



OFFICE OF INFORMATION TECHNOLOGY
University of Utah, Salt Lake City USA



Paul Burrows
Manager, New Media Integration
Media Solutions
Office of Information Technology
University of Utah
pburrows@media.utah.edu
801-581-7908

1

The reverse side
also has
a reverse side.

Japanese proverb

2

The best practice
for metadata...

3

...is to
PRACTICE
metadata...

4

...is to
DISAMBIGUATE
how we describe
things & search
for things...

5

...is to improve
FINDABILITY...

6

...is to enhance
our **WAYFINDING**
through ever
increasing content
and information...

7

...is to **SHARE** either
our metadata or
the things they
describe...

8

...is to recognize that
metadata always is
applied within some
CONTEXT.

9

...is to recognize that
metadata is bound by an
organization's
WORKFLOWS & RULES.

10

...is to convince you
that you never
met-a-data
you didn't like...

11

...ultimately to
recognize that
metadata is an
ENABLER.

12

...and appreciate that
one can never have
too many visual metaphors
in a single presentation.

Pablo's proverb

13



14

WHAT ABOUT IT?



15


**Is created & exists
in some form...**

Can be shared...

Enriches & empowers...

Tests for competency...

Checks for understanding...



Wants to be needed & experienced...

Answers a question...

Furthers a thought process...

Solves a problem or challenge...

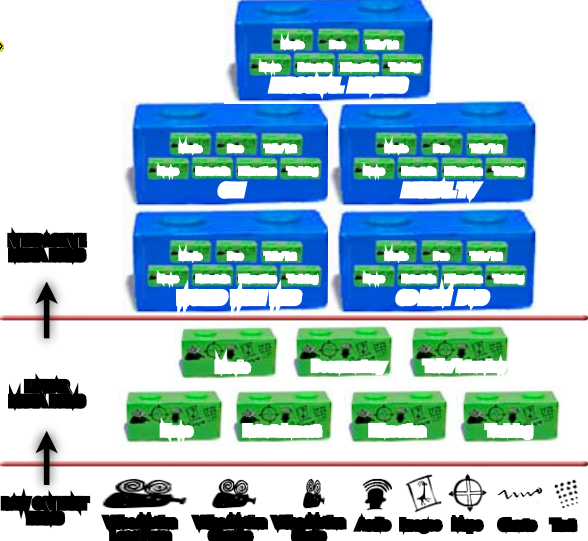
16

WHAT CONSTITUTES CONTENT?

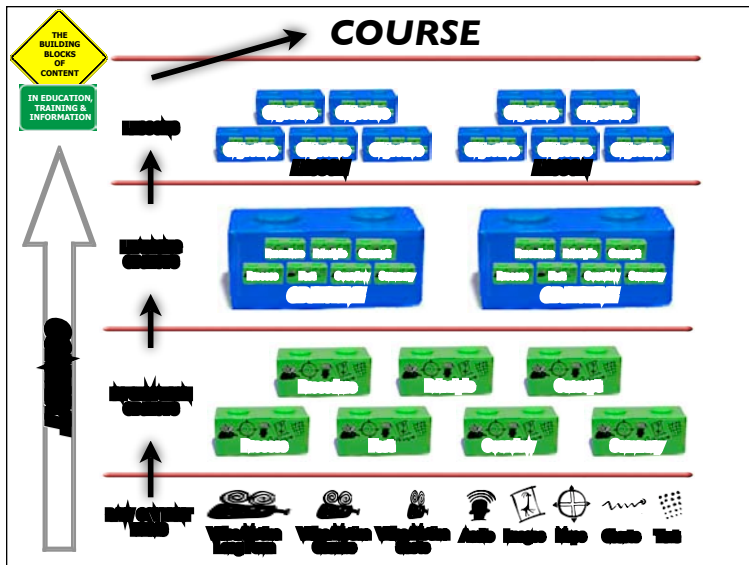


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THE BUILDING BLOCKS OF CONTENT



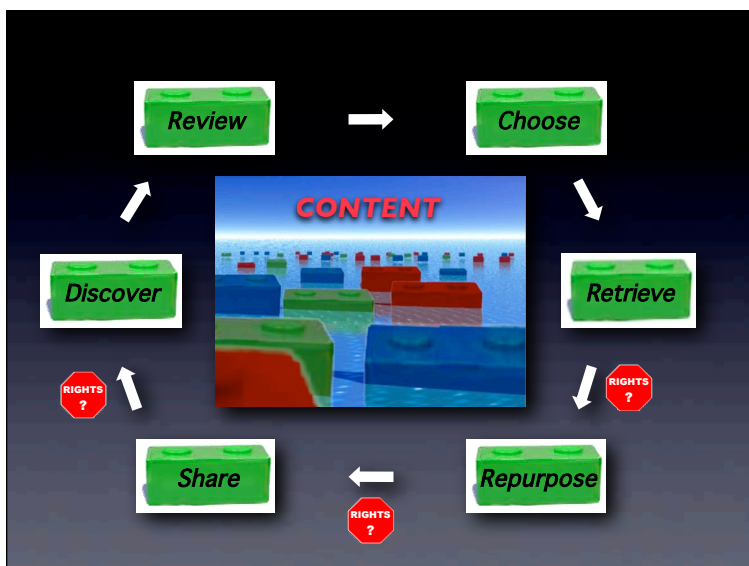
18



19




20



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BREVITY Endore-Kaiser and Perry

SUDDENLY JOHN REALIZED HE DIDN'T WANT PAPER OR PLASTIC. HE WANTED SOMETHING NEW ... SOMETHING FANTASTIC.




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BREVITY Endore-Kaiser and Perry

SUDDENLY JOHN REALIZED HE DIDN'T WANT PAPER OR PLASTIC. HE WANTED SOMETHING NEW ... SOMETHING FANTASTIC.




©2005 by Endore-Kaiser and Perry, Inc. endore-kaiser@prod.com 2/05

“Technology is freeing audiences to chose their own media experiences based on their needs, not the best laid plans of public broadcasters. Stations should focus on customer interests, not just leveraging their self-defined assets.”

