



PUBLIC BROADCASTING METADATA DICTIONARY PROJECT



January 8-11 in San Antonio



Getting Ready for Asset Management
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PUBLIC BROADCASTING METADATA DICTIONARY PROJECT

Whew...

*Aren't you glad you don't have
to think about that!*

1. Enhance awareness about the Metadata Dictionary Project.
2. Re-assure that some good, hard work is already being done.
3. The work of the Project builds on the reputation and credibility that public broadcasting enjoys (and has earned)
4. The Project has taken "a point position" regarding the investigation into and usefulness of metadata and digital asset management systems, especially for the benefit of stations with more limited resources.
5. The Public Broadcasting Metadata Core is primarily a dictionary and grammar for the exchange of data that currently exists in disparate databases and systems found throughout public broadcasting stations, departments and related communities.



Regarding the Intellectual Assets of Public Broadcasters



Photo by Jim Steinhart

- With Public Broadcasting's much coveted reputation for high *quality* and *credibility*...
- With its *connections* to...
 - Local & national communities
 - Universities, colleges & schools
 - Non-profit institutions
 - Arts & cultural organizations
 - Historical & scientific groups
- ...we are sitting on extensive *treasures* of programs (video & radio) and rich media files



Regarding the Intellectual Assets of Public Broadcasters

- Some of it is *buried* treasure...





Regarding the Intellectual Assets of Public Broadcasters



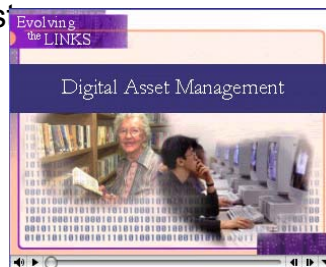
- Much of it awaits **valuation**...
 - Aesthetic value
 - Spin value
 - Monetary value
 - Service & Social value
 - Educational value
 - ROI



Regarding the Intellectual Assets of Public Broadcasters

- [Introduction](#) (ppt)
- [Metadata](#) (ppt)
 - > [UCME](#) (web)
- [Delivery on Demand](#) (ppt)
- [Digital Asset Management Systems](#) (ppt)
- [Universal Access](#) (ppt)
- [Example of a Portal](#) (ppt)
- [Conclusion](#) (ppt)

- Much of it awaits **description**, metadata **mark up**, **cataloging**, and **entry** into Digital Asset Management systems



Metadata and DAM Presentation
Courtesy of Wisconsin Public Television



Regarding the Intellectual Assets of Public Broadcasters

- The metadata we generate exists in **many forms** as part of many different management systems

-
- | | |
|--|--------------------------|
| National Program Distribution | Archiving |
| Local Broadcast Ops/Traffic | Production |
| Program Guides | Post-Production / NLEs |
| Advertising & Promotion | Facility Scheduling |
| Internet Services & Distribution Options | Digital Asset Management |
| Development, Fundraising, Sponsorship | Stock Footage Sales |
| Digital Rights Management | Education Connections |
| Graphics Library Tracking | Programming |

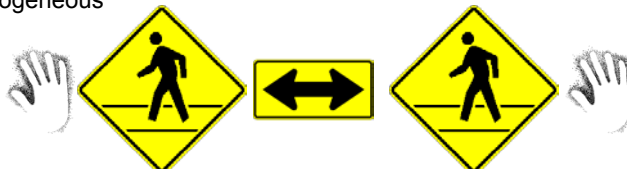


Regarding the Intellectual Assets of Public Broadcasters

- The dissimilar metadata we generate will likely need to be **exchanged** between systems

