StorNext Series

RT Builds Multi-Language Broadcast News Facility on StorNext-Based Workflow

With its expansive new broadcast and production center in Moscow, RT, the international television news network, knew that collaboration across its three language-specific channels would require a high-speed, state-of-the-art storage management solution. The answer was Quantum's StorNext end-to-end content workflow management software and storage appliances.

RT undertook one of Europe's most ambitious studio upgrades by relocating its existing operations center to a new 28,000-square-meter facility designed to support its round-the-clock international television stations, video production facilities, and a rapidly expanding new-media program. The studio complex, designed to enable HD broadcasts and support vast multi-platform distribution, needed to accommodate both live news and production tasks, which included distinct operations for RT's English, Spanish, and Arabic language programming. Compounding the complexity was the requirement that the newsroom and production staff, totaling more than 1,000 media professionals, would be able to share a common ingest and archive operation so that each group could select appropriate content for its different audiences from a common asset pool. The goal of the new operation was to minimize overhead and allow the maximum amount of collaboration and sharing of new content as it arrived.

DESIGN AND INTEGRATION OF A COMPLEX ENVIRONMENT

RT looked to broadcast specialist integrator OKNO-TV to make recommendations for a state-of-the-art facility that would support its current needs and accommodate growth as the network—already reaching 630 million viewers on five continents—expands in the future. The workflow system that was recommended and built incorporated best-of-breed tools and multiple suppliers in a complex environment that, at the height of the construction, required more than 150 installers working on the site at the same time.

The scale of the operation was very large—it was designed for a total of six studios and up to eight simultaneous outgoing HD feeds—resulting in the installation of 24 ingest servers, 48 transcoders,

and a multi-service optical network made up of 56 MediorNet frames. The system today manages over 40,000 hours of programming and almost a petabyte of digital content. Key to managing production and workflow is Dalet Enterprise Edition, providing media asset management, search, ingest, and transcoding control, and supporting non-linear editors from Apple and Adobe.

FINDING THE RIGHT CONTENT MANAGEMENT SOLUTION

One of the most challenging requirements for this large deployment was choosing a solution that could support all of RT's tools and provide collaborative workflow and a shared archive for all three separate-language operations. In a digital environment, the only way of providing that kind of capability is by architecting a large-scale, high-speed storage infrastructure offering broad compatibility for different broadcast and production tools, and with support for a large number of storage arrays, servers, and switched fabrics. After looking at alternatives from multiple vendors, OKNO-TV and RT selected Quantum's StorNext® to provide the platform for their end-to-end content workflow.

Explains Mikhail Kalanchekaev, OKNO-TV, "We implemented an immensely complicated system that in the end streamlined the RT workflow and gave all of the studios a way to share a common ingest, workspace, and archive capability. The key piece to supporting the system is Quantum's StorNext technology—it provides an integrated storage infrastructure that supports all of the RT tools, provides fast easy sharing between groups, gives consistent, high-speed transfer rates, and is a proven, reliable solution. Best of all, it does its work in the background so the production teams can think about their work, not the storage that makes it possible."

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>
> **Alexander Ozersky**
> Head of Broadcast IT Support, RT

SOLUTION OVERVIEW

- Quantum: StorNext File System, StorNext Metadata Appliances, StorNext G300 Gateway Appliances
- Non-linear editors: Adobe Premiere Pro and Apple Final Cut
- Dalet Digital: Dalet Enterprise Edition NRCS, MAM master control switchers, SDI ingest, file ingest, transcoding, archive management, Brio server
- Hitachi (HDS): Virtual Storage Platform
- Miranda: Imagestore 750 master control processor
- Vizrt: Viz Content Pilot, Viz Engines, Viz Curious Maps, Viz World graphics preparation and playout
- Telestream: Pipeline video recorder

KEY BENEFITS

- Provides common ingest/archive space for three separate studio operations
- Supports heterogeneous tools for maximum flexibility
- Gives faster access to new data and shared access to existing material
- Increases overall performance to support HD operations
- Provides faster, easier installation through appliance-based approach
- Automates sharing to reduce overhead and errors

A CENTRAL REPOSITORY
FOR MULTIPLE LANGUAGE STATIONS

Managing three different-language stations that need to share data and footage was an overwhelming task before StorNext. Under the new system, all content is initially ingested into a central storage pool by 24 servers, operating on a 7x24 schedule. Whenever material is needed by one of the three language-specific sites, it is automatically transferred from the central location to the appropriate studio's work area for production and localization. When programming is completed, StorNext automatically moves data back from each language site to the central pool for archiving. Metadata and proxies from the common resource are shared between all of the language sites, making it easy for any of the separate operations to search the archive and download content for re-use or localization. Editing and post-production tools can access files in any of the four locations, providing maximum workflow flexibility.

A major advantage of the StorNext file system is that it allows the highest performance ingest, transfer, and transcoding operations to be carried out over Fibre Channel links, while tasks needing lower performance (metadata transfer and some non-linear editing tasks, for example) use StorNext LAN clients. LAN clients allow servers and workstations to connect to the files over Ethernet to reduce costs, but they also provide a direct link to the data that offers extremely high performance and more robust failover and system resilience than conventional NAS protocols. In addition, StorNext provides support for many different brands of storage arrays and switches, allowing RT to expand systems in the future without being locked into a single supplier.

"By giving RT both Fibre Channel and high-performance LAN links, StorNext provides a very powerful way to balance high performance with affordability," says Alexander Ozersky, Head of Broadcast IT Support, RT. "StorNext allows a single interface to deliver the highest possible performance whenever it is needed, and at the same time to use lower cost links for the less bandwidth-intensive operations. StorNext's broad support for different vendors means that RT can easily change editing, storage, or switch vendors in the future to control costs."

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> Executive Director, OKNO-TV

APPLIANCE APPROACH SAVES TIME, SIMPLIFIES DEPLOYMENT

When designing a system of the scale and complexity of RT's new studio complex, a premium was placed on being able to deploy the storage infrastructure in the shortest amount of time and with the fewest complications. The StorNext metadata gateway appliances were a logical choice for the integrators.

"Using the StorNext appliance approach for metadata and LAN client links was a great option," explains Mikhail Kalanchekaev, Executive Director, OKNO-TV. "It gave us all the power of StorNext but meant that deployment was much faster and simpler than if we would have integrated the system on third-party servers."

ABOUT RT

The RT (formerly Russia Today) television network now consists of three global news channels broadcasting in English, Spanish, and Arabic, RT America news channel broadcasting from a Washington, DC studio, and a documentary channel RTDoc. RT has 22 bureaus in 19 countries and territories, with a presence in Washington, New York, London, Berlin, Gaza, Cairo, Baghdad, and other key cities, and it employs over 1,000 media professionals around the globe. RT has a global reach of over 630 million people in 100+ countries, or more than 28% of all cable subscribers worldwide, and is now available in more than 2.7 million hotel rooms.

ABOUT OKNO-TV

Internationally renowned, OKNO-TV is a leading systems integration partner for the world's broadcasters, content owners, and media service providers. With a multi-national team of industry experts at its core, OKNO-TV has a forward-thinking and independent approach to television systems and workflow design. OKNO-TV has for 20 years been a leader in the field of systems integration of television broadcast projects, and is the largest supplier of professional equipment in Russia. With the very latest knowledge and up-to-date technologies, OKNO-TV has successfully implemented many large-scale projects at the highest level of complexity and reliability.

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