David Liroff
VP & CTO
WGBH Educational Foundation

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CONTEXT...
CONTENT IS SEPARATE FROM ITS PRESENTATION



Content = “the What”
Delivery = “the How”
What + How =

24

SOMETHING WONDERFUL...

**New Media
Ecosystem
Directly Ahead!**



25

**Classic Media
vs
New Media**



26

Broadcast



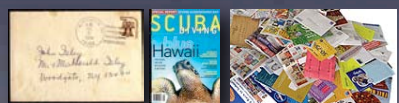
Landline



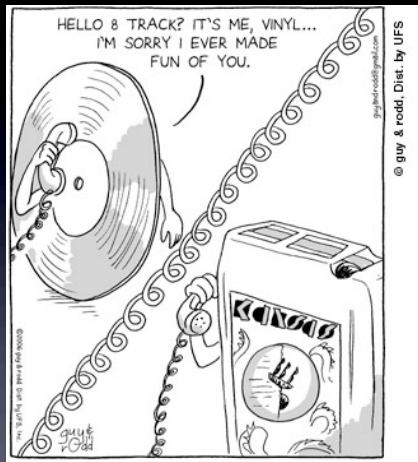
Packaged Media



Snail Mail



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**Push Content
vs
Pull Content**



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**Push Content
vs
Pull Content**



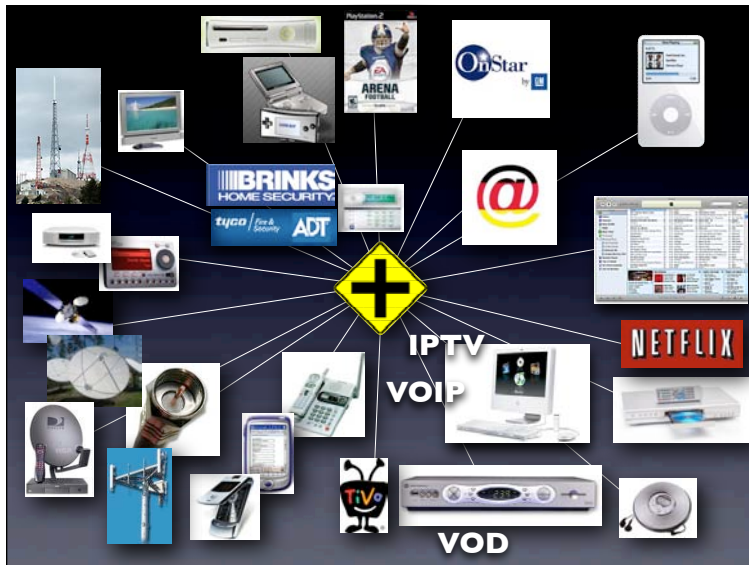
30

Media Convergence



An integration or intersection of various content and delivery systems.

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Consumption Profiles



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The Long Tail

<http://www.wired.com/wired/archive/12.10/tail.html>

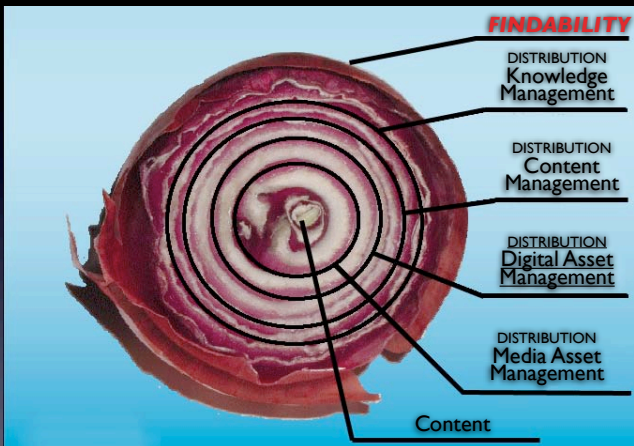
“Forget squeezing millions from megahits at the tops of the charts. The future of entertainment is in the millions of niche markets at the shallow end of the bitstream.”

Chris Anderson
Editor in Chief
Wired Magazine

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35



36



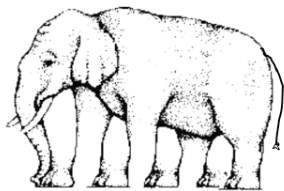
FINDABILITY

The ability to find relevant information fast.

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FINDABILITY

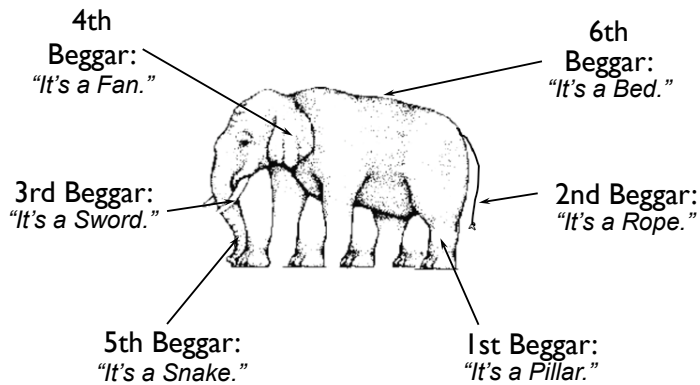


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FINDABILITY

The Blind Men and the Elephant
Hindu Fable as told by Persian poet Jalāl al-Dīn Rūmī
with derivative by American poet John Godfrey Saxe

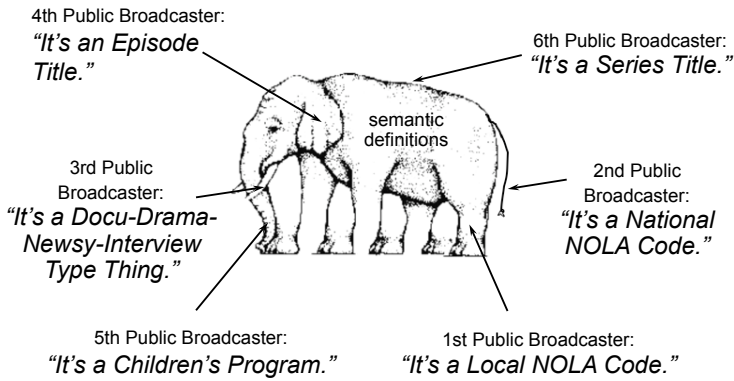


39



FINDABILITY

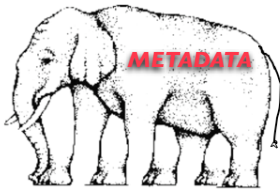
Public Broadcasters
~~The Blind Men and the Elephant~~
Hindu Fable as told by Persian poet Jalāl al-Dīn Rūmī
with derivative by American poet John Godfrey Saxe



40



FINDABILITY



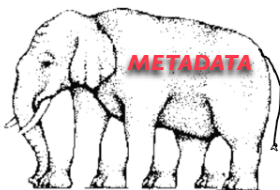
Provides a structured and organized way to describe things...standardization.
How important is that?

