Foxtel Collaborates With Hitachi Data Systems for Content Delivery and Dynamic Media Management

For over 17 years, Foxtel has been leading the revolution in Australia’s digital television market, offering a better entertainment experience every day to each one of their subscribing homes and businesses. It delivers exclusive and inspiring programming across all genres, the world’s most popular channel brands, and investment in high-quality local content. While traditional broadcasters are primarily advertising-driven, Foxtel is focused on serving its subscribers and therefore able to morph to consumer needs and stay at the forefront of innovation. Adding thousands of hours of new content, Foxtel has brought customers the latest personal digital recording technology, Australia’s largest high-definition (HD) offering with 26 dedicated channels, and Foxtel Go.

The Challenges
Supplying the content for its extensive channel network, Foxtel maintains an extensive transmission archive, mainly in the form of standard definition (SD) and HD tape. Over time, broadcasters around the globe were realizing that to stay competitive they need to reassess traditional methods for handling their information. They recognized not only that the linear management of content is unmanageable from a workflow perspective, but also that the human cost of managing it rises exponentially over time.

For over 17 years, Foxtel has been leading the revolution in Australia’s digital television market, offering a better entertainment experience every day to each one of their subscribing homes and businesses. It delivers exclusive and inspiring programming across all genres, the world’s most popular channel brands, and investment in high-quality local content. While traditional broadcasters are primarily advertising-driven, Foxtel is focused on serving its subscribers and therefore able to morph to consumer needs and stay at the forefront of innovation. Adding thousands of hours of new content, Foxtel has brought customers the latest personal digital recording technology, Australia’s largest high-definition (HD) offering with 26 dedicated channels, and Foxtel Go.

The Challenges
Supplying the content for its extensive channel network, Foxtel maintains an extensive transmission archive, mainly in the form of standard definition (SD) and HD tape. Over time, broadcasters around the globe were realizing that to stay competitive they need to reassess traditional methods for handling their information. They recognized not only that the linear management of content is unmanageable from a workflow perspective, but also that the human cost of managing it rises exponentially over time.
Following the Japan Tsunami in 2011, the whole entertainment industry experienced a shortage of HD tape, leading to a faster transition toward direct digital delivery and sweeping changes being made across file data traffic, facilities management, workflows, bannerizing, transcoding, media asset management and file management.

Foxtel had already laid plans to increase its digital store, but the company recognized that these needed to be accelerated to start reducing its massive library of videotapes.

As part of this re-evaluation, Foxtel investigated how the shift to digital will impact the agility and performance of the infrastructure in processing and networking, and the storage environment. Having worked with Hitachi for many years across its customer management and provisioning solutions, Foxtel opted for Hitachi again. Foxtel was familiar with the capabilities and reliability of Hitachi as a technology partner and decided to invite it to propose an end-to-end compute platform for managing its media assets. Critically, the broadcaster needed a cohesive foundation that allowed it to add new applications and services to its portfolio. The key to doing this was creating a single, flexible “content factory” that could be used to feed all delivery platforms. Thereby, they would eliminate challenges around formats and duplication of workflows and content.

“The guys from Hitachi really won from a technical point of view, because their proposal and the way they engaged with us really reflected their understanding of our business and the broadcasting sector,” commented Director of Broadcast Operations at Foxtel, Adam Scott. “The critical piece for us was being able to transform our workflows and to innovate with new content and services. What we’ve been able to do is move away from a linear model where each time we wanted to add a new platform, we would add a new process, storage and infrastructure. We have been able to move to a progressive approach where we have one workflow and the ability to spin out scalable new services extremely efficiently and with speedy time to deployment.”

The Solution
Following initial introductory discussions with Foxtel in 2011, the solution was agreed to and kicked off in mid-July 2012. The initial design was completed in just 6 weeks. Hitachi was able to prepare and test the solution off site. Hitachi then simply transported the kit to Foxtel’s offices, ready to integrate and run in parallel as it steadily transitioned to the primary content engine for all channels.

Because of the historic Hitachi policy of developing an ecosystem of like-minded open partners, the Hitachi proposal brought with it a wealth of local and global broadcast marketplace references. Hitachi rapidly architected a customized hybrid solution of servers aligned to the specific tasks and workflow Foxtel required.

The Hitachi solution is founded on a customized hybrid design of Hitachi Compute Rack 220 and Hitachi Compute Blade 2000 servers, aligned to specific tasks to provide best fit for the application workflow. Based on Hitachi Unified Storage (HUS) and clustered Hitachi NAS Platform 3090, the stack provides a converged storage infrastructure offering network attached storage (NAS) and storage area network (SAN) capability within a single system. This allows the solution to scale for further NAS and/or SAN capacity independently, without disruption or impacting on each other.

