

CASE STUDY

Dalet Enterprise Edition at RTBF



RTBF leverages the SOA Dalet platform to integrate entertainment and news workflows

rtbf

dalet 
Digital Media Systems

Radio Télévision Belge Francophone (RTBF)

As a member of the European Broadcasting Union (EBU), a partner of TV5, Arte and Euronews, the RTBF operates six radio channels and three television stations. Through these media outlets, RTBF promotes the cultural development of the French-speaking community of Belgium and of the international French-speaking community. There is a significant effort on content creation as RTBF programming is primarily based on its own original productions.



The Challenge

Television, Web and Radio Convergence

RTBF worked closely with technology consultants and vendors to evaluate ways to re-organize workflows and re-allocate resources to improve overall operations under a fully tapeless, integrated production environment. The rationalization sessions identified a number of objectives the tapeless system would need to address in order to improve productions. Most important was that the move to tapeless would require open technologies capable of streamlining multimedia and editorial production workflows across television, radio and web. It would also require a strong change management process to expertly design and deploy an enterprise-wide solution that masterfully facilitates multiple, concurrent workflows.

RTBF needed a solution that could address the production needs of many different types of resources. Logging, newsroom, postproduction, archiving departments each had specific requirements for producing television, radio, and web content. The right mix of production tools would need to be integrated into a highly interoperable framework. One of the main requirements was to adapt systems and technologies to user best practices rather than changing the workflow to adapt to the systems. User workspaces would be set up according to job profile; enabling the users to log in and be presented with only the production tools specific to their job. Repetitive tasks and media tasks had to be as automated wherever possible.

The transition to an integrated tapeless operation also represented the challenge of tracking metadata. Because the digital system would facilitate production for a number of resources across several platforms, production tools, servers, databases, archives would all need to be integrated into a single source tracking entity in order to properly maintain and protect metadata throughout the lifecycle of the content.

“ The primary objective was to create a tapeless system with a standard, harmonised production platform across all sites. This means that materials can be accessed and shared by all users

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Cécile Gonfroid, Managing Director of Technologies and Operations

In 2008, RTBF launched the NUMPROD project to adapt to the technological and structural changes affecting every level of the media world, with the goal to migrate their television and radio broadcast operations to a tapeless workflow. NUMPROD was going to offer integrated content management, media essence and metadata management, as well as production tools for multi-channel and platform distribution.

The Solution

Multiple Technologies Integrated through a Services Oriented Architecture framework

The new tapeless solution consisted of carefully selected technology including:

- Dalet Enterprise Edition for the newsroom computer system (NRCS), video content production, and Media Asset Management (MAM);
- EVS for integrated production including XT[2] video servers, IPDirector for the production content management and SAN storage;
- Front Porch Divarchive HSM for archiving;
- Orad for graphics;
- Avid NLEs for post production
- MediaGenix Traffic
- Fairlight for audio post-production.

Taking advantage of innovative workflow design techniques, RTBF implemented a unique approach that combined a highly interoperable SOA-compliant

“ One of the major challenges with the “Intranet de Production”, which was developed in-house at RTBF, was to organise these different systems and make them interoperable.

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Olivier Waty, Manager of R&D

framework with its internally-developed workflow management system called “Intranet de Production”. “Intranet de Production” is used to plan resources, infrastructures and equipments. It is also the backbone application under which all systems are integrated - news and content production, post-production, traffic, NRCS, radio production and playout. With new and legacy technology fully integrated through “Intranet de Production”, content is ubiquitous across the entire multi-channel, editorial and production workflow, in a multi-site environment. The centralized production flow driven by “Intranet de Production” allows metadata to be tracked from ingest to archive.

By combining the power of the Oracle SOA Suite, an Enterprise Service Bus (ESB), and custom developments through Dalet Web Services APIs, proprietary APIs, SOAP protocol and xml exchanges, RTBF not only enabled metadata and media to be exchanged between systems, but also integrated a number of business processes into the overall workflow.

“ We've found a high-performance platform that satisfies all users, so I think we can call that a victory

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Didier Vanzeune, Project Manager

The Workflow

Delivering Transparent Workflows for Users

The new tapeless system manages the complexities of RTBF operations in a way that is transparent to the users. Users can focus on the creative aspect of their mission without being exposed to the complexity related to isolated and specialized systems.