41



FINDABILITY

Media Item (Essence)
+ Descriptions (Metadata)



= An Asset (Has Meaning & Value)



IPR & DRM
(Intellectual Property Rights & Digital Rights Management)

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FINDABILITY



What *benefits* are possible through standardization?

- Findability
- Flexibility
- Agility
- Accessibility
- Portability
- Reusability
- Exchangeability
- Interoperability
- Reliability
- Sustainability
- Shareability

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FINDABILITY



What *types* of standardization are there?

ACADEMIC & CURRICULUM STANDARDS

CATALOGUING & METADATA STANDARDS

TECHNICAL, DELIVERY & INSTANTIATION STANDARDS

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FINDABILITY



Attributes of Metadata Elements
(defining descriptions, data models, dictionaries)

(modified ISO 11179 format)

- | | |
|---------------------------------|-------------------------------|
| > <i>element name</i> | > <i>obligation/mandatory</i> |
| > <i>version</i> | > <i>datatype</i> |
| > <i>element label</i> | > <i>maximum occurrence</i> |
| > <i>definition</i> | > <i>encoding schemes</i> |
| > <i>namespace identifier</i> | > <i>restricted values</i> |
| > <i>registration authority</i> | > <i>examples</i> |
| > <i>language of element</i> | > <i>usage guidelines</i> |

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FINDABILITY



Attributes of Metadata Elements (defining descriptions, data models, dictionaries)

(modified ISO 11179 format)

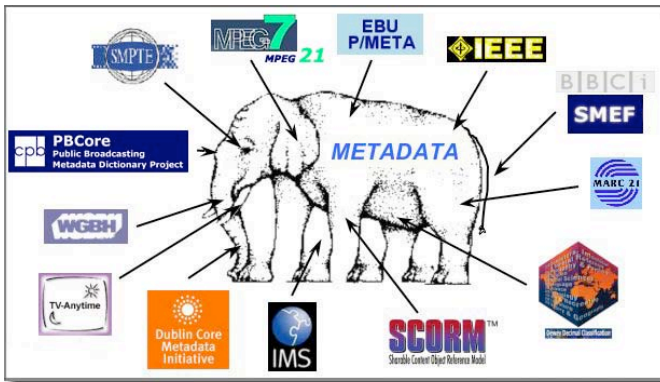
- > element name
- > version
- > element label
- > definition
- > namespace identifier
- > registration authority
- > language of element
- > obligation/mandatory
- > datatype
- > maximum occurrence
- > encoding schemes
- > restricted values
- > examples
- > usage guidelines

Registration Authority
Maintains and sustains the integrity, meaning, and application of a metadata element over its life span. Critical for the sustainability of a metadata scheme or D.A.M. System.

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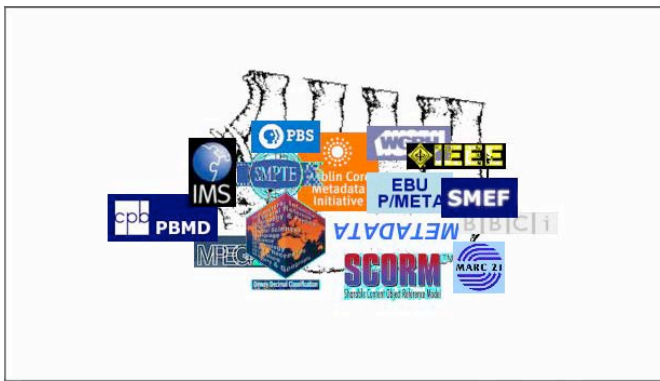
FINDABILITY



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FINDABILITY



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April 1, 2005
(no foolin')



PBS 2005 TECHNOLOGY CONFERENCE

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Development Funding for PBCore provided by the Corporation for Public Broadcasting

PBCore is a Metadata & Cataloging Resource for Public Broadcasters & Associated Communities

cpb PBCore
Public Broadcasting
Metadata Dictionary Project

PBCore v 1.0

**Welcome to PBCore,
the Public Broadcasting Metadata Dictionary**

Announcements and News

- RSS** Add PBCore Announcements and News to your RSS Reader (What's RSS?)
- NEW!** PBCORE XSD (XML SCHEMA DEFINITION) OVERVIEW READY FOR COMMENTS!
- Join the PBCore Listserv
- Read the PBCore presentation from PBS Tech Conference & NAB (April 2005)
- PBCore Version 1.0 is Published!
- PBCore Embraced by Kentucky Educational Television Digital Archive Project
- Flyer Announcing PBCore Version 1.0 Release
- Summary Report for the PBMD Test Implementations of the PBCore
- Summary Report for the PBMD Request for Comments Surveys for PBCore

Take me to the PBCore Dictionary Elements, right now!

Getting Oriented to the Website...

- About PBCore
- Navigating the PBCore Website
- About the Metadata Elements
- The PBCore is in Version 1.0

Home
Project Background
PBCore Elements
User Guide
Who May Use PBCore
Licensing PBCore
Resources & Links
Contacts
Site Map
Working Group
Feedback
Join Listserv

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cpb PBCore
Public Broadcasting
Metadata Dictionary Project

The PBCore (Public Broadcasting Metadata Dictionary) was created by the public broadcasting community in the United States of America for use by public broadcasters and related communities.

Initial development funding for PBCore was provided by the Corporation for Public Broadcasting.

The PBCore is built on the foundation of the Dublin Core (ISO 15836), an international standard for resource discovery (<http://dublincore.org>), and has been reviewed by the Dublin Core Metadata Initiative Usage Board.

