Here Comes *Everything*

managing media, text, audio and electronic versioning

Madi Weland Solomon

PEARSON

Content Architecture
Exploiting and Managing Diverse Resources
June 22, 2009, London

ISKO UK INTERNATIONAL SOCIETY FOR KNOWLEDGE ORGANIZATION

Madi Weland Solomon: diverse sources…

Professional Experience

Director of Content Standards, Pearson PLC

Independent Consultant:
Disney; Bose; MTV; BAFTA; British Museum, Coca Cola

Walt Disney Company, Corporate Nomenclature Taxonomist

Getty Research Institute Project Associate, Standards & Vocabularies

Eli Broad Art Foundation, Curatorial Assistant

Professional Associations

ISKO-UK
OASIS

Chair of the AMIA Metadata Joint Subcommittee

LOC Moving Image Collections (MIC): Cataloging and Metadata Working Group & Speakers Bureau

Contributor to ISAN *Best Practices for Audio Visual Works*

Personal info

Residence: London, UK

Family
  husband
  daughter
  dog

Interests
  Viewing art
    contemporary art
  Playing Musical instruments
    piano
    guitar
    banjo
    drums
    harp
  Writing
    short stories

2 case studies: reports from the trenches

Multimedia in Disney

- Cataloging media for interoperability
- Media management for physical & digital
- Intellectual Property management

Multimedia in Pearson Plc

- Media evolution
- Relating assets
- Electronic versioning
- Incorporating Rights

Selling semantics: adding value

(not the same as "information management")

- **Metadata as perspective**
  - interpreting
  - translating

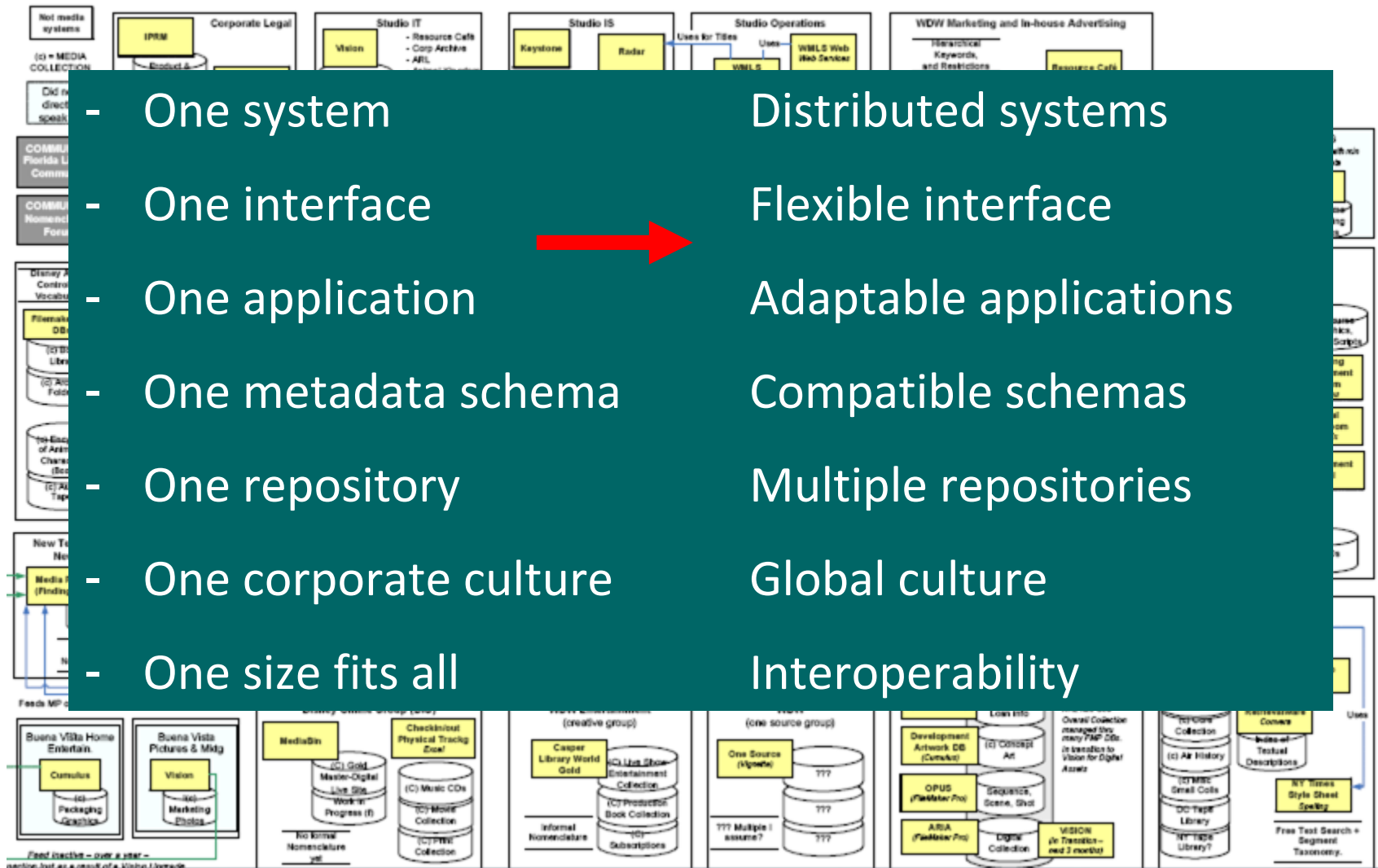*prosperity in life is transitory and dependent on luck*

