Exploring internet contribution and distribution

Arqiva and Net Insight whitepaper

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Introduction

Content distribution over the internet has come of age – with broadcasters and media providers enthusiastically embracing the channel as a true alternative to dedicated fibre, MPLS and satellite transmission. Questions, however, remain. The internet was never designed to handle the requirements of high-load broadcast services and security and quality concerns persist.

Working together, Arqiva and Net Insight have developed a fully-managed, end-to-end IP contribution service that leverages the latest technologies to eliminate the imperfections normally associated with internet grade transport.

The Internet Contribution Service (ICS) bridges the gap between the best-effort nature of the internet, and the high reliability and quality requirements demanded by Tier 1 broadcasters – and offers exciting new opportunities to extend audiences, break new markets and dramatically reduce the cost of transport.

IP contribution 101

IP contribution is a relatively simple concept – converting the feed to IP and distribute over the public internet. Its attractiveness as a media transport mechanism is clear when compared with the infrastructure costs of fibre, and the limited availability and long lease times associated with satellite contribution links. IP is fast, scalable, secure and self-healing. Perhaps more importantly, it opens up a host of business opportunities – from enabling 'fast start' trials in new geographies, to volume distribution models hosted in the cloud.

While much of the discussion today centres on leveraging IP to deliver live sports and outside broadcast coverage, it can play a much more fundamental role as the primary media distribution channel – either in place of fibre and satellite options, or to augment them, in particular use cases.

IP contribution use cases

- **Multiple endpoint delivery:** Broadcasters wishing to move live video content to multiple endpoints around the globe typically use fibre. This is a high cost activity. Leverage IP contribution and cloud-hosting eliminates the need for high cost lease lines and offers a virtual repository of content to deliver/pull from.

- **Fast start audience acquisition:** Establishing services in a new market requires a considerable infrastructure investment, long lead times and long-term financial commitment to the geography. IP contribution gives broadcasters the flexibility to fast trial services without the expenditure or commitments.

- **Addressing niche audiences:** Avoiding the high costs and longer-term commitments of fibre, internet contribution enables broadcasters to service smaller, cost sensitive audiences more effectively – maximising returns and delivering a greater choice of channels.

- **Disaster recovery and continuity:** With customer experience crucial in today's competitive world, a growing number of Tier 1 operators are choosing to deploy IP contribution as a 'go to' channel in the event of problems with existing fibre and/or satellite distribution.

- **Content acquisition:** Cable operators are often limited by the feeds available on distribution satellites in their respective regions. By leveraging an internet contribution solution, they are now no longer limited just by the availability of these channels, they can also pick and choose what quality they want to acquire.

Ultimately, the low cost, flexible nature of IP contribution is its key advantage – delivering the kind of business agility broadcasters have been unable to achieve with conventional approaches. They no longer have to 'commit' to a region for a minimum period of time (in the case of fibre, this could be a as much as three years), or manage limited availability, high cost satellite connections. All of which allows more budget to be directed elsewhere in the business.

The Arqiva approach

The Arqiva approach offers an end-to-end media distribution solution that includes IP, satellite and fibre– giving broadcasters reach, flexibility and the choice to use whichever platform is best suited to the business need.

For those exploring their IP contribution options, Arqiva has partnered with Net Insight to deliver a fully-managed service. At the heart of the solution, the Net Insight Nimbra VA family ranges from an impressive & flexible integrated 4-channel H264/HEVC encoder/decoder to standalone transport and virtual appliances.

Each option is built on the same carrier grade platform that significantly enhances the transport properties of the underlying IP infrastructure to assure reliable video transport over the public internet.

With security an imperative, each appliance is stringently tested to assure the highest levels of security – with a fully configurable firewall locking down the device and only providing management and video traffic access through dedicated VPN tunnels. The content itself is also highly encrypted using AES 256 encryption.

To ensure reliance, a minimum of two ISPs are contracted as part of the end-to-end management solution. This ensures no single point of failure should one ISP have problems – the other seamlessly takes the load.

The appliances comes pre-configured, and are controlled and monitored 24x7 – just as we would any broadcast service. It all adds up to a highly reliant, flexible and low-cost distribution option – whatever the business case.

The Arqiva Internet Contribution Service (ICS) is available around the world, including: Canada, Congo, France, Germany, Greece, Guinea, Iceland, Italy, Jordan, Kazakhstan, Netherlands, Philippines, Senegal, Singapore, Turkey, US and the UK.

Arqiva has transmitted over 300,000 hours of live video content

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An interconnected future

As we move into tomorrow, and High Efficiency Video Coding (HEVC) becomes the primary distribution for UHD content, Arqiva customers will benefit from increasingly tighter technical and commercial integration with fibre and satellite products – with all broadcast services integrated under a single, powerful management umbrella.

Added to this, with IP contribution the primary method of delivering content into (and out of) the cloud, Arqiva will drive greater levels of virtualisation to position the cloud as the perfect mass-distribution platform for premium content.

For more information, go to:
arqiva.com/overviews/tv/fibre-and-ip-connectivity/

For more information about Net Insight's Nimbra VA family, go to:
netinsight.net/products-services/internet-media-transport/

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About Arqiva

Arqiva is a leading UK communications infrastructure and media services provider dedicated to connecting people wherever they are through the delivery of TV, radio, mobile and the Internet of Things (IoT). We are an independent provider of telecom towers, with circa 8,000 active sites across Great Britain, and are also the only supplier of national terrestrial television and radio broadcasting services in the UK. Our advanced networks support the exponential growth of connected devices and the ever-increasing demand for data from smartphones to tablets, connected TVs, smart meters, cars and medical devices.

For more information, news and insights from Arqiva,
please visit the website at **arqiva.com**

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netinsight

About Net Insight

Net Insight's vision is to enable a live and interactive media experience for anyone on earth. Our aim is to lead progress and enable a global media marketplace where live content can be exchanged and interaction among TV audiences can take place in real-time. We want to create the media experience of the future, centered on content.

Net Insight delivers products, software and services for effective, high-quality media transport, coupled with the effective management of resources, all, which creates an enhanced TV experience. Net Insight's offerings span across the entire media spectrum, starting from TV cameras and TV studios, right through to the TV consumers. Our solutions benefit network operators, and TV and production companies, by lowering total cost of ownership, improving their workflow efficiencies and providing them with the ability to capture new business opportunities.

More than 500 world-class customers run mission critical media services using Net Insight's solutions, covering more than 60 countries worldwide. Net Insight is listed on Nasdaq Stockholm.

For more information, please visit **netinsight.net**

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out more, let's talk.

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