51

The intent of the Public Broadcasting Metadata Dictionary Project is to first spawn a core set of metadata descriptors that are applicable to most venues and scenarios.

The PBMD Project is focused on the ability to exchange metadata between parties rather than trying to build a completely comprehensive, all encompassing, über metadata system that satisfies all user requirements.

As extensions are evaluated and experts help the PBMD Project incorporate their metadata, the PBCore becomes more robust, but simple enough to be understood and usable by most of us.



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Participants

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



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Snapshots

The people in the Working Group
all had a passion
for this work -
an “inner librarian.”



54

We need to ensure success across the system, where increasingly we are all in what are almost forced collaborations, triggered by the growing urgency of our asset management needs and our resource constraints.



55

What we do is ultimately all about access by others within and outside of the public broadcasting system - to the extent that the dictionary we develop allows access to the metadata, but not the appropriation of content.



56

There is a great deal of existing work in the field to build on; the metadata dictionary project does not have to start from scratch.



57

Based on its review and evaluation work, the Working Group should then be in a position to “pick the best and leave the rest” -- an application profile --



58



86 + 112 + 97 + 32 + 140

467
metadata



59

Beantown
Smackdown
#1




separate
metadata
elements

recommendations
for grouping and
collapsing

separate
metadata
elements



60

 **PBCore**
Public Broadcasting
Metadata Dictionary Project


Snapshots

Beantown Smackdown #2 Beantown Smackdown #3

249 58 48

FileMaker FileMaker FileMaker

separate metadata elements PB Core metadata elements PB Core metadata elements



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 **PBCore**
Public Broadcasting
Metadata Dictionary Project

Snapshots

We must think about “life after the metadata dictionary is published,” focusing on how to ensure compliance, provide incentives, practice enforcement, and anticipate the need for a long-term infrastructure and authority capable of carrying out these and other implementation functions.




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 **PBCore**
Public Broadcasting
Metadata Dictionary Project

Snapshots

PBCore’s home is a website and is the main vehicle for users to access information, fulfilling Public Broadcasting’s mission to provide non-commercial information and universal access to the public.

<http://www.pbcore.org>



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PBCore is to be made useful, ubiquitous, and a permanent part of our creation, generation, and management of content.



64

A PBCore authority will conduct advocacy, communication, training, technical assistance, and maintenance and change orders for updates to the dictionary.




65

The creative/operational challenge that PBCore will address is, “You can’t use it if you can’t find it.” If we can’t sensibly organize, re-use and re-purpose our assets, we will find ourselves delivering less and less product, and having less and less relevance to our audiences.




66




Snapshots

PBCore is not a single, shrink-wrapped product that is installed and applied. It is a building block that can be inserted into many different applications and many different models, all depending on individual station infrastructures, capabilities, and needs.










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








Snapshots

Mapping & Crosswalking Element Relationships










KPUB-TV



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Snapshots

Mapping & Crosswalking Element Relationships

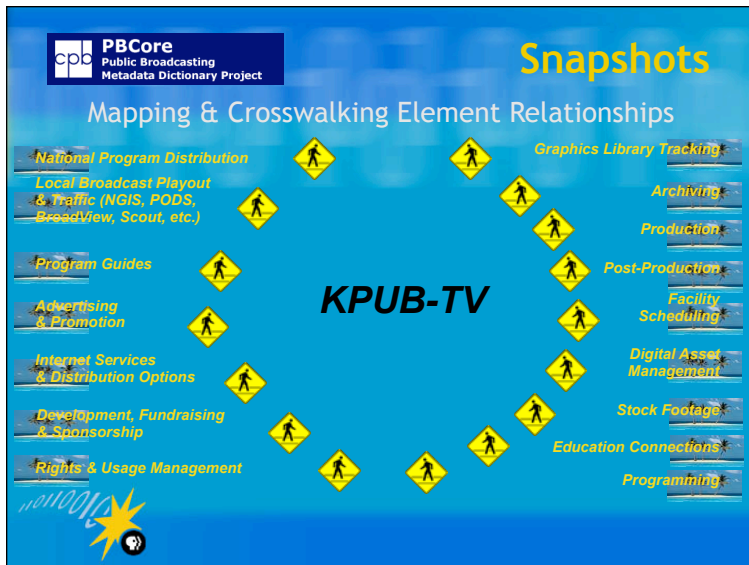
- National Program Distribution
- Local Broadcast Playlist & Traffic (NGIS, PODS, BroadView, Scout, etc.)
- Program Guides
- Advertising & Promotion
- Internet Services & Distribution Options
- Development, Fundraising & Sponsorship
- Rights & Usage Management

- Graphics Library Tracking
- Archiving
- Production
- Post-Production
- Facility Scheduling
- Digital Asset Management
- Stock Footage
- Education Connections
- Programming