Media Asset Management

Find, track and exchange media assets between global business units and business partners.
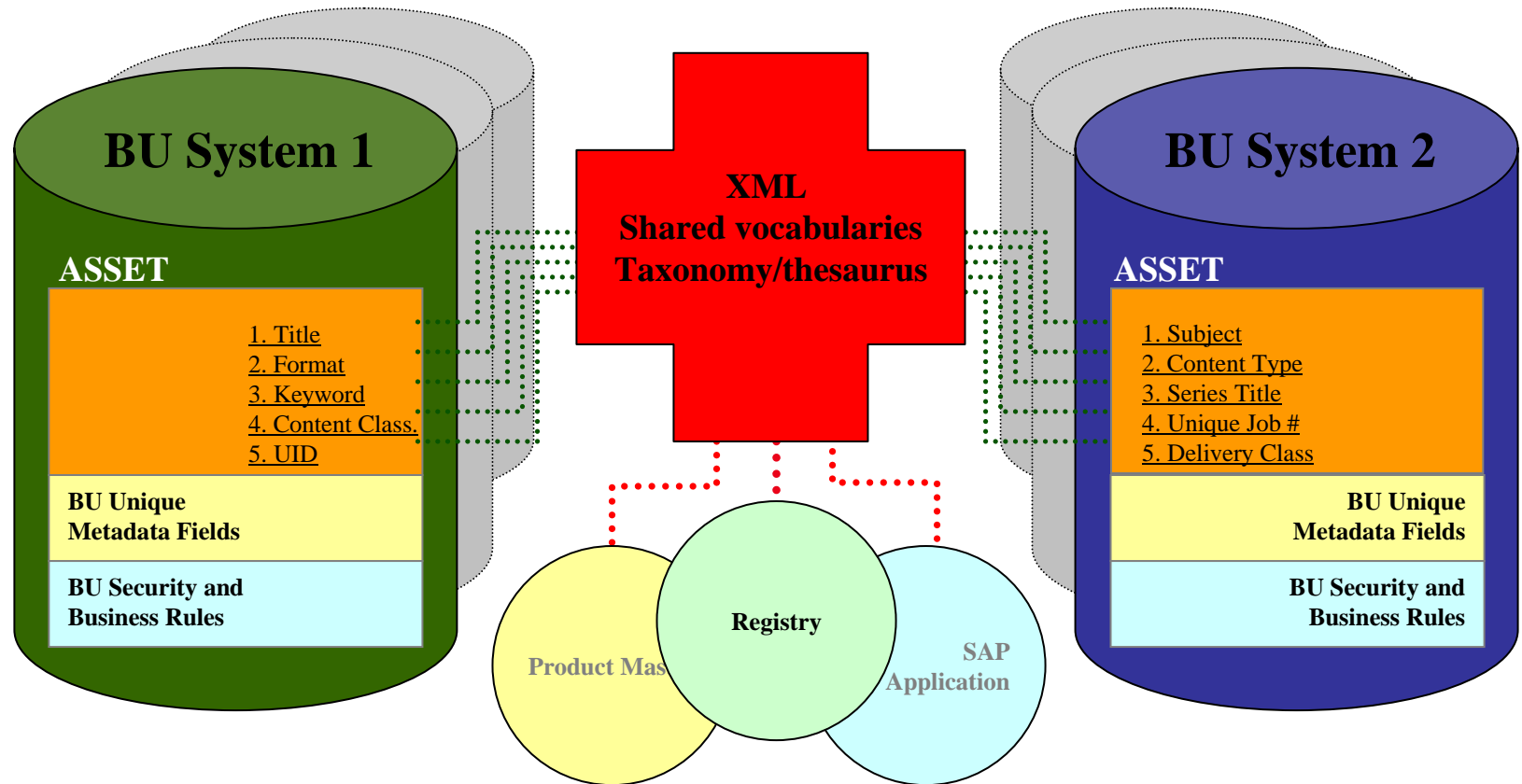
Over 60 major media repositories across the businesses

- One system	Distributed systems
- One interface	Flexible interface
- One application	Adaptable applications
- One metadata schema	Compatible schemas
- One repository	Multiple repositories
- One corporate culture	Global culture
- One size fits all	Interoperability

Controlled Access Points: Names, Titles, Identifiers

BU System 1

ASSET

1. Title
2. Format
3. Keyword
4. Content Class.
5. UID

BU Unique Metadata Fields

BU Security and Business Rules

XML Shared vocabularies Taxonomy/thesaurus

BU System 2

ASSET

1. Subject
2. Content Type
3. Series Title
4. Unique Job #
5. Delivery Class

BU Unique Metadata Fields

BU Security and Business Rules

Registry

Product Mas...

