

Channel in a Box Forum

Even more boxes

With Channel-in-a-Box continuing to occupy a great many broadcasting minds, we felt a second Forum was needed this year. **Philip Stevens** moderates

CHANNEL-IN-A-BOX (CiaB) acceptance has now reached the stage where the benefits — especially in terms of capital and operating expenditure, and space demands — far outweigh the perceived downsides. Nevertheless, questions still remain in some minds, around 4K and second screens, for example.

The panellists discussing these and other issues in this month's Forum are (in alphabetical order) Don Ash, managing director, PlayBox Technology; Mark Errington, CEO, BroadStream Solutions; James Gilbert, CEO, Pixel Power; Karl Mehring,

senior product manager, TV Everywhere at Snell; Scott Rose, director of product management, Grass Valley; Mat Shell, proposals and solutions manager, Pebble Beach Systems; Stephen Smith, product line manager, Imagine Communications; Bruce Straight, vice president sales and marketing, ToolsOnAir; Andy Warman, director of product management, media servers and storage, Harmonic; Jan Weigner, managing director and CTO, Cinegy; and Goce Zdravkoski, managing director, Stryme.

We last looked at CiaB earlier this year. What are the latest developments since that time?

Ash: The first half of 2014 has proved extremely dynamic and successful. CiaB is now recognised right across the industry as being fully complementary to traditional high-end systems, as well as being ideal for emerging markets and low-budget installations. We have recently been working with Toronto-based Masstech Group which offers some of the world's most advanced asset management and archiving systems. The combined skills of the two companies have proved so powerful that we plan for Masstech to acquire the products and technology of PlayBox. Our software designers and their Masstech colleagues have been cooperating very closely to achieve the tightest possible convergence between

our CiaB technology, created on AirBox, and Masstech's MasStore technology and the Masstech for Enterprise solution. The goal is to create a seamless, end-to-end file-based broadcast environment where playout and graphics are fully integrated with the asset management system.

Errington: Having determined that a standard IT server can handle a fully-featured channel, and that these servers can handle increased channel count and complexity of secondary events, there is an interesting divergence of direction going on with regard to vendor offerings in CiaB. Some are creating hardware-specific edge devices, which is not significantly different from a standard server running as an



Don Ash, PlayBox Technology



James Gilbert, Pixel Power Solutions

edge device (which has been around for many years), some are looking more to end-to-end IP solutions, and in some cases those are combined with 'cloud' architecture — whether private or public. These models are still evolving and I believe a hybrid of hardware-specific and IT

solutions will exist for some time to come as broadcasters sweat some of their legacy equipment before fully embracing an all-IP solution.

Gilbert: What I see as the important development in this market is that it is diverging. The mechanics of

Channel-in-a-Box are pretty well established, and each vendor now has to put a distinctive spin on it. At Pixel Power, we see broadcasters and content owners wanting to migrate more of their channels to simple, low impact technology. The key issue, though, is that they do not want to lose any functionality or, more important, quality. So our solution is focused on the real requirements of broadcasters today. In particular, we start with the branding and work back from there. Our central graphics platform, Clarity, already has all the video processing needed for a channel playout, like video servers, realtime effects and, of course, multiple layers of 3D graphics — all the things you need in a premium playout suite. So, we built ChannelMaster from the Clarity graphics platform, rather than take an off-the-shelf PC and try to make it do things it is not very good at achieving. In conjunction with either our own Gallium software or any other playout and asset management tool, ChannelMaster really does do all you need for a true Channel-in-a-Box — including advanced functionality like automated menu and promo production, complex 3D graphics and squeezebacks.

Mehring: At Snell, our focus has been on giving broadcasters more functionality, flexibility, and creativity with advanced CiaB technology. This includes taking the 'box' out of CiaB and focusing on software. We do this by taking rule-based approaches to common problems — such as 'now and next' menus, and auto population that removes



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support its services in Germany, Asia and New Zealand. Each server is located at the local transmission platform's network operations centre where it provides a complete channel as a high quality digital feed. The only connection between the EdgeBox and TCI's headquarters in London is via the internet. This transports all video material, subtitles, captions and graphics as well as playlists and monitoring data between the remote site and TCI's operations headquarters in London, making the whole system schedule-driven. Each EdgeBox is configured with full redundancy and includes AirBox playout servers, supplied complete with multi-channel audio and SafeBox content management. Each receives files, sent via the internet and based on FTP, that include media and playlists from TCI in London. It then checks it has the required media to fulfil the playlists, sending a list of any missing media items back to HQ.

Errington: The Customer required a unique solution to a re-broadcast requirement, taking three live input feeds, opt-out ad insertion, and opt-out programming, all time delayed. Traditional solutions would have required several pieces of equipment to achieve this, but the Oasys solution was capable of using a standard server and, with software

signal routing, implement it in a single playout device. Two live input feeds are switched based on time of day, as well as a manual operator override. The live throughput of the inputs is passed through to a trigger de-embedder that provides GPI switching for advert opt-out. A copy of the live throughput is internally switched into the advertising insertion software (Local) where it can be reviewed in realtime. From there, it is internally switched to a further opt-out allowing for switching to a third input if the re-broadcast rights don't exist for the main live inputs. The opt-out is controlled by a separate GPI signal de-embedded from the main feed. The final signal from the multi-combined pass-through and playlist is then internally



Jan Weigner, Cinegy

switched into a final process which delays the channel by 15 minutes for re-broadcast.