“The guys at Hitachi Data Systems really came through for us and worked with us in a different way. They came to us as a partner, totally comprehending the requirements and challenges we had, based on their experience of working this sector. They knew how to create a model for working with us for mutual benefit. Our technology platform underpins our competitiveness and delivers on our need to stay ahead; Hitachi was one step ahead, anticipating our needs and creating a solution that delivered business value.”

Adam Scott
Director of Broadcast Operations
Foxtel
HUS, managed from a single management system, enables file-level search across Foxtel’s active content within servers and other attached storage assets, including a backup system for older inactive content. Hi-Track Remote Monitoring system further augments the system capabilities for Foxtel, allowing Hitachi to monitor the solution’s operational health and provide pro-active support for routine disk replacement and exceptions management.

To create this customized solution, Hitachi used its open infrastructure stack of servers and storage certified by notable specialist broadcast software vendors. The solution enables Foxtel to manage a single “gold” copy of all its content, which is securely stored and protected for immediate and longer-term use. The Hitachi Unified Storage platform provides the ability to manage file, block and content data in the same system. This management allows all content to be recalled and transcoded quickly to suit any distribution method and be used across a broad range of viewing formats.

At the heart of value Foxtel gains from Hitachi was its ability to act as the single procurement vehicle for both Hitachi capabilities and specialist software geared to the broadcast sector. Through its experience of working with sector-specific software, such as Ardome and Viz Media Engine from Vizrt, Hitachi effectively presented a single point of purchase for both solution delivery and project management.

Ensuring performance and resilience of the Hitachi platform was another imperative, with already substantial workloads anticipated to further grow in the future.

After realizing the value of the unified solution, other broadcast applications were added, including Harmonic Rhozet, Tektronix Cerify and Mayam Workflow. This highlights the extensibility of the Hitachi platform and its ability to minimize additional investment when adding new services.

“From the moment we pushed the button they sprang into action and didn’t waste a moment; I really can’t fault the engagement,” explained Scott. “The summer’s Olympics programming meant we were in a platform lockdown at the project kickoff. So Hitachi Data Systems just racked and stacked the whole solution off site. Once the solution was ready, we wheeled it in, turned it on and began switching over.”

Benefits

Hitachi performed extensive performance testing, optimization and engineering for Foxtel before the new platform went into production. This ensured the broadcaster’s content factory was primed for ongoing growth of capacity and performance requirements. When the system went live, Foxtel’s performance expectations were exceeded by over 75% with the new Hitachi enterprise compute environment and unified storage solution.

And while Hitachi is helping the broadcaster to manage content on the networks it already owns and operates, the platform also creates the capability to add new content and services. Previously, adding new services was cost-preventative in many cases, but through streamlining the workflow and shifting to operate using a single “gold” copy of all content, the operator has vastly reduced cost and opened the door to creating new opportunities. With Foxtel planning to release more content through new consumer devices, the platform represents the ability to usher in a new period of growth and innovation for the company.

“As the direct content delivery model became a necessity, we were able to make a difficult situation easy by creating the right infrastructure. All new and live content is now going directly into our media asset management tool. Being able to have that source copy and ingesting it only once to reuse it many times, in any place, is fundamentally revitalizing our workflow and saving a huge amount of time,” said Scott. “We had numerous copies of each piece of content and if we wanted to provision it to a new platform, we would have had to ingest it and re-encode it before launching it to that device.”

Underpinning the Hitachi approach was its proven Storage Economics methodology for calculating and determining the lifecycle costs of a solution, as opposed to just the purchase price. This approach has been tested by Hitachi over many years to look at the holistic cost of storage and storage management, factoring in other costs elements such as utilization, power, cooling, scaling and migration costs.

For Foxtel, adding new content is critical to staying ahead of consumers’ consumption patterns. When it gains new content or adds new channels, the cost of managing content rises. Foxtel needed the scalability that would enable it to add new content, yet still grow sustainably. Meanwhile, the inclusion of capabilities such as quality control and transcoding within the enterprise compute stack saved on having to create those capabilities.

“The new platform means that when we think up great new ways to deliver and use our content, the realities and practicalities of executing a new idea are close,” concluded Scott. “Before, it might take a real feat of engineering to make a newly dreamed-up strategy come alive. Now, if we wanted to, say, launch a specialized proposition onto a tablet or mobile phone, or create an application on the next big consumer device, we can be agile and keep up with consumer demand.”

A Look Ahead

Hitachi Data Systems and Foxtel will continue to evaluate how future market trends like on-demand services and customized services, such as search and public and private content storage, will affect the broadcast industry.

The demand for content by consumers, which can be urgent, has meant Foxtel will work with Hitachi to continue optimizing workflows that will provide data tiering and file management. These capabilities are being developed while ensuring that reliability, performance and scalability are not compromised as data growth continues to expand.