


*Everything Old*

*Can Be New Again...*





*Archive* = place where items have been selected for permanent or long term preservation

*Library* = a collection of information, sources, resources and services, organized for a common use



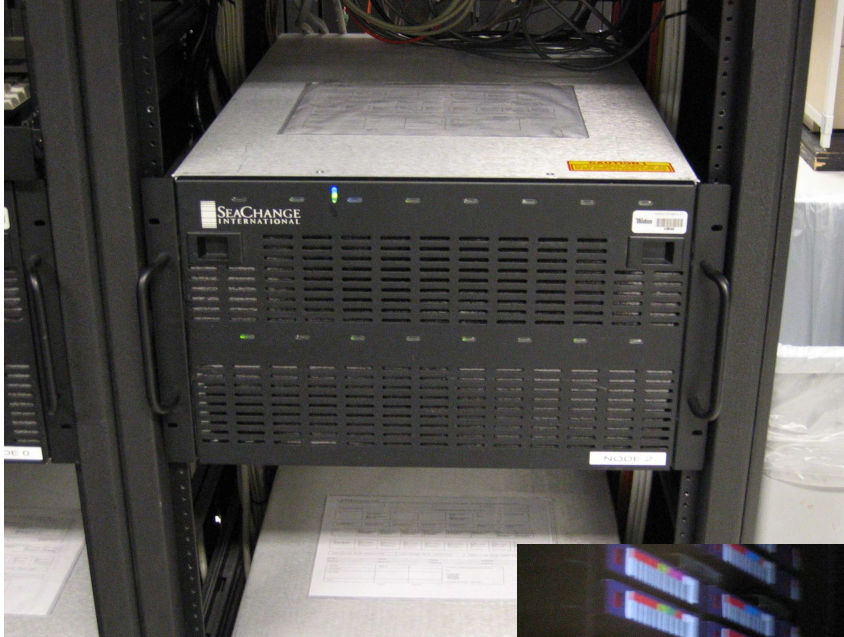
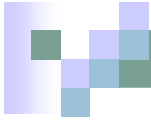
What our  
libraries used  
to look like...





*Preserving physical media? No mystery!  
Trained Archivists Know What To Do!*

- \* Climate controlled, dust-free environment
- \* Acid-free containers
- \* Limited handling and playback
- \* Visual inspection
- \* Human readable labels
- \* Stable, fixed content



