedicated to enabling connectivity throughout the TV delivery chain, Arqiva understand this new landscape offers both prospects and challenges. The complicated and ever-changing nature of the connected landscape requires clarification and simplification. Therefore, over the course of 12 months of research, insight and thought leadership, in partnership with consultancy partners Decipher, we will investigate and illuminate the key trends, needs and innovations which are driving the industry forward.

This paper sets the scene for this forthcoming programme and will contextualise the landscape changes which drove us to support customers is the challenging and evolving marketplace.
The Evolving Landscape

The development of TV delivery and consumption has been widely discussed in both the consumer and trade press. There are three broad themes which form the basis of industry progress:

- Increased smart device ownership by an increasingly tech-savvy user base,
- Improved infrastructure, both in and out of the home,
- The resilience of live, broadcast at the heart of TV consumption

Across most mature media markets, consumers have become increasingly technology-literate which has trickled down into their TV consumption and is beginning to influence established habits. Sophisticated behaviours such as streamed viewing when on the go, or ownership of digital libraries of content are no longer reserved for early adopters.

The multi-screen home is now commonplace, a year ago nearly one-quarter of the UK population had access to four screens at home (TV, computer, smartphone and tablet) compared to only 11% in 2012 (Kantar Media, futurePROOF, 2013). Ownership and use of multiple screens is matched in other territories too: TNS reported in July 2014 that 25% of their worldwide consumer survey watch content on a PC, laptop, tablet or mobile daily. This rises to 33% in mainland China and Singapore and 32% in Hong Kong.

Significantly, many of these devices are now permanently internet connected, both in and out of the home. To match this demand, BT have expanded their fibre broadband footprint.

As a result, we are seeing increased consumer demand for access to the value-delivering “content everywhere/anytime”, whereby users have access to content when and where they want it, not when the provider or broadcaster dictates. Despite these changes, scheduled linear delivery remains the major method of mass market content consumption. So, new consumption is by no mean marginalising traditional viewing. Due to broadcast economics and the nature of rights agreements, we expect this to be sustained for many years to come. From an audience point of view, there is a
comfort factor associated with the linear TV model. As a distribution mechanism it remains unmatched for reliability and in simplicity of reaching large audiences with programming and advertising.

In the current model, traditional broadcast platforms still provide access to the linear broadcast, but this is now almost guaranteed to be supported by an OTT, catch-up TV or on-demand (VOD) service. This is not to say that these services could not offer access to linear, it’s just that due to current delivery methods, the complexities of media processing and limitations of the underlying technologies, this has not started to happen en masse until very recently.

The industry is now in the enviable position of being able to work with emerging consumer behaviour, rather than trying to engender change within an unwilling audience. It is now time for providers in the value chain to step forward and meet consumer expectations for convergence in TV. Innovation should build on the most successful areas of TV video consumption and offer a much more powerful, flexible and efficient model.

90% of TV viewing is still linear, with the remaining 10% via recording devices or viewing of catch-up TV services (BARB, 2013).
What is Connected Broadcasting?

It is as a consequence of this technology development and the slow evolution of user behaviour, the marketplace at all stages on the content value chain has fragmented. At early stages of industry development, this was bred from the need for speedy innovation and to cover knowledge gaps. However, as services mature, a disjointed collection of partners and technology silos suppress convergence and prevent well integrated user experiences.

Current inefficient workflows, based on technology not intended for true television broadcasting, are currently used to deliver to emerging platforms. This is creating complexity, operational inefficiency and cost for broadcasters. So what is the solution? Already responsible for the UK’s terrestrial television infrastructure, Arqiva has the unique ability to deliver an experience from video encoding through the value chain to user consumption.

Since the acquisition of ConnectTV in 2012 and Capablue in 2014, the solution builds broader capabilities onto Arqiva’s traditional foundations. In doing so, we provide robust support for multiple devices, access points and platforms. The sum of this forming four key ‘Connected Broadcasting’ components:

1. A true ‘contribute once over any network, distribute anywhere’ solution. Including linear broadcast, connected devices and VOD;
2. High volume, multi-format transcoding and metadata transformation, enabling delivery of content to any publisher, platform or bespoke portal;
3. Secure content management, storage, curation and packaging supported by broadcast service levels;
4. Delivery to anywhere; digital terrestrial, DTH satellite, cable head-ends, OTT / STB / smart TV, online, tablet, mobile…

‘Connected Broadcasting’ reflects Arqiva’s ability to provide single content processing and delivery solutions that work across traditional broadcast platforms as well as connected devices (PC, mobile, tablet and IETV, hybrid TV and consoles).

