Quantum

The Baltimore Ravens Celebrate Their Twentieth Season with a Technology Transformation & Workflow Enhancement

Since the birth of The Baltimore Ravens in 1996, much has changed in how fans watch football. The in-stadium experience has morphed into more than just a football game, as the fan is provided with video clips, images, and audio that magnify the experience. Instant replays are displayed on high-definition RavensVision screens. And fans that are out of the stadium watch replays and features on a wide range of broadcast and social media.

RAVENS PRODUCTIONS

IMT
INTEGRATED MEDIA TECHNOLOGIES, INC.

reachENGINE

FEATURED PRODUCTS

StorNext Pro Studio

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Jay O'Brien
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SOLUTION OVERVIEW

- StorNext 5, StorNext Pro Studio and StorNext AEL500
- Levels Beyond Reach Engine Media Asset Manager
- Telestream Vantage transcoder
- Adobe Premiere Pro video production toolset

KEY BENEFITS

- Speeds up production by allowing team members to share access to content over a high-performance SAN
- Simplifies workflow by using an integrated media asset manager to control all content and workflow, from ingest and editing to transcoding and archive
- Brings more content into the system at a lower cost using an integrated archive under the control of the media asset manager and directly accessible to the editing teams
- Protects content more effectively over time by automated media checking and migration
- Open-platform approach protects investment and provides freedom to add newer, more cost-effective technologies as they appear
- StorNext Distributed LAN Clients deliver faster performance than NAS while leveraging Ethernet for low cost

Emmy-winning Ravens Productions has the job of delivering content to fans wherever they want to see it. The team creates three television shows per week on regional networks, and it delivers all the video content on BaltimoreRavens.com and the Ravens' social media accounts. The team also produces Ravens home games, which includes the RavensVision screens and digital signage.

"There is no offseason in the NFL anymore," explains Jay O'Brien, Director of Broadcasting & Gameday Productions, Baltimore Ravens. "Even when our television shows are dark and there aren't any games at M&T Bank Stadium, our fans demand compelling content on our website, mobile app, and social media."

MAKING BETTER USE OF A RICH LEGACY

"We have 19 seasons of games, filmed from a minimum of three different camera angles per game, sitting on shelves in our studio," O'Brien says. "And that's not to mention the off-the-field footage, community events,

practice film, press conferences, and other historical events on those tapes. It's a wonderful resource that we want to utilize to create new content, but the tape library had taken over a big part of our broadcast studio. We kept running out of disk space for the working files, and the process of finding content was slow and inefficient. It's fair to say that we didn't really know what we had, and when we did know, it was hard to find and reuse."

Ravens Productions decided to make the shift from a videotape-based workflow to a file-based system because it wanted to make better use of existing assets, but the initial implementation created a new set of issues.

MORE THAN JUST GOING TAPELESS

"We switched in 2014 to a tapeless camera," says O'Brien. "It was great not having to handle tapes anymore, but we uncovered new problems. Our codec, as it turned out, didn't work very well with our media asset manager, so we lost control of our metadata,

and that made it really hard to keep creating content. Our consumer-grade hard drives got swamped with data, and we worried that they weren't going to be the kind of high-reliability storage that we would need in the long run."

Jay and his team enlisted the help of Integrated Media Technologies, Inc. (IMT), a specialized systems integrator with experience in helping many other organizations, including sports teams and leagues, to upgrade their media production and distribution systems.

"We wanted a system built on an open platform, that was reliable, cost-effective and scalable to meet our needs today and well into the future," explains O'Brien. "Our team leadership wanted us to have easier access to our archival footage, and this solution absolutely had to be up and running prior to the start of the 2015 training camp."

SOLUTION SET FROM QUANTUM, LEVELS BEYOND, AND TELESTREAM PROVIDES ANSWER

After a carefully implemented needs analysis, IMT recommended an integrated set of solutions based on open-platform technologies with Quantum, Levels Beyond, and Telestream being the key providers.