*But what about our  
libraries today?*





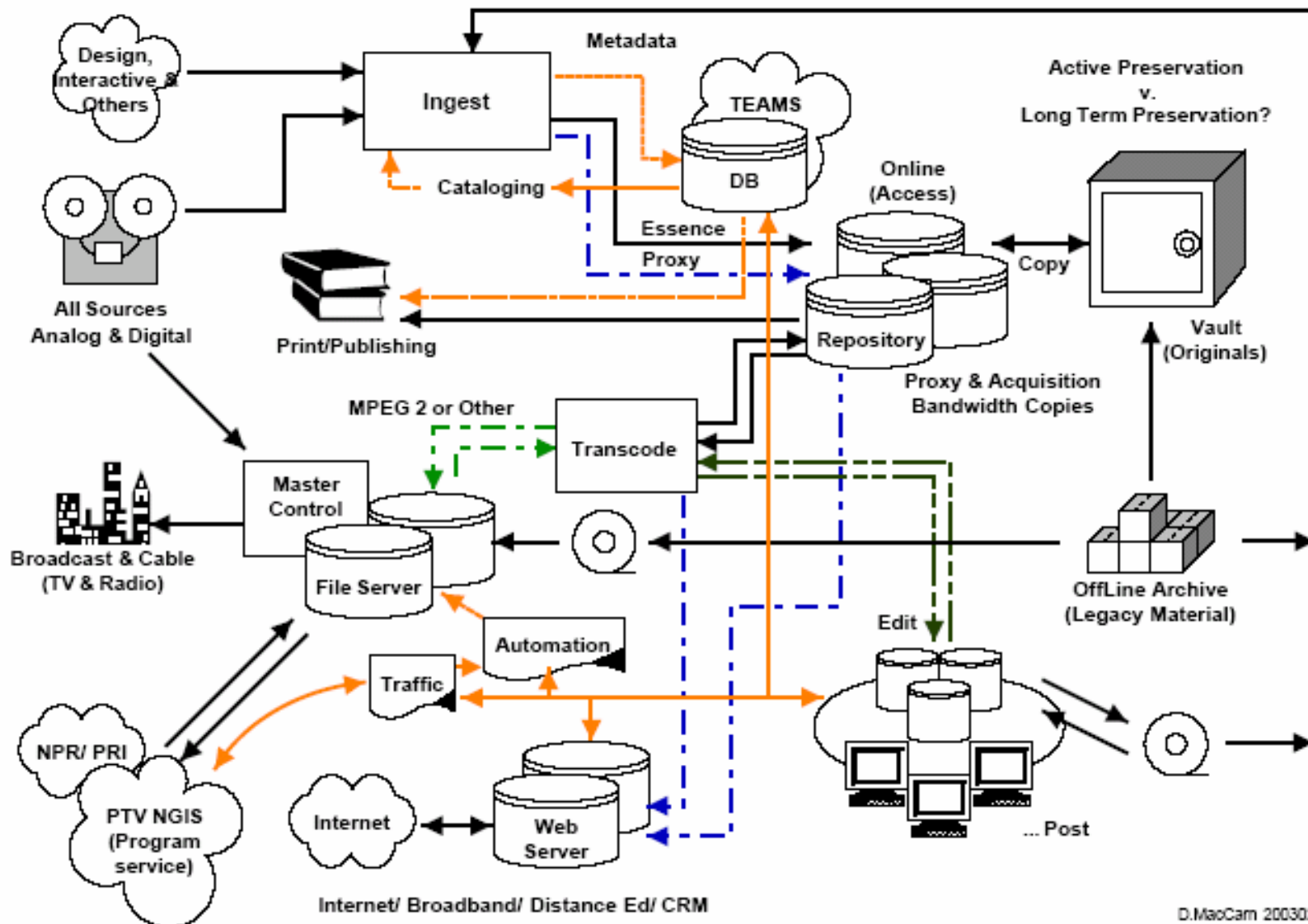
## *Today's Tapeless Broadcast Library*

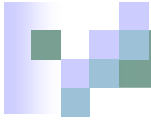
- \* Nothing to see - visual inspection impossible
- \* Content can be easily accessed *but* it can also be easily altered
- \* Accurate 'metadata' is *crucial* to playback
- \* Files *must* be interoperable
- \* Completely dependent on continuously running, functional hardware and software



# Digital Asset Management Unified Field Theory

Multi-Media





**When the digital landscape has --**

- \* Constant changes in formats**
- \* Regular updates in software**
- \* Rapid obsolescence of hardware**

***How do we preserve programs?***

***And why does it matter to us?***




*Because the future for our programs  
is preserving them*

- \* The public has a long memory for favorite programs
- \* Our programs reflect important documentation of contemporary social history
- \* There is life after broadcast - the public looks for their entertainment and educational media on-line
- \* Teachers, educators, students, parents also expect to find research and class materials on-line



***Preservation* is the key  
to making our rich content available.**

*If we save it, we can make it accessible.  
If we make it accessible, they will come...*



*“It is impossible to preserve an electronic record.  
It is only possible to preserve the ability to  
reproduce the electronic record.”*

International Research (Project) on Permanent  
Authentic Records in Electronic Systems

\* \* \* \* \*

**The challenge of digital *preservation*  
is to accurately and correctly  
*reconstitute the file***

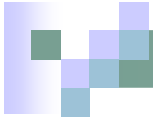


*“If you can’t find it, you can’t use it.”*

Annie Valva, Director  
Research and Business Development  
WGBH Interactive

\* \* \* \* \*

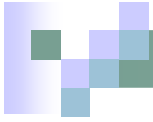
**The challenge of digital *access***  
**is to store the files in databases that are**  
***searchable***



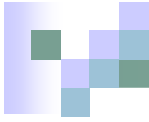
The secret to solving both these problems?

*S & M*

*[No, not that kind]*



*Standards*  
&  
*Metadata!!!*



*S & M make possible --*



Bruce Devlin  
Stell & Wilcox

*"We are on the verge of a metadata revolution. Get your data models clean and prepare for an interesting ride!"*

Tim Roney-Lee, 1999



change Format is an open file format, aimed at the interchange of AV with associated data and metadata. It establishes interoperability of n various applications used in the television production chain. This nional efficiency and creative freedom through a unified networked

**What is MXF?**

The Material eXchange Format (MXF) is an open file format, targeted at the interchange of audio-visual material with associated data and metadata. It has been designed and implemented with the aim of improving file-based interoperability between servers, workstations and other content-creation devices. These improvements result in a more efficient workflow and in more consistent content creation and distribution. Today's users and operators of content creation and distribution systems are faced with an enormous amount of input data. It has been recognized by the leading players in the production and distribution of content that the user community - to ensure that the format really makes sense. It is being published as an Open Standard which means it is a file transfer format that is openly available to all interested parties. It is not compression-scheme-specific and it simplifies the integration of systems using MPEG and DV as well as future, as yet unspecified, compression strategies. This means that the transportation of these different files will be independent of content, and will not dictate the use of specific manufacturers' equipment. Any required processing can simply be achieved by automatically invoking the appropriate hardware or software code. However, MXF is designed for operational use and so all the handling processes are seamless to the user. It just works quietly in the background.

Besides offering better interoperability - working with video and audio between different equipment and different applications - its other major contribution is the transport of metadata. By developing MXF from the beginning as a new file format, considerable thought has gone into the implementation and use of metadata. Not only is this important for the proper functioning of MXF files, it will also enable powerful new tools for media management as well as improving the content-creation workflows by eliminating repetitive metadata re-entry.

The convergence of technologies in television production, and in transmission to the viewers, means that the traditional workflow of moving the content - programme video and audio - within studios is changing too. Not

- \* Uniformity in content cataloging and tagging needed for searching
- \* Interoperability for file exchanges
- \* Standards for packaging and transcoding
- \* Ability to plan for future file migration



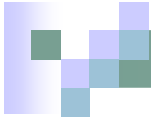
*But the workflow implications  
are important*

- \* **Cost of storage is dropping, so we can store more**
- \* **Content management systems are improving**
- \* **Entering necessary metadata will rest with *many people* along the production and broadcast chain**
- \* **Developing standards is a *long-term collaborative effort***




**An Archivist is no longer someone who handles  
tapes at the end of the production  
and distribution chain.**

**Today, the role of Archivist has become a  
*“Content Specialist,”* or a  
*“Media Manager”*  
who is overseeing  
an *“archival process.”***



As archival elements become integrated  
into our local production and  
distribution workflows,  
the Archival Process is taking shape.

*We must all become “content specialists”  
who share the responsibilities  
for preservation.*



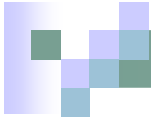
*“Public television has been responsible for the production, broadcast and dissemination of programs which form the richest audiovisual source of cultural history in the United States.”*

**Television and Video Preservation 1997:  
A Study of the Current State of American Television  
and Video Preservation  
Report of the Librarian of Congress**



Among many factors,  
this is one of the  
primary reasons for  
CPB to start planning

*The American Archive*



*Preserving Digital Public Television*

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