Gilbert: The New Zealand Racing Board is the most recent company to move to ChannelMaster. Its channels have a mixture of live horseracing from horse courses and around the world — which requires some manual intervention — and scheduled programmes, which might be a live discussion or a packaged content. They wanted to broadcast 24-hours-a-day, which they could not achieve without automation. However, they also wanted the operational flexibility for manual as well as fully automated control, and they required strong branding and lots of graphics. ChannelMaster was perfect for them.

Mehring: A major US broadcaster had a hybrid automation system that included an end-of-life in-house system and Crispin for live events. They required a change to the in-house system, as it was no longer economical on a number of levels including system, component and personnel issues. The system had a number of bugs and wasn't future-proof, and therefore was unable to grow with the pace of the business. The broadcaster moved to the Snell ICE system to build on a standard IT platform and to ultimately reduce costs.

Rose: Located just outside Dallas, Westar Master Control Services currently provides video playback services to 15 commercial and public broadcasting customers and is a fully owned subsidiary of New York-based All Mobile Video (AMV), one of the USA's premier providers of end-to-end video and audio solutions for entertainment, sports, news programming and events. When the company decided to launch an outsourced centralised master control service, they knew that a core component would have to be the most dependable playout solution they could find to streamline operations for all the stations served. iTX, the most widely deployed integrated playout solution in the industry, is the only playout system to have proven scalability, coupled with unprecedented speed of channel deployment and format flexibility. In Westar's case, each iTX output server is also equipped with graphics capabilities that can be used to enhance channel branding and differentiate individual services.

Shell: Africa 24 recently installed the Pebble Beach Systems Stingray Channel-in-a-box solution at its 24-hours-a-day, seven-days-a-week Paris transmission centre. It integrates into the broadcaster's existing technical infrastructure, offering automatic media movement

from the current media SAN. Stingray's native 2D Flash graphics playout capability is deployed to deliver graphics which are dynamically updated when breaking stories arrive, and Stingray's audio and DVE functionalities are used to generate transitions between news segments.

Smithe: One such example is a European media enterprise that sought to launch multiple new channels on an aggressive schedule. Leveraging Imagine Communications' Verso integrated playout system enabled the customer to successfully meet their short timelines while minimising space requirements, lowering operational costs and complexity versus discrete components, and allowing for easy future channel expansion.

Straight: This year, Copenhagen played host to the 59th Eurovision Song Contest. At the red carpet opening ceremony, broadcast live from the Copenhagen City Hall Square, ToolsOnAir played an integral part. Working from OB vans, Best Broadcast Hire used ToolsOnAir just live production software to streamline the playout of artist interviews and video clips. In live interviews direct from the red carpet with each contestant, lower third graphics with artist information were integrated in realtime with the video feed, then simultaneously broadcast live and streamed over the web. just:live delivered the high quality video and audio playout, while the integrated playout engine provided back-to-back playout of mixed codecs, aspect ratios, pixel sizes and field orders. Interactive realtime graphics can be integrated to display live source-data, including news or stocks tickers and weather feeds. The tight integration with composition:builder, our graphics template creation tool, enables pre-produced templates to be layered on top of the video layer, which enables content changes to be made during playout and delivered in realtime.

Warman: The C&B deployment at Fox Sports 1 is a good example, as this application required technical sophistication, as well as media workflow and control. The broadcaster met these requirements by combining the Harmonic ChannelPort system with third-party automation; in this case, Snell Morphex. Fox

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Gorc Zdravkoski, Stryme

had a very clear visual look and performance criteria in mind, and these were best achieved by using the Harmonic and Snell systems together. The channel requirements went well beyond simply putting ChannelPort under automation control as the play-to-air system. The actual deployment also includes Spectrum servers for ingest and the MediaGrid shared storage system for centralised storage. These and other media workflow and control systems interoperate to deliver a sophisticated and striking on-air product — and one in which the on-screen action continues even as ads and supporting graphic branding run to support the commercial operation of the channel.

Weigner: One of our largest customers, Dogan Media Group, went from six traditional playout channels to more than one hundred units with our software-based commodity IT-server playout, without having to increase the physical rack space. To achieve this scale in the short amount of time required, in the small physical space available, and at an affordable budget, would not have been possible with the traditional solution used before. Today, this customer is moving forward with us, migrating its playout centre into a private cloud.

Zdravkoski: After waning a tendering within the ORF, the national Austrian broadcaster, we worked closely with our client to make sure to fulfil the specific requirements. As we tried to simplify the workflow in broadcast management, we developed a multi-channel all-in-one solution that now works as a parallel backup to the existing ORF systems and serves TV channels ORF 1, 2 and 3. The backup ensures the smoothness of the daily television business and can be integrated easily in the customer's infrastructures and workflows. Since we started to develop this all-in-one solution,

we have managed to put all the single components into one video server, including functionalities for every single workflow. Whereas traditional architecture would require separate systems to carry out

the equivalent functionality, our all-in-one broadcast solution Genesis fully met the project demands and took the ORF one step closer into a tapeless scenario. This has proven Genesis's capabilities and

showed the power of a fully integrated and highly automated Channel-in-a-Box system. **TVBE**
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