Material is ingested in high resolution by the EVS IP Director content production management to the EVS XT[2] video servers. Ingested high resolution material is stored in the EVS SAN storage. The synchronization of proxy and high resolution file ingest is made possible by the Dalet web services API. The resolution format conversion is fully automated and transparent for users. As soon as the material is recorded, metadata such as descriptive information of rushes and IDs are assigned to all audio-visual content. Thanks to the "Intranet de Production", these metadata will remain attached to the content throughout the production process, right through to the archiving stage.

From their Dalet workstations, users can easily search and browse content, make the right shot selection and may edit the content directly from their desktop. Editing of final packages and more complicated pieces are mostly done using Avid NLEs. The exchange of shot lists and EDLs from Dalet to Avid bins is automated via the RTBF "Intranet de Production" system. The unique custom development integrates the flow of media and data between the Avid Transfer Manager, the EVS IP director, and the Dalet Web Services API. Once the video edit is ready, it is transferred to Fairlight Audio editors for sweetening. The files are then sent back to EVS SAN, converted into a low resolution using Rhozet Carbon Coder. The final content and metadata is then brought back into Dalet.

Journalists, on their side, have access via Dalet to planning, rundowns, ingest and video production/pre-production tools to produce stories, graphics and

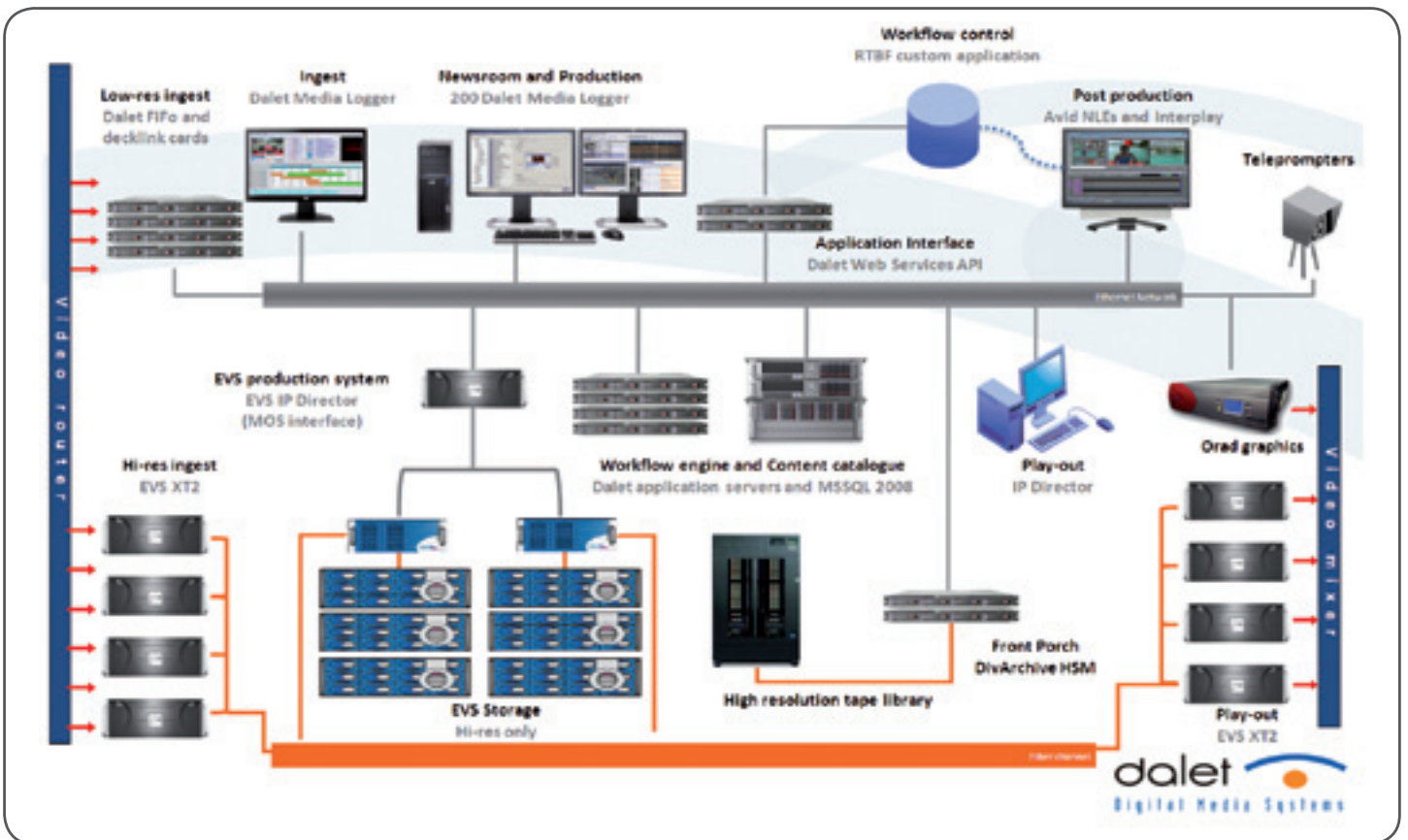
video material in proxy resolution. Dalet seamlessly integrates with the EVS ingest, production and play-out systems. Using MOS protocol, the Dalet NRCS is fully integrated, ensuring rundown synchronization between the Orad Graphic system and the teleprompters. Produced material can be easily repurposed for distribution to the Web and other multimedia platforms.