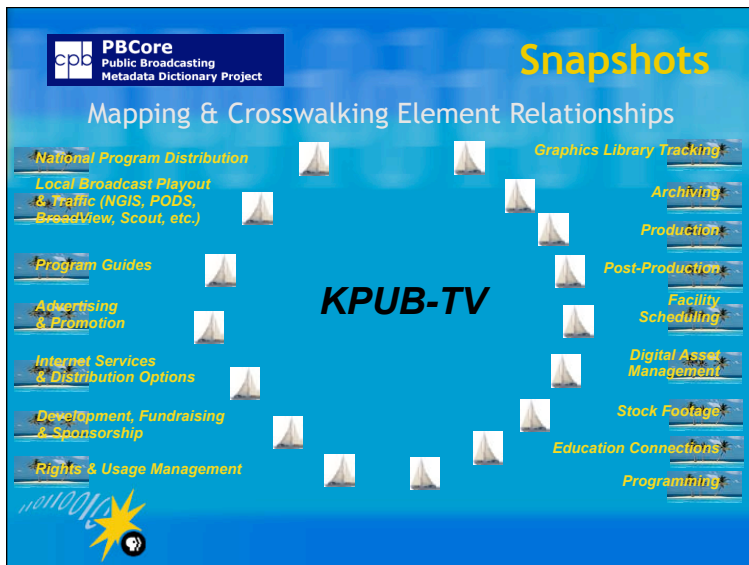
KPUB-TV



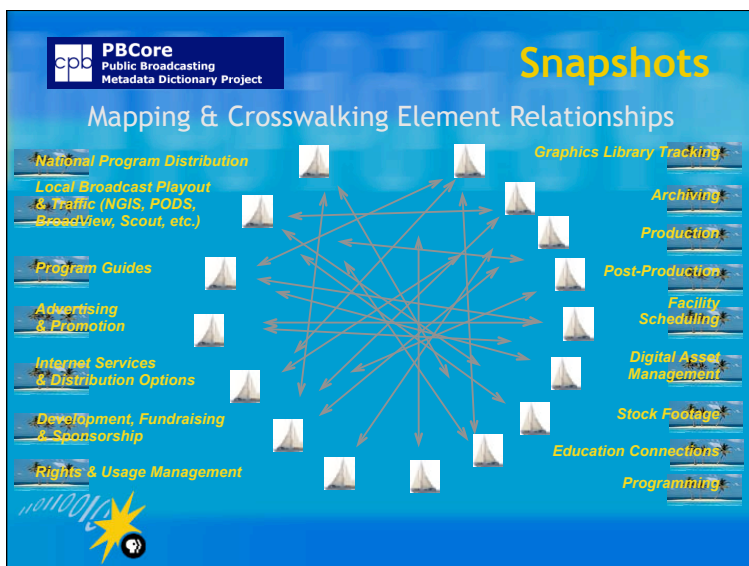
69



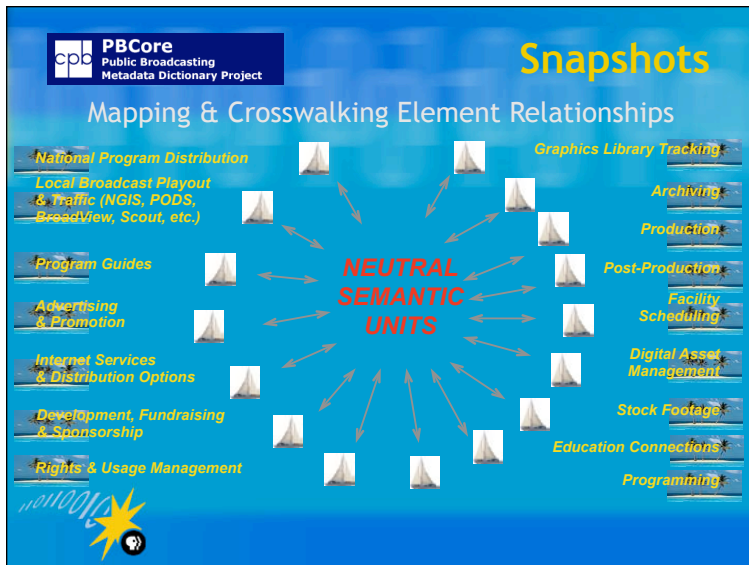
70



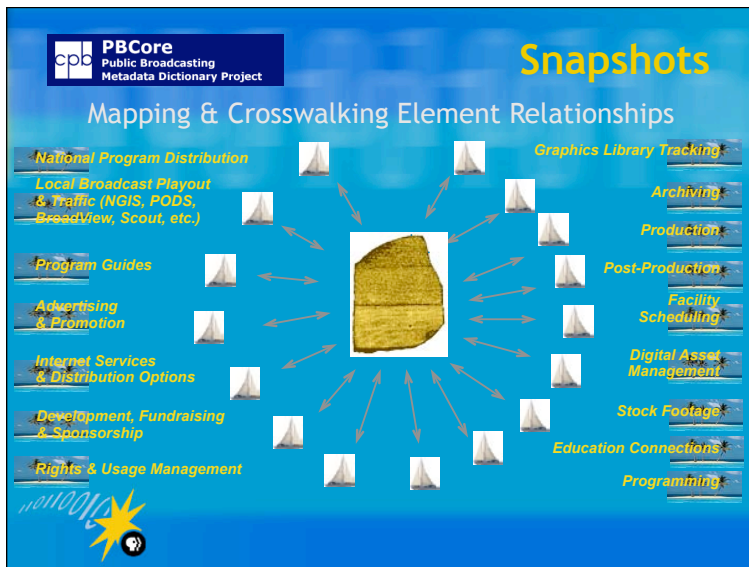
71



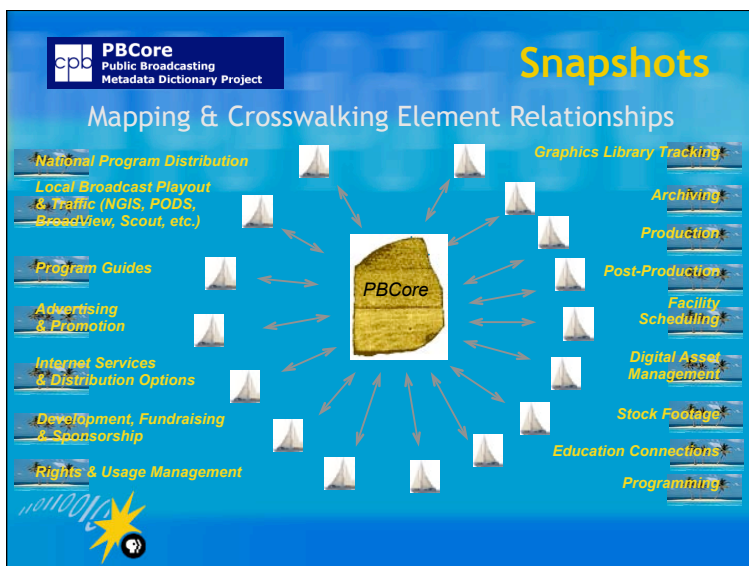
72



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74



75

PBCore has 48 metadata elements.

- > It is a core set of terms and descriptors (elements)...
- > Used to create information (metadata)...
- > That categorizes or describes...
- > Media items (sometimes called assets or resources).



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PBCore has 48 metadata elements.