It is paralleled by the broader direction that the industry is taking towards better connected solutions within the TV device market. Open standards such as HbbTV, HTML5, MPEG-DASH and Common Encryption technologies are driving this consolidation. However this is in only small sections of the value chain. The online video platforms
being used today are not and were not designed to support the demands of true broadcast television. They do not have the reach, resilience or scale to contribute content and channels to traditional broadcast networks, so cannot truly deliver ‘TV anywhere’.

At Arqiva we understand the different ways in which people are watching television and consuming content. We recognise that while investment in new technology and business models has been on-going over the years, it has typically been incremental, supporting ad hoc change rather than enabling major transformation. We seek to do things differently and the drive is now for truly connected services, designed for television, which combine the best of traditional workflow efficiency and reliability with the reach, scalability and dynamic operations to deliver end-to-end on all consumer devices.

**Why Connected Broadcasting Matters**

For many years, traditional broadcast infrastructure service providers like Arqiva, have been trusted with the high quality, reliable management and distribution of broadcast television signals. In this business, extensive resilience, skilled engineering support and deep knowledge of broadcast is expected. To date, delivering to connected devices has been a complimentary but side-line innovation, developed in house to differentiate and drive innovation. Due to the origin of many connected services with web and online teams, relationship have been established with software companies, not broadcast service providers, leading to variable levels of quality and delivery.

Encouraged by excellent services from the BBC iPlayer, Sky Go and Netflix, consumers will no longer accept a poor user experience or any form of loss of service. Broadcast quality now extends beyond the television.

Traditional linear delivery now makes up only one, albeit very important, element of a broadcast offer that includes an ever increasing mix of consumption devices, choices and demands. The challenge will be to ensure consistent quality of end user experience, regardless of channel or device.

Achieving this demands something different. As the trend towards outsourcing (or insourcing) core broadcast infrastructure continues apace, and internal self-build over-the-top (OTT) platforms are nearing end of life, there is a compelling reason to approach things from another angle. Consider a consolidated platform, built to support end-to-end traditional broadcast and connected device delivery, which will enable broadcasters to reduce cost, improve speed to market and maintain
expected levels of service. This type of approach would offer consistent and reliable delivery of the right content anywhere, anytime and anyhow. It would remove the operational complexity and cost of reliance on multiple technologies, partners and commercial models, delivering true ‘broadcast quality’ connected services.

**Summary**

We believe that very few, if any, single organisations can currently provide this complete end-to-end service. A service that combines the experience and operational heritage in delivering independent broadcast solutions, and the global scale in media workflow management, publishing, processing and distribution required, with the credibility and creativity needed to deliver front end multi-device customer management, metadata management, user experiences and monetisation.

Some years ago, the thought of putting playout services in the hands of an external service provider was unheard of. Yet today broadcasters think nothing of it. Arqiva’s own European Playout Centre opened its doors in 2012 to deliver a range of HD television playout services. We believe a similar step change can help broadcasters cost effectively manage the new world order of Connected Broadcasting.

It is because of this that Arqiva, through engagement with Decipher Media Consultancy, have decided to run a yearlong program of thought leadership exploring the future of TV with a specific focus on Connected Broadcasting. Through a series of insight-led white papers and events, a comprehensive overview of Connected Broadcasting will be delivered. Kicking off in September 2014, Wave 1 will debrief on the Evolving User and Emerging Landscape – this research and analysis will outline and give in-depth insight into the key consumer and industry trends behind the arrival of Connected Broadcasting. Wave 2, in December, will turn to the Customer’s Perspective investigating the needs and challenges of those traditional and emerging customers of video infrastructure services. In 2015, we will provide a conceptual perspective on the way connected broadcasting can be used to depart from the norm – what new opportunities are now available for existing market participants and new video/TV market entrants. Finally wave 4 delivered in June 2015, will define a true twenty-first century broadcaster.
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