SAP Application

XML and taxonomy conduit expresses the common data model in a standard format, and provides the mapping between systems.

A word about governance and compliance

40% creating, building, reviewing, assessing,

60% steering, cajoling, campaigning, listening, educating

80% diplomacy after 2 years

Grassroots organising

- Ratified a Core Metadata
- Standardized cataloging: *Best Practices*
- Used a common nomenclature: *controlled vocabularies*
- Constructed a taxonomy
- Used thesaurus functions to bridge dialects

Disney Toon Studios
Disney Video Premiers
Disneyland Advertising

The **Media Technology Board** was formed one year later.

- Approved a 5-year roadmap for media interoperability
- Identified Priorty-1 projects
- Dedicated funds
- Promoted cooperation at business unit level

Bottom up, Top down

strategic

| Identify principles | Identify business drivers & obstacles | Ensure on-going funding | Define priorities |

tactical

| Identify tools, workflow, best practices | Publish standards | Confirm processes/ technical infrastructure | Initiate projects | Monitor, track, and report | Coordinate tactics across divisions |

execute

| Awareness of emerging/ existing industry standards | Launch project | Form governance sub-entities | Communicate & educate | Track source data | Track content through systems | Report recommendations |

metadata standards, network standards, registry standards, encoding standards, etc...

Knowledge Hub

PEARSON

Global Content Mngmt Council
Authorizes standards
Determines implementation priorities
Champions & promotes

Standards
Committee
Govern standards
Have authority
Test Standard
Communicate to businesses

Work Teams

Source of all Standards
Have specific goals
SC member involvement

Create context, identify domain

<Keywords>
    <Agents>
        <<agents by state or condition>>
            <u>royalty</u>
                kings

→knights

                princes
                princesses
                queens

<Agents Facet>
    <People>
        <people by state or condition>
            <u>landholders</u>

→knights

                landowners

                tenants

Disambiguate

Dalmatians:
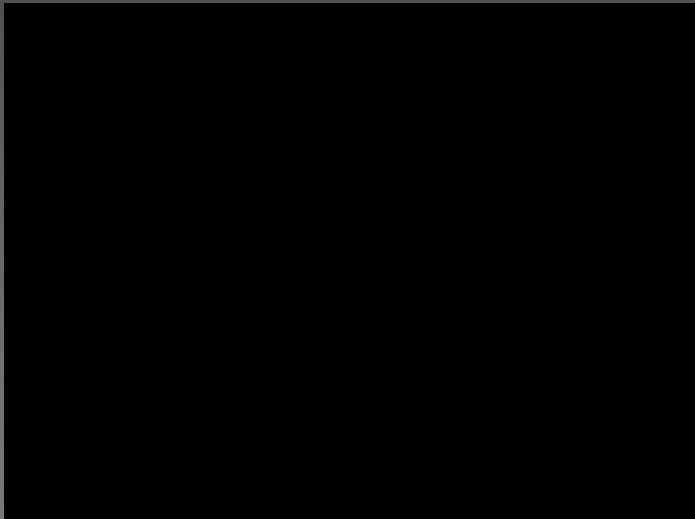
Main Titles
  <Moving Image Titles>
    <animation titles>
      <<animated film and video titles>>
        One Hundred and One Dalmatians

Main Titles
  <Moving Image Titles>
    <live-action titles>
     <<live-action film, video, and featurette titles>>
        101 Dalmatians
        102 Dalmatians

Main Titles
  <Moving Image Titles>
    <animation titles>
      <<animated film and video titles>>
        101 Dalmatians II: Patch's London Adventure

Main Titles
  <Moving Image Titles>
    <animation titles>
      <<animated television titles>>
        101 Dalmatians, Disney's

Main Titles
  <Book Titles>
    101 Dalmatians: Escape from De Vil Manor

Main Titles
  <Music Related Titles>
    Sing Along Songs, Disney's: 101 Dalmatians – Pongo & Perdita

Main Titles
  <Style Guides>
    101 Dalmatians Holiday Art

ESPN logging bay: speed

2006
Collective shifts in our perception of knowledge

2006: The new mission

- Expand the taxonomy to a *media ontology*
- Provide more flexibility
- Provide a schema that can serve as mapping utility
- Provide a model that can support multiple instantiations of a single property
- Provide a schema that can be applied to an integrated model.