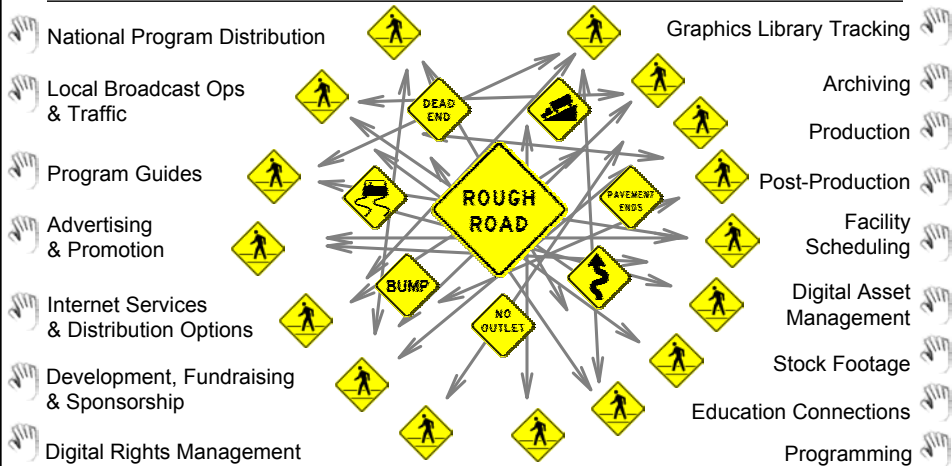
- One station function can **share information** with another station function.
- Provides **interoperability** between “heterogeneous” databases

- **Maps** relationships and equivalences in metadata
- Uses what is referred to as **“crosswalks.”**

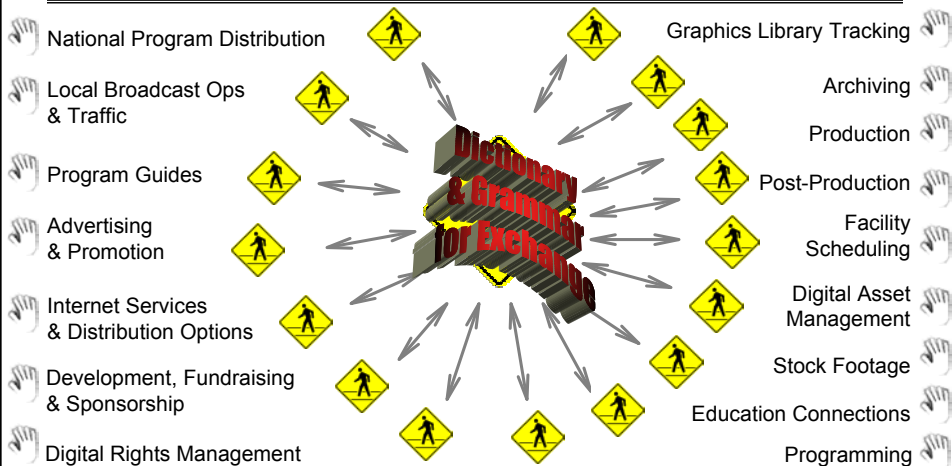


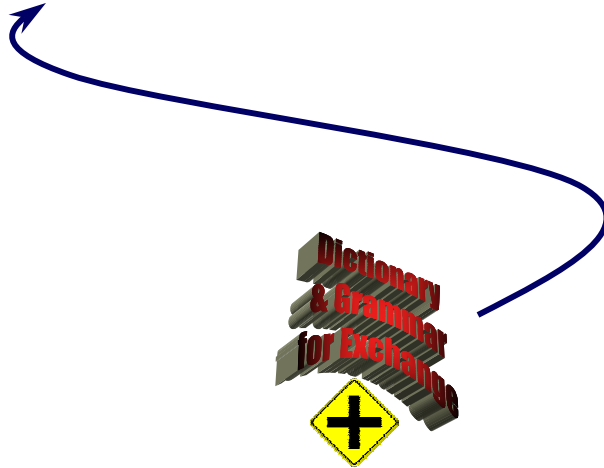


Regarding the Intellectual Assets of Public Broadcasters



Regarding the Intellectual Assets of Public Broadcasters





Examples of Data Sharing



Specific Objectives

- ✚ Draw from Public Broadcasting communities and form a **WORKING GROUP** to...
 - ✚ –Develop and refine **user requirements** for a sharable metadata dictionary
 - ✚ –Review **existing metadata** dictionaries and schemes to...
 - Determine applicability
 - Identify gaps and overlaps
 - Retain the best, purge the rest