Dalet and EVS are connected to the Front Porch Divarchive HSM to move material from the high resolution material on the EVS storage to the Storagetek tape library. Media transfers remain fully transparent for the users; the proxy resolution remains online for search and browsing. Dalet manages rule-based purges of the high resolution and proxy resolution content. The Dalet system is also connected to "Tramontane", a homemade archiving system widely used by RTBF users by taking advantage of the Dalet Web Services API.



The "Intranet de Production" integration framework enables Dalet users and Avid editors to work collaboratively. Exchange of media and metadata between EVS, Dalet, and Avid are fully transparent.

Dalet Enterprise Edition at RTBF



“ The main advantage of the system for journalists is that they can access material without having to leave their workstation. They can remain seated at their desk and, using a single tool, Dalet, they have access to news reports, the texts that they are writing, the news broadcast production book and images that they can view, edit and send to the editor. They can use a single programme to access all the materials and tools that they need without ever leaving their desk ”

Benoît Balon-Perin, Director of Operations, Sports and News

The Benefits

Benefits of "Intranet de Production"

With technology fully integrated, the new tapeless solution optimizes production by automating the exchange of media and metadata between the different vendor products throughout the workflow and across the 3 distribution platforms (TV, Web, Radio). Repetitive processes and tasks are fully automated. Personnel, unburdened by technical limitations and duplicative tasks, can focus on creative efforts.

With a clearer view into the workflow as a whole, operators can better plan for resource needs and infrastructure enhancements. The innovative approach to designing the workflow has provided RTBF with an open system ready to support future technologies.

“ As well as TV broadcasting, the system is also used to broadcast audio content over the radio, to supply images to new media content, such as the internet and mobile phones, and to create content in different formats. It's a genuinely an enterprise wide project

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Cécile Gonfroid, Managing Director of Technologies and Operations



Ingest is done using different tools from different providers, yet, material is seamlessly referenced and tracked by the DaletPlus MAM framework and immediately available for any authorized user.



Content is always available with its entire set of metadata regardless the system RTBF operators use.



The open IT infrastructure incorporates an Enterprise Service Bus (ESB) construct for an unprecedented interoperability between systems and maximum scalability while all the components connected to Dalet are monitored using the Dalet Dashboard and the RTBF purposed made Dashboard.

Key Highlights of the RTBF Installation

1. Highly interoperable integrations between multiple and heterogeneous production tools, that not only exchange media and metadata between different systems, but also trigger operational processes – using the powerful Web Services APIs from some of the technology providers.
2. Content is manually and automatically exchanged between the different production sites throughout Belgium – using Dalet multisite exchange tools
3. RTBF plays the role of integrator. By developing the "Intranet de Production", RTBF keeps control of the workflows, the integration, and the future functionalities of the system.
4. EVS and Avid exchange files based on the EVS integration of the Avid Transfer Manager via GigE or SDTI interface.
5. Change management involving several hundred users has been successful, due to streamlined workflows, systems training and a vast campaign of communication including "Belgium jokes", based on cartoons drawn by a famous Belgium illustrator.

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