Industry bodies

- Open Language Archive Community (**OLAC**), Cataloging Policy Committee

- SMPTE RP210, DMS-1

- ISAN Best Practices

- Resource Description and Access (**RDA**) Draft Review

- Public Broadcasting Core Metadata (**PBCore**)

- International Press and Telecommunications Council (**IPTC**)

- Dublin Core

- Visual Resources Association

- **Functional Requirements for Bibliographic References (FRBR)**

references

Research papers of **Jane Hunter**, Professorial Research Fellow & Leader of the eResearch Lab, Univ. of Queensland, AU

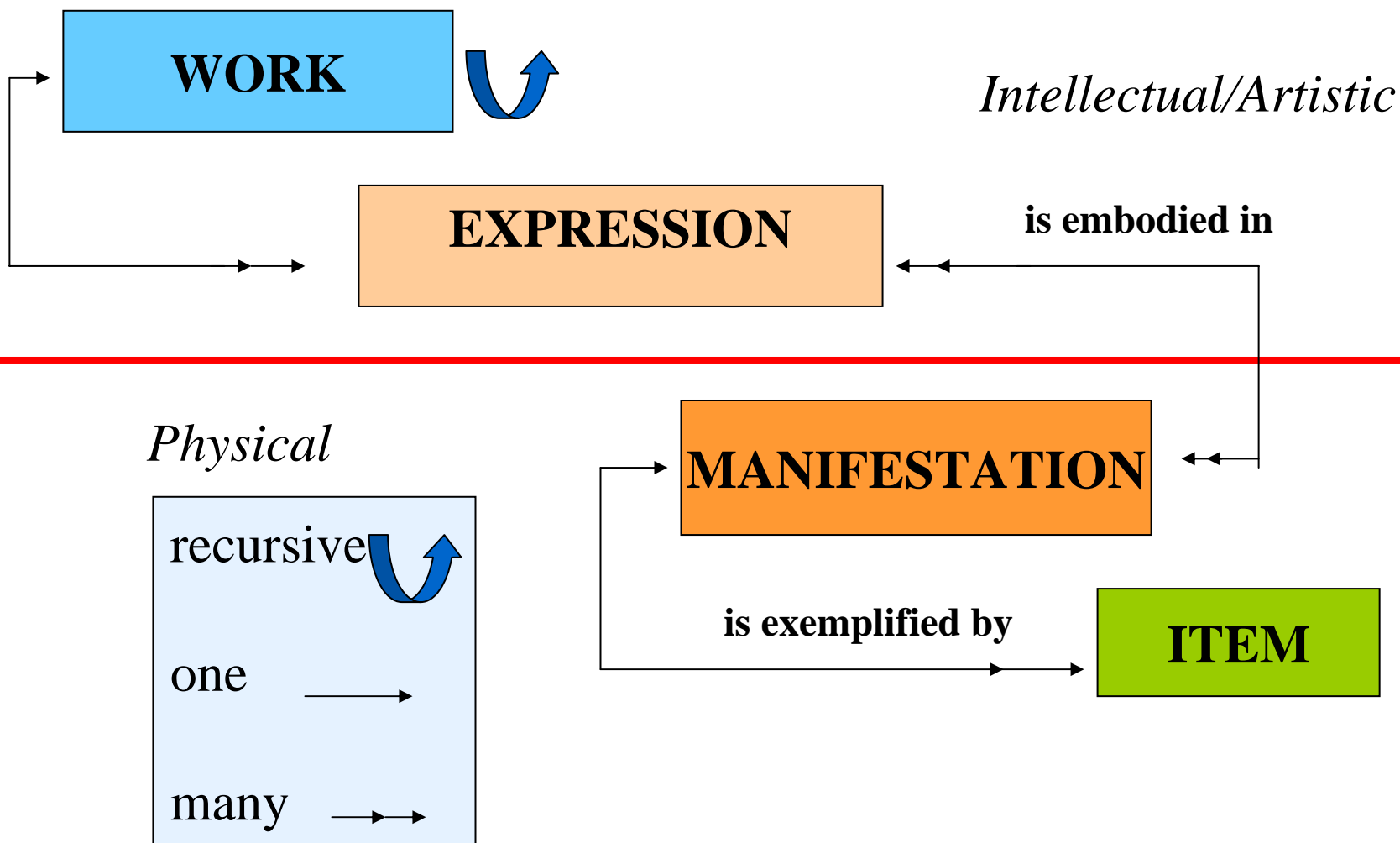*Enhancing Semantic Interoperability for Multimedia through a Core Ontology*

