

WGBH AND DIGITAL ASSET MANAGEMENT

Because WGBH has one of the largest collections of audio and video content in public broadcasting, it has much to gain from setting the Digital Asset Management (DAM) standards for the public broadcasting industry and related educational organizations and institutions.

PROJECT OVERVIEW

WGBH has been involved in DAM for over 10 years, and the Foundation's recognized broadcast and education expertise has attracted partnerships with Sun Microsystems, Artesia Technologies, and Sony Electronics, Inc.. Begun in the Fall of 2000, the partnership with these leading vendors is enabling us to develop and test a reference architecture blueprint that will provide the complete recipe (hardware/software solution) for a proven scalable, open standards-based, end-to-end DAM platform. The "status" and "related projects" sections below offer further detail about the current standing of this large-scale initiative.

WHAT IS DAM?

A DAM system is a repository of digital assets that supports the indexing, cataloguing, versioning, controlled access, storage, search, retrieval and distribution of the content with which an institution is entrusted. Digital assets consist of stills, graphics, text, video, and audio, and they can be an entire program or elements thereof. Each asset is described in the system using "metadata" (universal fields and controlled vocabularies), to facilitate search and retrieval by specific search queries or in general data mining.

PROJECT GOALS

Our primary goals in implementing a DAM system are as follows:

- Evolve from broadcast distribution to multi-platform/on-demand content distribution
- Enable the storage and preservation of our archival assets even as we migrate to changing media and media formats
- Streamline the production/post-production by facilitating efficient and effective search and retrieval methods
- Simplify and centralize access to 50 years worth of content
- Economize with the re-use of existing assets
- Facilitate new content partnerships

TECHNOLOGY PARTNERS

Sun Microsystems

WGBH's relationship with Sun Microsystems dates to 1994, when WGBH purchased its first piece of Sun hardware. Since then, the relationship has prospered and WGBH was approved as a Sun Microsystems Center of Excellence Facility, and a Sun reference site for Asset Management.

In March 2002, WGBH was awarded a \$2 million grant from Sun Microsystems for the purchase of equipment, some of which is used for the DAM endeavor. In addition, Sun Professional Service groups have been assigned to refine project requirements and begin to develop solutions for four defined business ventures: **Asset Management, Constituent Relationship Management (CRM), Interconnection, and Distance Learning (onCourse)**.

Artesia Technologies

WGBH initially contracted with Artesia in the Fall of 2000 to prototype an Asset Management system to consolidate several disparate and redundant databases, with the longer-term objective of implementing an enterprise-wide DAM system. This evolved into a partnership in November of 2001. Given Artesia's leadership

in Asset Management for the publishing industry, WGBH chose to partner with them to expand their expertise to the handling of video and interface enhancements.

WGBH has purchased licenses for Artesia's TEAMS product, and is working with them to develop a customized web-based interface. TEAMS, which accommodates open metadata and industry standards, enables the capture, management, and dynamic re-use of valuable rich-media assets such as video, audio, images, graphics, and text.

Sony Electronics, Inc.

In August 2002, WGBH approached Sony Electronics' Business Solutions and Systems Company to provide consulting services and technology for the station's DAM Reference Architecture initiative. Sony has been a long-standing leader in broadcast and production solutions, products, integration and consulting services. Sony designs products and applications that facilitate the transition to digital in the emerging broadband network era. Sony asserted its leadership position in digital asset management by providing the first innovative DAM system for CNN in 1999. Sony has continued to develop key solutions including bridge products between the analog and digital worlds with its introduction of the e-VTR, MXF file format and maintains relationships with many of the leading providers of asset management services.

STATUS

Build out of the DAM reference architecture is staged in four phases.

1. **Inception** - "Requirements Analysis & Planning"
 - a. This phase wrapped up in April, 2002. The deliverables from this phase included a vision document to identify opportunities where the system can provide value, provide proposed solutions, and to identify restraints. A high-level application and infrastructure architecture to support development and deployment in the context of the requirements is articulated, risks identified, and iteration plan developed for elaboration.
2. **Elaboration** - "Drill-down & Prototyping"
 - a. The elaboration phase is defined by the collected information during the Inception. During this phase major technical risks for deployment are resolved and a proof of concept implementation is developed. Proof of concept provides WGBH with the tools and information needed to plan a full-scale deployment, fully realizing the benefits of digital asset management. This phase is just wrapping up and documentation is being finalized.
3. **Construction** - "Design & Build"
 - a. Our next phase due to start in Spring, 2003, construction of the system includes completing the implementation, refinement of use cases and the design and preparation of the system to production quality. Full testing and quality assurance will be performed.
4. **Transition** - "Deployment"
5. During the transition phase, the production system is turned over for full deployment and system verification, system and user documentation is generated..

RELATED PROJECTS

The DAM system will allow different constituents to utilize WGBH's assets for new content partnerships, value-added membership benefits, educational applications and commercial re-sale. Following are some specific ongoing projects related to this initiative:

1. **Constituent Relationship Management (CRM)** – focused on delivering targeted, personalized content to constituents and leveraging the on-demand access model. Integrated across mediums, CRM will deliver accurate, timely content to individuals utilizing a broad variety of response methods with the goal of building brand loyalty and financial support. Integration of fundraising and premium offers is a part of this model.

2. **Digital Rights Management (DRM)** – allows a user of the system to identify the rights associated with a particular asset. Rights information will be treated as metadata that is linked with the asset.
3. **onCourse/Distance Learning** – a separate company (5013b) spun off from CPB, working independently from CPB (there's an initial investment from CPB but onCourse has to be self sustaining). Focused on the delivery of educational content, and professional development resources targeted to the needs of community-based public service organizations.
4. **Interconnection** – assists in defining the Asset Management architecture requirements of PBS' replacement satellite program distribution system. Also aids efforts to establish regional master control centers.
5. **Public Broadcasting Metadata Dictionary Project** (partner: Corporation for Public Broadcasting) – as part of the CPB Future Fund, WGBH is administering a grant to develop a shared metadata dictionary, to enable organizations within public broadcasting and educational communities to extend their access to content by sharing their asset libraries.

FUTURE DIRECTIONS

The future vision of a DAM system at WGBH is to make possible the enduring retrieval, distribution, storage and preservation of assets into perpetuity. This will be accomplished through the creation of technology that encompasses open standards and non-proprietary configurations and therefore embraces all existing and emerging media technologies and distribution channels.

ABOUT WGBH

WGBH Boston is America's preeminent public broadcasting producer, the source of nearly one-third of PBS's prime-time lineup and companion online content as well as many public radio favorites. WGBH is a pioneer in educational multimedia (including the Web, broadband, and interactive television) and in technologies and services that make media accessible for people with disabilities. WGBH has been recognized with hundreds of honors: Emmys, Peabodys, duPont-Columbia Awards...even two Oscars. In 2002, WGBH was honored with a special institutional Peabody Award for 50 years of excellence. For more information visit www.wgbh.org.