- > **INTELLECTUAL CONTENT** (descriptive, subjective)...
13 elements describing the actual intellectual content of a media asset or resource.
- > **INTELLECTUAL PROPERTY** (rights & usage)...
7 elements related to the creation, creators and usage of a media asset or resource.
- > **INSTANTIATION** (structural, objective metadata)...
28 elements that identify the nature of the media asset as it exists in some form or format in the physical world or digitally.



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KEEP PBCore SIMPLE !

Remember, PBCore is to be a
real-world tool,
not an arcane philosophical model.

-- That is indeed a best practice --



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utah metadata application profile
for the UEN Digital Media Service

WHAT IS UMAP?

The **Utah Metadata Application Profile**, otherwise known as **UMAP**, is a collection of descriptors used to identify and depict media items. These files are made available for search, review, and download from the Utah Education Network Digital Media Service. Assets in the UEN DMS collections include video, audio, text (pdf), and image files. The service provides digital media assets for Utah's K-12 educators and students through its **eMedia** gateway. As well, the Utah Collections Multimedia Encyclopedia (**UCME**) and the University of Utah's public broadcasting television station, **KUED-TV**, offer numerous media assets to their respective communities, both public and invitational.

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utah metadata application profile
for the UEN Digital Media Service

UMAP USER GUIDES

Main Menu of Viewing Options for the UMAP Metadata Elements

- Option 1: Common Names (128)**
(definitions and guidelines for individual elements alphabetically listed by their Common Names--"Administrative Overrides")
- Option 2: Database Column Names (128)**
(definitions and guidelines for individual elements alphabetically listed by their Oracle Database Column Names)
- Option 3: Logical Groupings (Content Classes) (13)**
(definitions and guidelines for individual elements listed by logical groupings--"Content Classes")
- Option 4: Published Metadata for End Users (28)**
(in the same order as used by our consumers for searching and reviewing media items--"User Group Overrides")
- Option 5: Indexing Metadata for Catalogers (112)**
(in the same order as used by our catalogers for entering descriptions and data --"Administrative Overrides")

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utah metadata application profile
for the UEN Digital Media Service

UMAP ELEMENTS USER GUIDES

Option 1: Common Names (128)

(definitions and guidelines for individual elements listed alphabetically by their Common Names--"Administrative Overrides")

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

COMMON NAMES ARE LISTED ALPHABETICALLY

Common Names "Administrative Overrides" (as seen by catalogers)		Oracle Database Column Names	Published "User Group Overrides" (e-Media)
A	↑		
Activity represented	ⓘ	kw_activity_represented	
Affiliations represented	ⓘ	kw_affiliations_represented	
Alternative modes	ⓘ	umap_alternative_modes	Alternative modes
Alternative title	ⓘ	umap_title_alternative	
Audience level	ⓘ	util_audiencelevel	Audience level
B	↑		
Body of water	ⓘ	kw_covspatial_body_of_water	
C	↑		
Citation	ⓘ	FR citation_summary	Citation
citation-Creator or author	ⓘ	citation_creator	
citation-Creator role	ⓘ	citation_creator_role	
citation-Creators (other)	ⓘ	citation_contributor	

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ADMIN & EMEDIA LABELS	METADATA DESCRIPTORS	METADATA ATTRIBUTES
	▼ Content Class 07: Utilization (Content Suitability for Audiences) ▶ Description of the content class ...	
Audience level	▼ util_audiencelevel [for publication]	
	▼ DESCRIPTION...	
	<ul style="list-style-type: none"> DEFINITION... 	AUDIENCE LEVEL identifies a generalized type of audience, viewer, or listener for whom a media item is primarily designed or educationally useful. The ability to designate the intended users of a media item is especially important when matching a program's usefulness to a specific age range, audience grouping, or educational level. The descriptors are more generic than the K-12 categories used for GRADE LEVEL. The allowed values are drawn from Library of Congress groupings and can be used for crosswalk harmonizations with external metadata schemas.
	<ul style="list-style-type: none"> COMMENTS... 	
	▼ DATA ENTRY...	
	<ul style="list-style-type: none"> DATA TYPE... DATA LENGTH... GUIDELINES... 	repeating 100 Select from the picklist. More than one age range may be selected. K-12 (general) Pre-school (kindergarten) Primary (grades 1-6) Intermediate (grades 7-9) High School (grades 10-12) College Post Graduate General Education Educator Vocational Adult Special Audiences General Male Female Other
	<ul style="list-style-type: none"> PICKLIST OF VALUES (Popup Menu)... 	
	▼ EXAMPLES...	
	<ul style="list-style-type: none"> FROM UMAP2... 	See picklist.


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 utah metadata application profile
 for the UEN Digital Media Service

THE PUBLISHED END USER NAMES ARE LISTED IN AN INTUITIVE ORDER AS THEY APPEAR IN THE WEB INTERFACE for example, e-Media for K-12

Published "User Group Overrides" (if any)	Common Names "Administrative Overrides" (as seen by catalogs)	Oracle Database Column Names
FFZ Type (NP default)	Type	np_title_type
FFZ Size (NP default)	Size	np_title_size
FFZ Info (NP default)	Info	np_title_info
1 Title	Title	umap_title
2 Title (contextual)	FR Title (contextual)	umap_title_contextual
3 Description	Description-Abstract (short)	kw_description_abstract_short
4 This title is a(n)	This title is a(n)	umap_title_type
5 Media type	Media type	umap_media_type Informal
6 Keywords	FR Keywords	kw_keyword_summary
7 Genre	Genre	kw_genre
8 Duration	FR Duration	umap_media_duration
9 Utah Core Area	Subjects-Utah Core Area	usoh_k12_subject_area
10 Grade level	Grade level	usoh_gradelevel
11 Audience level	Audience level	util_audiencelevel
12 Is part of	Is part of	rel_related_asset_parent
13 Is related to these parts	Is related to these parts	rel_related_asset_siblings
14 Has these parts	Has these parts	rel_related_asset_child
15 Suggested related media	Suggested related media	rel_suggested_related_media
16 Full description	FR Description-Abstract (summary)	kw_description_full_summary
17 Alternative modes	Alternative modes	umap_alternative_modes
18 Is this digital or physical	Is this digital or physical	umap_media_manifestation
19 Physical formats and locations	Physical formats and locations	umap_physical_format_location
20 Content tags	FR Content tags	util_content_tags_summary
21 Copyright notice	FR dm-Copyright notice	dm_copyright_notice
22 You are permitted to	dm-End user permissions	dm_enduser_permissions
23 Under these constraints	dm-End user constraints	dm_enduser_constraints
24 With these obligations	dm-End user obligations	dm_enduser_obligations
25 Citation	FR Citation	citation_summary

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METADATA BEST PRACTICES

The Goal is to "Disambiguate"

When entering and sharing metadata, control...