Annotating Relationships between Multiple Mixed-media digital objects by extending Annotea
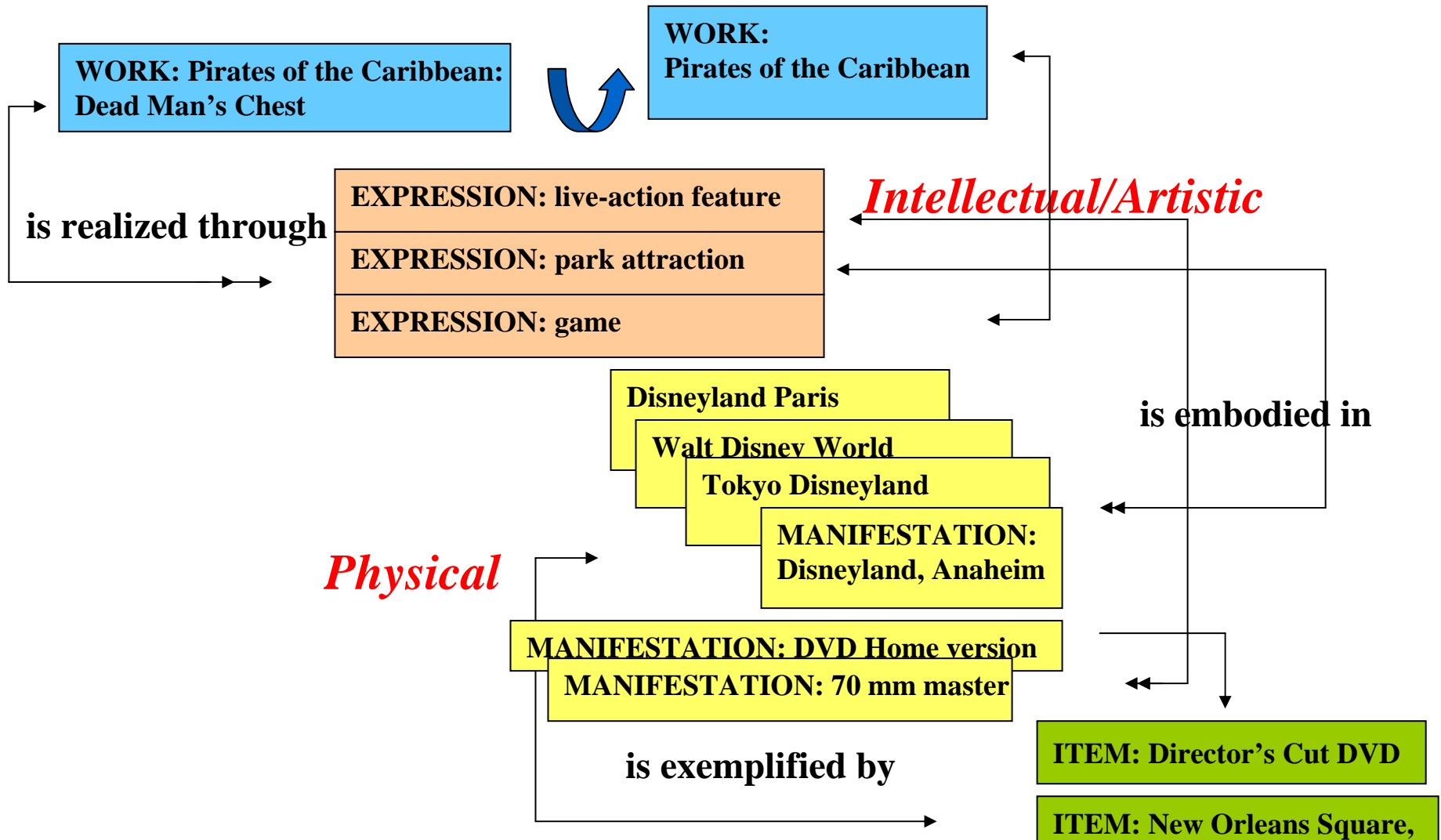
An Event-Aware Model for Metadata Interoperability