"We developed a strategy and built a solution that met the business requirements of the Ravens," says Tom McGowan, VP of Business Development, IMT. "We knew from experience that we could integrate these technologies to meet their objectives. And we were confident that we could complete the project on time and within budget."

The solution selected centered on a dual, redundant StorNext Metadata Controller (MDC), a StorNext Pro Studio Storage Area Network (SAN), StorNext File System and Storage Manager, and a StorNext Archive-Enabled Library (AEL), all from Quantum. This solution gives all the editorial and graphics workstations shared access to work in progress and archived content.

For media asset and workflow management, the system uses Levels Beyond's Reach Engine (LBRE) Studio, which gives the Ravens' creative users access to content from initial capture to edit, through metadata management to distribution. Since LBRE is entirely web based, there's no desktop client to download, no software to update, and the Ravens personnel don't need to be locally accessible to the media. High-quality, high-performance transcoding is provided by Telestream's Vantage.

INTEGRATING WORKFLOW-OPTIMIZED STORAGE WITH MEDIA ASSET MANAGEMENT

One of the key advantages of the new solution is its ability to integrate highly scalable storage for both active and archived content across multiple storage types, while providing direct access to all content. In the new workflow, content that is actively being worked on, as well as proxies for all of the content, is stored on a Quantum QXS-1200 RAID array, part of the StorNext Pro Studio. StorNext 5 allows all the content to be shared by all of the editors and graphics personnel, and it allows it to be seen directly by the Levels Beyond Reach Engine MAM and Telestream transcoding engine.

"One of the advantages of StorNext 5," says Jason Kranitz, SVP of Sales, IMT, "is that it presents the content through a shared, high-performance file system, making it easy to integrate with different applications. The integration with Levels Beyond, workstations, and Telestream has been proven at many of our various installations and we know exactly how they interact."

Files not being actively worked are moved automatically to the StorNext AEL500 archive, which stores them on LTO-6 media. StorNext Storage Manager moves content, but it is managed through the Levels Beyond Reach Engine MAM. Integration of the archive with the MAM means that all of the editors can see the archived content through the same interface used for active content, allowing them to access existing material quickly for reuse in new programming.

ABOUT THE BALTIMORE RAVENS:

The Baltimore Ravens are a professional American football team based in Baltimore, Maryland, playing in the AFC North of the American Football Conference (AFC) in the National Football League (NFL). The team is owned by Steve Bisciotti, and has played its home games at M&T Bank Stadium in downtown Baltimore since 1998. The team is headquartered at the Under Armour Performance Center in Owings Mills. The Ravens have experienced great success in their history: they made the playoffs ten times since 2000, with two Super Bowl victories (Super Bowl XXXV and Super Bowl XLVII), two AFC Championship titles (2000 and 2012), four AFC North division titles (2003, 2006, 2011 and 2012), and are currently the only team in the NFL to hold a perfect record in multiple Super Bowl appearances.

ABOUT IMT:

Integrated Media Technologies, Inc. (IMT) is a consulting, design, and systems integration company that specializes in providing business consulting and TCO models for private, hybrid, and public cloud workflow solutions. Customers rely on IMT to deliver mission-critical solutions and services focused on media technologies, storage, asset management, high-performance computing, networking, and 24/7 support.

Integrated Media Technologies Inc. (IMT) is a Digital Media and Technology Company with offices in Los Angeles, Silicon Valley and Dallas. Inc. Magazine ranked IMT as the 25th fastest-growing private company in the Technology Services industry; Los Angeles Business Journal ranked IMT as the 39th fastest-growing private company; CRN ranked IMT 18th on the list of 62 newcomers to the Solution Provider 500 list. IMT serves the Media & Entertainment, Information Technology, Government/ Education, and Healthcare sectors with a broad range of solutions designed to drive new value and efficiencies from technology. IMT's operations are segmented into three principal businesses: Consulting and Systems Integration Business, Interactive Video Learning (IVL) Systems, and Localized Media Networks.