- For ambiguities in terms used (clear definitions)
- The meanings behind data categories (semantics)
- How descriptions are selected and entered by using agreed upon vocabularies and values (picklists, type of data, examples)
- For idiosyncratic and "creative" applications of descriptions (guidelines for usage)
- The "rules of the road"

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The Goal is to “Disambiguate”

Strive for...

- **Data accuracy**
- **Data Timeliness**
- **Automating data entry**
- **Automating the sharing of data
(mapping to other databases & devices)**

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Metadata Always is Applied Within a Context

- **Creation / Production / Editorial Processes**
- **Ingestion / Digitization of Essence**
- **Cataloging / Logging / Descriptions**
- **Exploitation Processes
(search, retrieval, playout, repurpose)**
- **Bound by IPR & DRM**
- **Archival Purposes**

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When Metadata Goes Bad



Listing Service
Insanity



87



When Metadata Goes Bad



Listing Service
Insanity



88



When Metadata Goes Bad



Listing Service
Insanity



89



When Metadata Goes Bad



Listing Service
Insanity



90



When Metadata Goes Bad



Listing Service
Insanity



91



When Metadata Goes Bad



Listing Service
Insanity



92



When Metadata Goes Bad



Listing Service
Insanity



93



When Metadata Goes Bad



Listing Service
Insanity



94



When Metadata Goes Bad



Listing Service
Insanity



95



When Metadata Goes Bad



Listing Service
Insanity



96



When Metadata Goes Bad



Listing Service
Insanity



TV LISTINGS SERVICES



Animation
Family

97



When Metadata Goes Bad



Listing Service
Insanity



98



When Metadata Goes Bad



Listing Service
Insanity



At one time in the dark reaches of American mining history, determined forces were locked in battle for the very soul of the nation. It was a time when the fuse was lit, the blast was imminent, and the warning cry was offered: "fire in the hole."
KUED presents **Fire in the Hole**, an examination of the mining labor conflicts that shaped the West during the early 1900s.

99



When Metadata Goes Bad



Listing Service
Insanity



TV LISTINGS SERVICES



Adults Only
Entertainment

100



When Metadata Goes Bad



Listing Service
Insanity



TV LISTINGS SERVICES



Adults Only
Entertainment

101



METADATA BEST PRACTICES



The Quest is to Exchange & Share Information

Because there are numerous data models and dictionaries upon which different metadata schemes and implementations are based...

...there is considerable overhead and effort to exchange descriptions between disparate systems (MAM, DAM, CMS, etc).

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The Quest is to Exchange & Share Information

A common data model does not guarantee that two entities attempting to exchange metadata...

...have a common INTERPRETATION of the metadata elements themselves, their meanings, attributes, and their acceptable values (structured and vocabulary terms).



The Quest is to Exchange & Share Information

When two entities attempt to transmit metadata between each other...

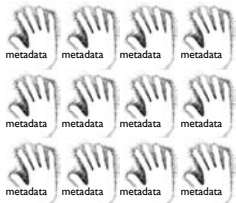
...a standardized protocol, wrapper, or container should be employed.

- > **MXF**: Materials Exchange Format that packages both essence & metadata (descriptive & structural)
- > **XML**: Extensible Markup Language (define models by DTD, XSD)
- > **MOS**: Media Object Server Protocol (news operations)
- > **SOAP**: Simple Object Access Protocol (lightweight info exchange)
- > **AAF**: Advanced Authoring Format (content creation)



The Quest is to Exchange & Share Information

By using an *über database* By using *mapping & crosswalks*



With all features, workflows, & business rules for all communities and users!
[SMEF, P/META, SMPTE MPEG-7, MPEG-21]

Building custom data bridges between systems!

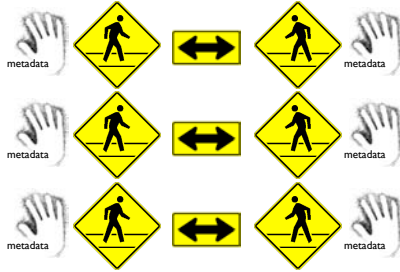
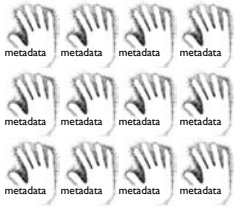


METADATA BEST PRACTICES



The Quest is to Exchange & Share Information

By using *harvesters & search engines...*



AGGREGATORS

Harvest from multiple databases and create a single, searchable "Control Index"

FEDERATED SEARCHES

Uses multiple crosswalks to multiple databases to create an ephemeral "Results Page"

106

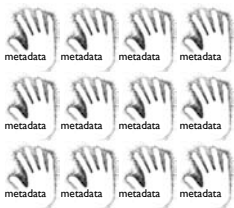


METADATA BEST PRACTICES



The Quest is to Exchange & Share Information

By using *search engines...*



Open Archives Initiative

AGGREGATORS

Harvest from multiple compliant databases and create a single, searchable "Control Index"

107

META-CHASMS

DISCONNECTS THAT COMPROMISE CONTENT'S DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY



108

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



QUALITY OF METADATA SCHEMA

109

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



standards-
based

ad hoc &
parochial

QUALITY OF METADATA SCHEMA

110

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



registration
authority

deregimented

QUALITY OF METADATA SCHEMA

111

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



controlled
vocabularies
&
taxonomies

folksonomies
&
meta-noise

QUALITY OF METADATA SCHEMA

112

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



comprehensive
scope & all-
encompassing

simplified
&
unembellished

QUALITY OF METADATA SCHEMA

113

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



granularity
of metadata

broad
&
non-specific

QUALITY OF METADATA SCHEMA

114

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



flexibility
&
extensibility

options
ignored
& unused

QUALITY OF METADATA SCHEMA

115

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



SUFFICIENCY OF METADATA SCHEMA

116

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



too much
metadata

enough
metadata
for the
task

SUFFICIENCY OF METADATA SCHEMA

117

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



too little
metadata

escalating
expectations

SUFFICIENCY OF METADATA SCHEMA

118

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



satisfying
business
rules

satisfying
basic
findability

SUFFICIENCY OF METADATA SCHEMA

119

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



satisfying
internal
needs

satisfying
interoperability
& metadata
crosswalks

SUFFICIENCY OF METADATA SCHEMA

120

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



including
ought-to-have
metadata

limiting to
must-have
metadata

SUFFICIENCY OF METADATA SCHEMA

121

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



the promise
of a particular
schema

the
customization
required to be
functional

SUFFICIENCY OF METADATA SCHEMA

122

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



established
change order
process in
place

ad hoc
change-as-you-
go process

SUFFICIENCY OF METADATA SCHEMA

123

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



QUALITY OF METADATA ENTRY

124

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



follow
thoroughly
documented
procedures

idiosyncratic
cataloging
&
“winging it”

QUALITY OF METADATA ENTRY

125

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



bullet-
proofing data
entry options
for any
cataloger

reliance on
trained,
competent,
consistent,
professional
catalogers

QUALITY OF METADATA ENTRY

126

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



employing
anal
retentives

employing
laissez
fares

QUALITY OF METADATA ENTRY

127

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



disambiguous
descriptions

meta-noise,
vague,
indefinite,
understood
only by a
specific
community

QUALITY OF METADATA ENTRY

128

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



INTEROPERABILITY

129

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



open
(xml capable)

proprietary

INTEROPERABILITY

130

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



crosswalks to
other schemas

data islands,
insular

INTEROPERABILITY

131

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



SCORM
compliant for
learning
objects to be
shared with
LMS/CMS

bound to local
objectives and
curricula

INTEROPERABILITY

132

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

shareable &
repurposeable
by specified
permissions,
constraints &
requirements



DRM & IPR
inhibit sharing
and
repurposing

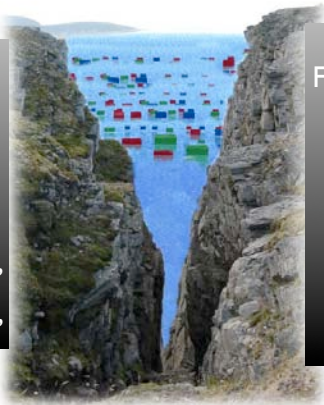
INTEROPERABILITY

133

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

open to
Aggregator
search engines
harvesting from
multiple
databases,
creating a single,
searchable
"Control Index"



open to
Federated search
engines
using multiple
crosswalks to
multiple
databases,
creating an
ephemeral
"Results Page"

INTEROPERABILITY

134

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

compliant
with Open
Archives
Initiative
prescriptions
(OAI)



incompatible
with Open
Archives
Initiative
prescriptions

INTEROPERABILITY

135

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



MAM DAM CMS INTEGRATION

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META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



desktop
or
workgroup
capable

enterprise
caliber

MAM DAM CMS INTEGRATION

137

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



open
architecture

closed
architecture

MAM DAM CMS INTEGRATION

138

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



out-of-the-
box features

customization
& professional
services
contracts

MAM DAM CMS INTEGRATION

139

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



proprietary
programming

open source
programming

MAM DAM CMS INTEGRATION

140

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



optimized for
long term
archival,
library storage
and delivery
of content

optimized for
shorter term,
time-bound
storage and
delivery of
content

MAM DAM CMS INTEGRATION

141

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



open access

requires authentication & authorization via users and groups

MAM DAM CMS INTEGRATION

142

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



uses metadata schema in its pure form and structure

forces customization (conformance bastardization) of the pure metadata schema

MAM DAM CMS INTEGRATION

143

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



facilitates implementing a metadata schema through user interfaces & functionalities

requires database programmers, sys ops, and managers

MAM DAM CMS INTEGRATION

144

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

facilitates
triggers and
functions to
extend
functionality



triggers and
functions
reduce server
responses and
quality of
service

MAM DAM CMS INTEGRATION

145

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



WILLING AND ABLE

146

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

tribal, insular
mentalities



collaborative,
cooperative,
wordly
perspective
(flat earth
friendly)

WILLING AND ABLE

147

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

political, legal,
social,
economic
inhibitors



altruistic,
academic.
beneficent,
philanthropic
openness

WILLING AND ABLE

148

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

restricted to
“pushing”
content
according to
pre-
determined
missions,
rules,
economics



encourages
and
accommodates
“push & pull”
of content
based on
needs, wants,
and preferred
experiences

WILLING AND ABLE

149

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

traditional,
conventional,
habitual,
institutional
behaviors and
practices



needs driven,
opportunistic,
innovative
novel upstarts

WILLING AND ABLE

150

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



EXPECTATIONS

151

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



flexible,
exhaustive,
comprehensive
cataloging

difficult,
advanced,
layers-deep
wayfinding and
findability

EXPECTATIONS

152

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*



simple,
permissive,
effortless
cataloging

simplistic,
single field
searchability


EXPECTATIONS

153

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

quality of
metadata
descriptions



quality of
search results


EXPECTATIONS

154

META-CHASMS

*DISCONNECTS THAT COMPROMISE CONTENT'S
DISAMBIGUITY, FINDABILITY, WAYFINDING & SHAREABILITY*

if you actually
build a
system...



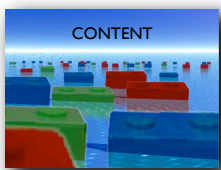
...someone
will come
unglued

EXPECTATIONS


155

METADATA AS AN ENABLER


CONTENT

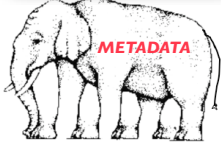



**New Media
Ecosystem
Directly Ahead!**





FINDABILITY


























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OFFICE OF INFORMATION TECHNOLOGY
University of Utah, Salt Lake City USA



Paul Burrows
Manager, New Media Integration
Media Solutions
Office of Information Technology
University of Utah
pburrows@media.utah.edu
801-581-7908