Adding Multimedia to the Semantic Web - Building an MPEG-7 Ontology

The ABC Ontology and Model

the FRBR Group 1 Entities

WORK

Intellectual/Artistic

EXPRESSION

is embodied in

Physical

recursive

one

many

MANIFESTATION

is exemplified by

ITEM

WORK: Pirates of the Caribbean: Dead Man's Chest

WORK: Pirates of the Caribbean

is realized through

Intellectual/Artistic

EXPRESSION: live-action feature

EXPRESSION: park attraction

EXPRESSION: game

Disneyland Paris

Walt Disney World

Tokyo Disneyland

MANIFESTATION: Disneyland, Anaheim

is embodied in

Physical

MANIFESTATION: DVD Home version

MANIFESTATION: 70 mm master

is exemplified by

ITEM: Director's Cut DVD

ITEM: New Orleans Square,

Application of metadata examples based on the Preservation Metadata Implementation Strategies (PREMIS) data model
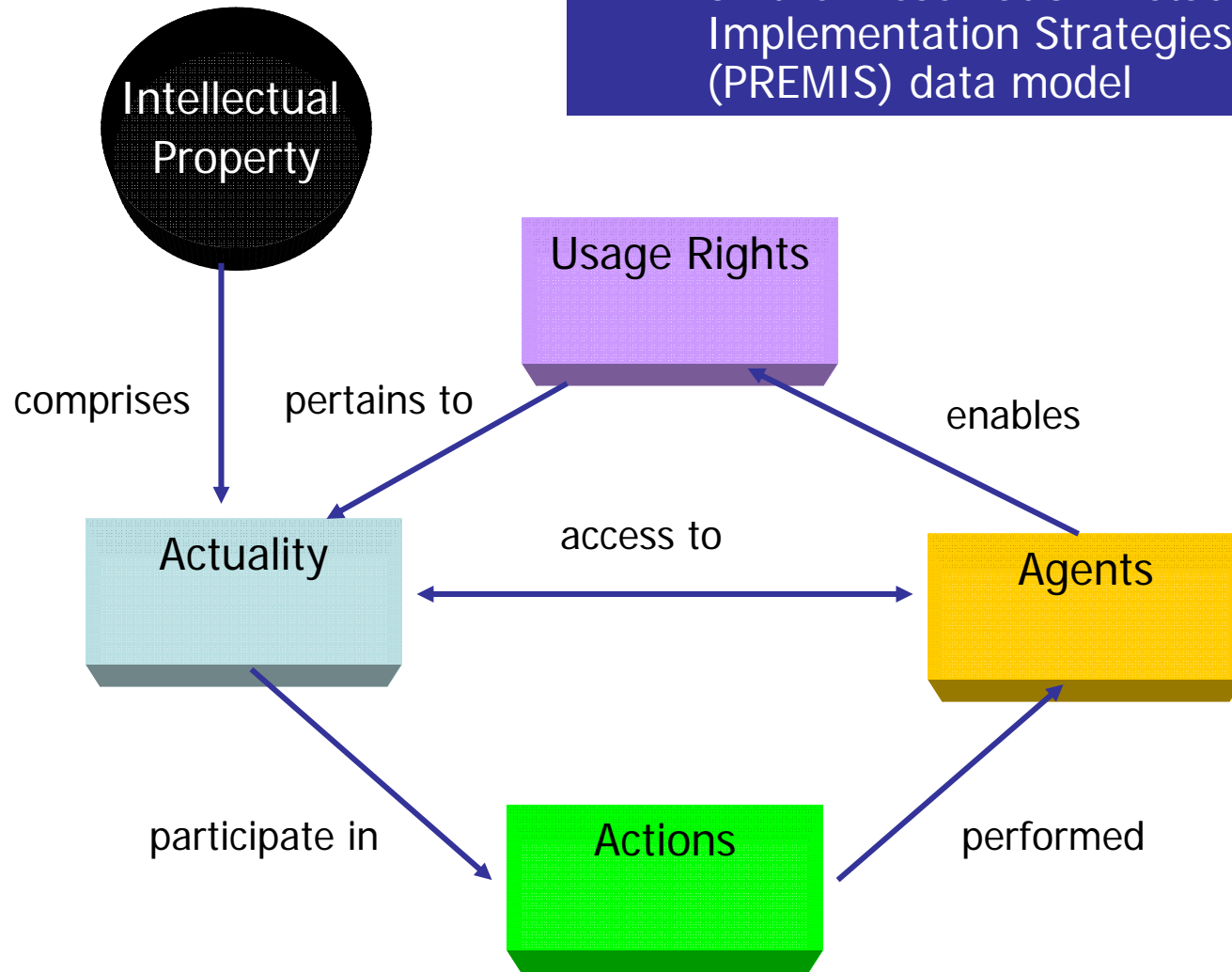
Timeline of media asset management @ Disney

Disney 4.0:

"Disney Monorail" deployed

- 40 systems connected
- ½ only receive
- ¼ originate content
- 10 systems are bi-directional and exchange assets

Integrate vocabularies from/with businesses

Disney 1.0: MAM
standards-based interoperability strategy

Mission Update

| 2000 | 2002 | 2003 - 2004 | 2005 | 2006 | 2007 | 2008 |
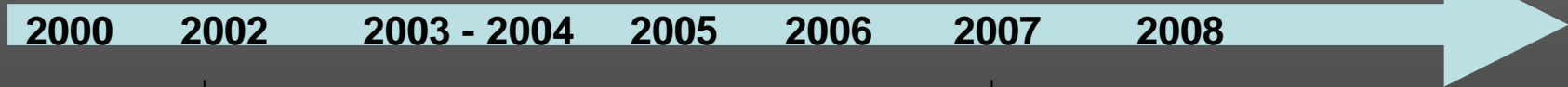
Nomenclature & standards:
in-house taxonomy tool

