DIGITECA RADIO RAI
A MEDIA HUB FOR DIGITAL RADIO

A project that comes from afar now completely being redesigned to meet the challenge of the digital radio. The established plan for 2014-2015 foresees a strong push to innovation on technologies, enabling the master archive as a front-end production environment and back-end resource sharing. The switch of its former name to the new "Digiteca" one better brands its evolution from an audio preservation archive to a multi-content production hub.

THE CUSTOMER

RAI - Radiotelevisione Italiana is the exclusive licensee of Italian public broadcasting service; it produces television channels, radio, satellite, digital terrestrial platform.

Radio Rai is the division of RAI dealing with the production of radio programs, as well as the overall planning of the radio broadcasts. Radio broadcasts are regularly disseminated by the early 20s with three national networks covering information, events, business, sport and lifestyle, music, entertainment and comedy, culture and news. Some additional radio channels (Filodiffusione, Isoradio, FD4, FD5) provide furthermore public utility information and services about information and news, entertainment, traffic, weather forecast.

KEY CHALLENGES

Learned along fifteen years of evolution from the very first introduction of the "Audioteca" digital audio archive system, the lessons from the past drove to identify as a critical business factor the ability to quickly adapt production processes at a reasonable cost to react and cope with changing environment. For those reasons the capability to rearrange existing services and processes, together with the readiness to manage new contents into to the production life-cycle, where identified as key paths for the evolution, targeted to realize a flexible and enlarged integration of the production systems.

In the renewed Digiteca Media-Hub however, long term preservation of digital media still stands as a pillar with foreseen improved reliability and openness.

An increased number of audio, images, video and multimedia contents, re-organized in thematic areas, and with improved quality, will ready to be exploited and managed for production from modern devices leveraging on the redesigned SOA driven infrastructure.

THE SCENARIO

At its very early stage in late '90, with the transition to the digital of the Radio ahead, the first phase of the project was focused on the implementation of a digitalization process, from ¼" tapes to digital files on DLT tapes. The process began in May 1996 and ended in 2002 and consisted in the conversion from analogue to digital of 145,000 tapes. A study of the best techniques and organization models made it possible to reach a good compromise between quality requirements, time and costs.

The second core phase of the project dates back between 1997 and 2001 when finally the digital archive started into operation. From its origin the digital audio archive was built to fully manage near on-line and on-line storage to allow users to search and exploit archive material on a web based front-end. Digital archive has been natively thought to be capable to manage different multimedia data (audio, images, text, etc.) thus allowing openness to new delivery channels.

The system has been provided from its origin to cope with material coming from the CD transcription, from the automatic feed from 24/7 on-air recording, from the digitalization and transcription of historical recorded material, from the interface with production sites based on the import/export of metadata and essences.

Up to nowadays the system went in to valuable upgrades carried out in the period 2006-2013, also switching its former "Audioteca" name to the new one "Digiteca", with a first stage of the transition to SOA already achieved. The archive technologies evolved in time from the former DLTIV to LTO3, and now LTO5. Currently the overall system is integrated with Radio Production, Rai Teche Multimedia Catalogue and MusiPOP. Video HD contents have begun to be handled as part of the radio production processes.
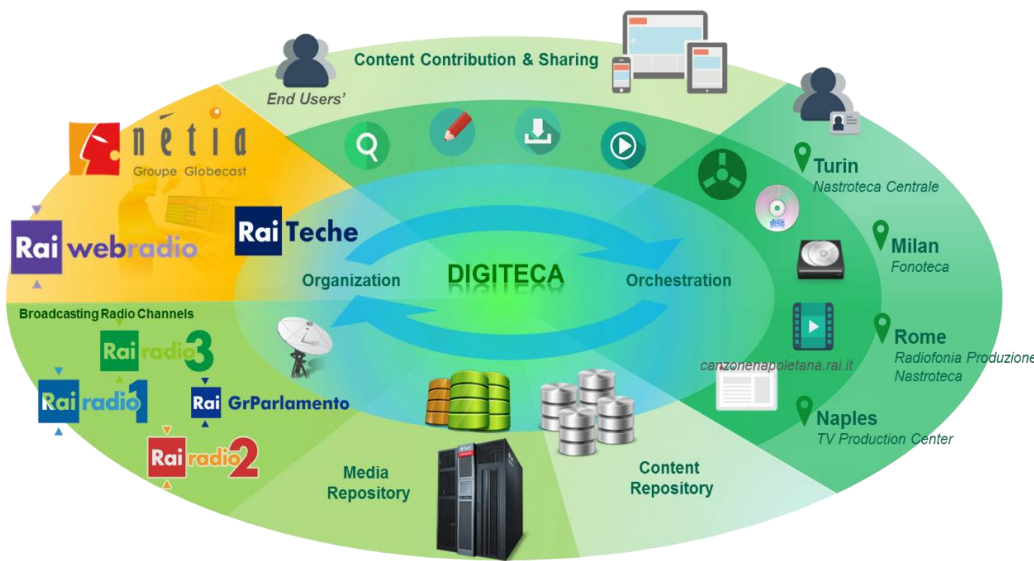
THE SOLUTION

The system has been redesigned on a SOA driven architecture, re-modulating and refactoring basic services and providing a more flexible BPM capability as the main orchestration framework. The existing contents will be reorganized and made more accessible on modern devices.

The preservation of multimedia material is ensured by a completely automated tracking of material stored on digital tapes. An automated Tape Library Oracle StorageTek SL8500 with the Discovery Storage Manager (DSM) solution, integrated with the Discovery Reply MAM, allows the near-line archival and off-line management of digital data onto LTO5 tapes.

The DSM solution supports automatic rotation of exhausted tapes, mirrored Tape Library management, whose introduction is forthcoming and foreseen togheter with the switching to LTO6-7. DSM also provides automatic production and management of off-line backup tapes and hot migration program management. Moreover the system provides the capability to rebuild the entire archive with information collected from tapes after a severe outage (disaster recovery).

The master archive is now populated with more than 360.000 hours of high quality over nearly 1.4M audio contents, in addition to more of 900.000 hours of audio recordings in broadcast quality, spanning along around 70 years of broadcasted material onto RAI Radio channels. The overall archive sizes nearly 5M files, with 300TB data spanning over more than 140 years of continuous audio listening.

REPLY VALUE

The constant presence of Discovery Reply side-by-side with Radio RAI in more than 10 years of collaboration bears the witness to how the Company recognizes Reply's value in terms of competence and flexibility. Discovery Reply brought the contribution of its technical know-how, combined with a proven solutions and project teams, acting eventually as a partner for the realization of specific architectures with a strong technological innovation.

The strength of the solution is the adoption of an open architecture and standards, based on consolidated technologies for the integration of the Digiteca with the other production systems, accompanied by a strong coordination in the implementation of functional extensions.

Discovery Reply is a division of the Reply Group that specializes in Digital Asset Management solutions for managing the entire life-cycle of digital business assets, such as videos, images, audio files, and graphic documents. Based on the Digital Asset Management platform, Discovery Reply develops vertical applications for broadcasters and leading companies in a variety of international industrial sectors, thereby providing innovative visual experiences and management models. Discovery Reply integrates the supply itself with expert advice and system integration services in the areas of process engineering and review, technological upgrades technology and provider selection, management, and digital content production and distribution.
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