Specific Objectives

- ✚ Draw from Public Broadcasting communities and form a **WORKING GROUP** to...
 - ✚ –Determine the **scope and breadth** of a usable metadata dictionary that is...
 - Extensible
 - Interoperable
 - Consensus-built
 - ✚ –Prepare a preliminary **Draft** of a Public Broadcasting Metadata Dictionary of descriptors and their usage
 - ✚ –Present the Draft for **Review and Comment** from Public Broadcasting communities



Working Group Members

- ✚ PBS, APTVS, NETA
- ✚ NPR, PRI
- ✚ Public Interactive, PBS.org, NPROnline
- ✚ National producers (WGBH, MPR, WNET, Grubin)
- ✚ Community radio and TV licensees (KCTS, WGBH, WHRO)
- ✚ State networks
- ✚ University radio and TV licensees (KWSU, WPT, WPSX, KUED, WMVS)
- ✚ Educators & their Evangelists (WPT, OnCourse, WHRO)
- ✚ Subject Matter Experts (AMIA/Rutgers, DOD Academic CoLab, University of Washington Information School)



User Requirements

- ◆ **User Requirements Team** was assigned to...
 - Conduct use case interviews
 - Summarize use case scenarios
- ◆ Issues and recommendations...
 - Implement a small, mandatory set of core metadata...but allow for modularity and special case extensions useful to other communities
 - Cont'd



User Requirements

- ◆ More Issues and recommendations...
 - Any metadata must be able to pass through existing transport and application standards already in place for public broadcasting
 - Dovetail with MPEG-7, Dublin Core, SMPTE and EBU P/Meta schemes
 - Use XML to crosswalk metadata from one application profile to another



Metadata Dictionary



A **Dictionary Review Team** was assigned to...

- Review existing metadata dictionaries, elements & qualifiers

Existing Metadata Standards



Existing Management Systems within Public Broadcasting



Metadata Dictionary



A **Dictionary Review Team** was assigned to...

- Spawn a PBCore Metadata Dictionary



86 + 112 + 97 + 32 + 140

467

metadata elements



Metadata Dictionary



A *Dictionary Review Team* was assigned to...

- Spawn a PBCore Metadata Dictionary

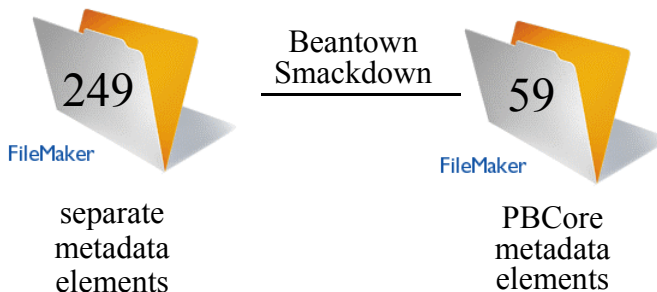


Metadata Dictionary



A Dictionary Review Team was assigned to...

- Spawn a PBCore Metadata Dictionary





Draft PBCore Metadata Elements

- ✚ Title
- ✚ Title.Alternate
- ✚ Title.Series
- ✚ Title.Episode
- ✚ Title.Program



Draft PBCore Metadata Elements

- ✚ Creator
- ✚ Creator.Role

- ✚ Subject





Draft PBCore Metadata Elements

- ✚ **Description**
- ✚ **Description.Abstract**
- ✚ **Description.TableofContents**
- ✚ **Description.ProgramRelatedText**



Draft PBCore Metadata Elements

- ✚ **Publisher**
- ✚ **Publisher.Role**

- ✚ **Contributor**
- ✚ **Contributor.Role**





Draft PBCore Metadata Elements

- ✚ **Date.Created**
- ✚ **Date.Issued**
- ✚ **Date.AvailableStart**
- ✚ **Date.AvailableEnd**