Integrate systems

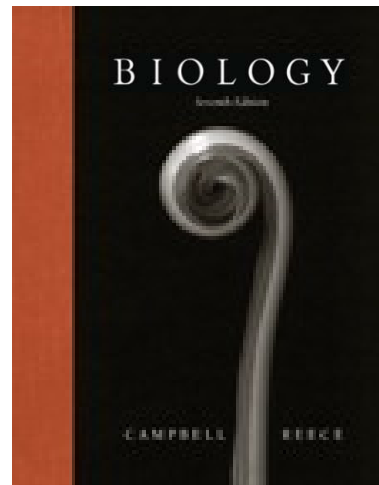**Operational:**
cable network groups

Media Evolution at PEARSON
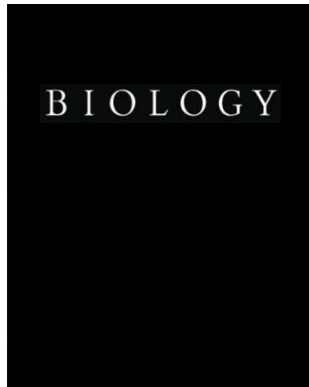
Books

HTML eBooks
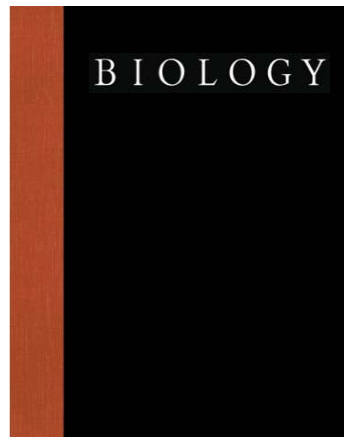
Flash eBooks

Dynamic eBooks
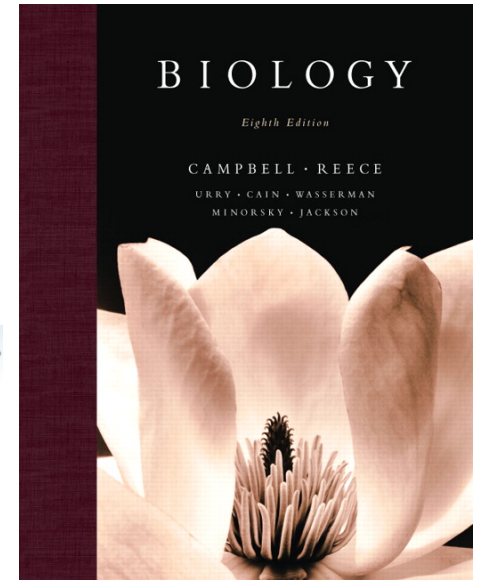
Mission: microcontent
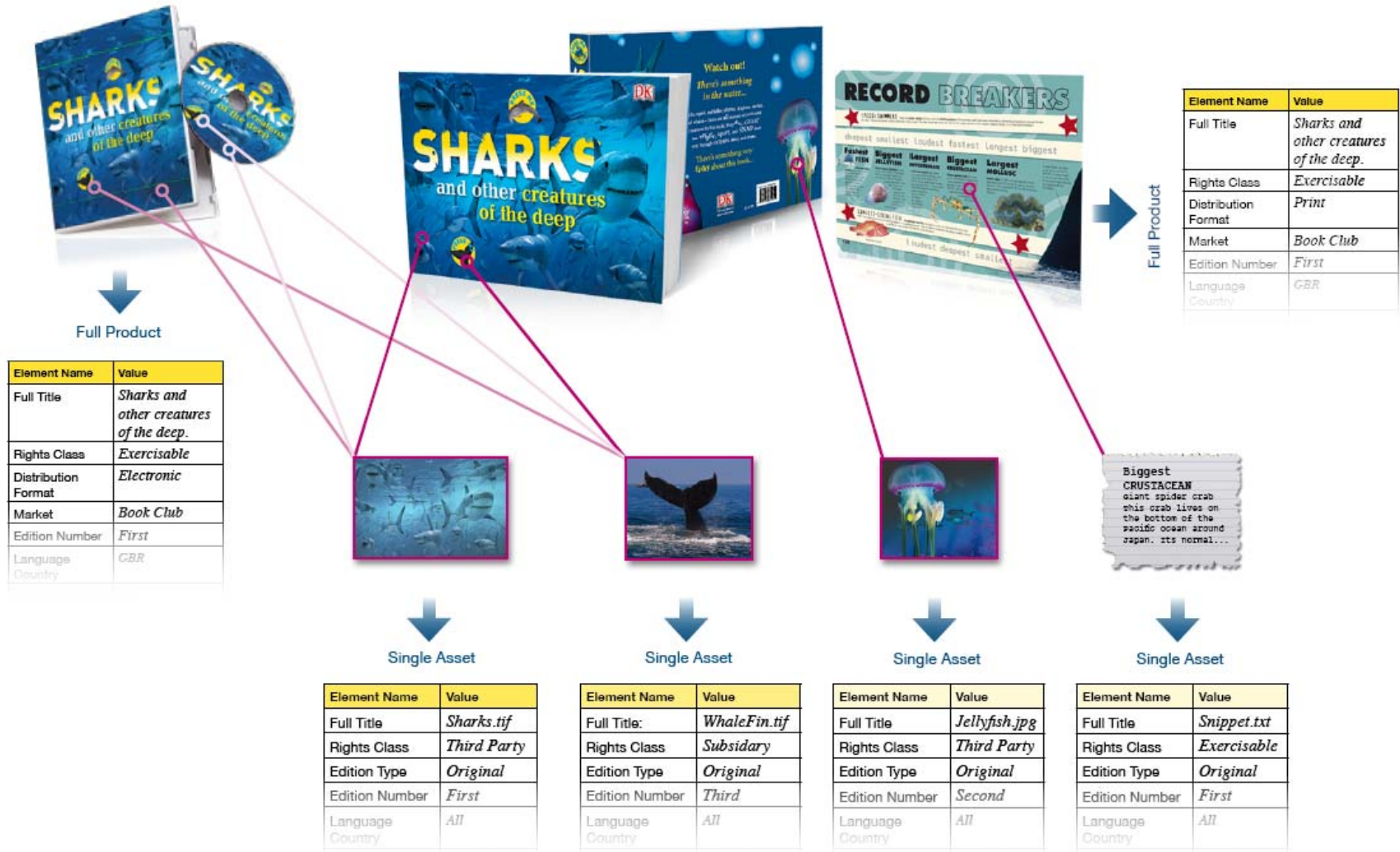
Content Descriptive Metadata & Rights Metadata developed in tandem