"As we digitize and move our entire library of existing content into the new archive, our production team will have, for the first time, direct access to the team's first 19 years of content," says Jay O'Brien. "It is going to allow us to create new and compelling programs that build on that history."

BETTER PROTECTION OF IRREPLACEABLE ASSETS

Another benefit of the archive system is enhanced protection. The StorNext AEL archive includes a feature, Extended Data Life Management (EDLM), which automatically scans stored media to track its integrity. When recoverable error rates increase, a sign of potential wear, the content is written to new media. Copies of tapes can also be moved off-site for disaster recovery protection.

"EDLM allows the Ravens to track media wear and do something about it before any content is at risk," says Jose Palencia, IMT's Vice President of Engineering. "It adds a level of integrity to the archive that nobody else can match."
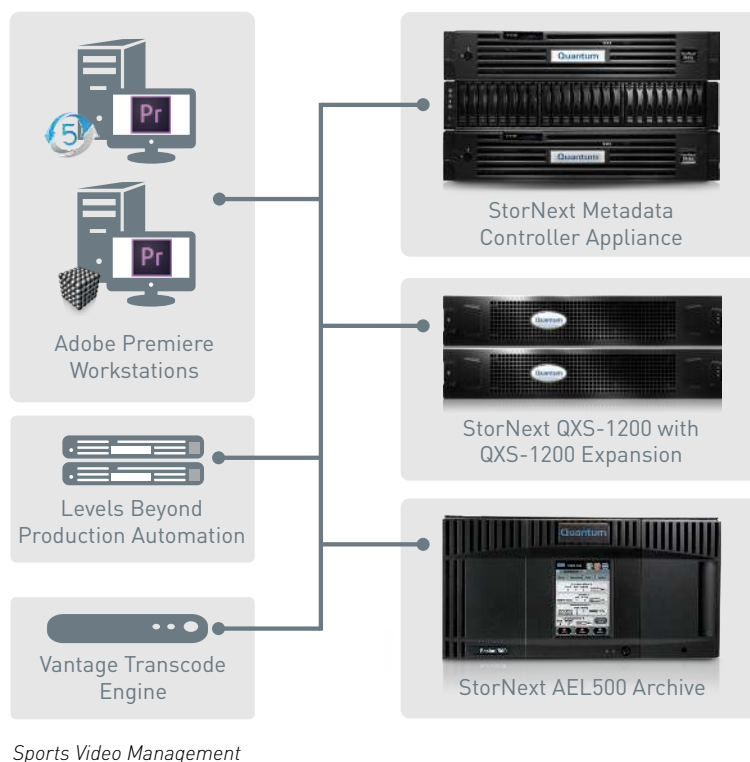
TESTED, PRE-CONFIGURED SYSTEM SIMPLIFIES INSTALLATION AND SUPPORT

For the Ravens, the use of StorNext Pro Studio and the archive-enabled library provides production-tested, pre-configured components to simplify and streamline the deployment. And the use of a set of cooperative products, MAM, editing, and transcoding was designed to make certain that the entire solution set would be compatible.

"Putting together a system like this on our own would have taken us months and a major part of the time would have been spent testing all the pieces to make sure they would work together," says Jay O'Brien. "By using the StorNext Pro solution and integrating workflow applications, we deployed this system in a few weeks, and it was up and running in plenty of time for our pre-season games. The IMT team was sensitive to our budget and time constraints and designed a solution that fit all of our needs as well as guiding us through the new technologies and workflows.

This new solution will not only enable us to be first when delivering content, but the level of automation will allow our editors and producers to focus on creating complementary content to further entertain and inform our fans. We needed a fast and cost-effective enhanced media workflow and this is the perfect solution for us."

Adobe Premiere Workstations

StorNext Metadata Controller Appliance

StorNext QXS-1200 with QXS-1200 Expansion

Levels Beyond Production Automation

StorNext AEL500 Archive

Vantage Transcode Engine

Sports Video Management