Draft PBCore Metadata Elements

- ✚ **Type**
- ✚ **Type.Form**
- ✚ **Type.Genre**

- ✚ **Format.Physical**
- ✚ **Format.Digital**
- ✚ **Format.Identifier**





Draft PBCore Metadata Elements

- ✚ **Format.FileSize**
- ✚ **Format.AudioBitDepth**
- ✚ **Format.AudioChannelConfiguration**
- ✚ **Format.AudioDataRate**
- ✚ **Format.AudioSamplingRate**



Draft PBCore Metadata Elements

- ✚ **Format.ImageAspectRatio**
- ✚ **Format.ImageBitDepth**
- ✚ **Format.ImageChannelConfiguration**
- ✚ **Format.ImageColorCode**
- ✚ **Format.ImageDataRate**
- ✚ **Format.ImageFrameRate**





Draft PBCore Metadata Elements

- ✚ **Format.ImageFrameSize**
- ✚ **Format.TimeStart**
- ✚ **Format.Duration**
- ✚ **Format.Standard**
- ✚ **Format.Type**
- ✚ **Format.Encoding**



Draft PBCore Metadata Elements

- ✚ **Identifier**

- ✚ **Source**

- ✚ **Language**
- ✚ **Language.Usage**





Draft PBCore Metadata Elements

- ✚ **Relation.Type**
- ✚ **Relation.Identifier**

- ✚ **Coverage.Spatial**
- ✚ **Coverage.Temporal**



Draft PBCore Metadata Elements

- ✚ **Rights.Usage**
- ✚ **Rights.Reproduction**
- ✚ **Rights.Access**

- ✚ **Audience.Level**
- ✚ **Audience.Rating**





Draft PBCore Metadata Elements

✚ **Standard**

✚ **Annotation**

✚ **Location**



Attributes/Grammar of each Metadata Element

(modified ISO 11179 format)

✚ *element name*

✚ *version*

✚ *element label*

✚ *definition*

✚ *namespace identifier*

✚ *registration authority*

✚ *language of element*

✚ *obligation/mandatory*

✚ *datatype*

✚ *maximum occurrence*

✚ *encoding schemes*

✚ *restricted values*

✚ *examples*

✚ *usage guidelines*



(Optional Discussions)



Examples of data mapping & crosswalks



Discussion about Application Profiles



Extensibility



Next Steps: Request for Comments



We will review the Dictionary with public broadcasting projects and entities not already directly involved in the Metadata Working Group, in addition to contacting experts in the field.








We will be testing the effectiveness of the Public Broadcasting Metadata Dictionary as an aid to data exchange, using typical Public Broadcasting data translation scenarios.



Examples of Data Translation & Sharing










Revisit the Intentions of the Metadata Dictionary Project

-  Wade into the muddy waters of metadata and D.A.M.
-  To conduct its work based on the expertise of communities and organizations currently working with metadata and asset management systems.
-  To “take a point position” so you wouldn’t have to.
-  To spare you unnecessary expenditures of resources, personnel, facilities, and time.
-  To build on the recognition that the technical standards of public broadcasting have always been held as the yardstick of measurement. We would have similar hopes for our metadata standards and metadata sharing activities & translations.



Timeline

- | | |
|--|----------------------------------|
|  April 2002 | 1st meeting of the Working Group |
|  Summer 2002 | Team Homework Assignments |
|  September 2002 | 2nd meeting of the Working Group |
|  October 2002 | Beantown Smackdown |
|  January - May 2003 | Comment Period |
|  May - June 2003 | Revisions |
|  July 2003 | Publish Version One |



For More Information



CPB Asset Management Websites Links



[***Digital Asset Management***](#) will help us fulfill our mission of service, by facilitating the easy ingest, storage, cataloging, search and retrieval of our rich media assets. Get the details about what your colleagues are doing, and what's on the horizon.



[***Public Broadcasting Metadata Dictionary Project Website***](#)
Find out about this fascinating and timely endeavor - that of creating a shared language, or protocol, to help describe and exchange public broadcasting's many rich media assets.