Product/content

Metadata	Metadata	Metadata
	TeRRs	
	Taxonomy	

Metadata	Metadata	Metadata
	Vocabularies	
	Taxonomy	

Metadata	Metadata	Metadata
	Nomenclature	
	Taxonomy	

**Authority Data
Names, Titles, IDs**

Semantically link ➡

Global Rights data authority

Rights/Royalties/Licensing

Metadata	Metadata	Metadata
	TeRRs	
	Taxonomy	

Metadata	Metadata	Metadata
	Vocabularies	
	Taxonomy	

Metadata	Metadata	Metadata
	Nomenclature	
	Taxonomy	

*F*unctional *R*equirements for *A*uthority *D*ata *(***FRAD)**, 2007

**International Federation of Library Associations
and Institutions**

IFLANET

http://www.ifla.queenslibrary.org/

FRAD relationships

- Persons
- Families
- Corporate Bodies
- Works

- Persons and names
- Families and names
- Works and names
- Access Point relationships (within and between)

Types of Relationships:
- Between works
- Sequential relationships
- Derivative relationships
- Descriptive relationships
- Whole/Part relationships
- Genus/Species relationship
- Accompanying relationship (part to part)
- Shared characteristic relationships

Attribute relationship:
- Collaborative
- Sibling
- Parent/Child
- Membership

4 kinds of relationships:

1.   Components of a whole
     (instances to entity)

2.   Equivalents (entity to entity)

3.   Accompanying relationships
     (part to part)

4.   Conceptually related items
     (entities to entities**)**

How are relationships expressed?

Visual Resources Core 4.0

Dublin Core
related resource

- hasFormat
- hasPart
- HasVersion
- isFormatOf
- isPartof
- isReferencedBy
- isReplacedBy
- isRequiredBy

Relationship Type	Reciprocal Relationship Type
<general - default>	
relatedTo	relatedTo
<hierarchical - group/collection/series to parts>	
partOf	largerContextFor
formerlyPartOf	formerlyLargerContextFor
<a work and its components>	
componentOf	componentIs
partnerInSetWith	partnerInSetWith
<works that are related as steps in the creation process>	
preparatoryFor	basedOn
studyFor	studyIs
cartoonFor	cartoonIs
modelFor	modelIs
planFor	planIs
counterProofFor	counterProofIs
printingPlateFor	printingPlateIs
reliefFor	impressionIs
prototypeFor	prototypeIs
<works designed to be displayed together>	
designedFor	contextIs
mateOf	mateOf
partnerInSetWith	partnerInSetWith
pendantOf	pendantOf
exhibitedAt	venueFor
<works copied after or depicting other works>	
copyAfter	copyIs
depicts	depictedIn
derivedFrom	sourceFor
facsimileOf	facsimileIs
replicaOf	replicaIs
versionOf	versionIs
<work to image relationships>	
imageOf	imageIs

Related Resource: keep it simple

- Related Resource **Content Type**
- Related Resource **Title**
- Related Resource **Reference ID**

Existing practices
- Related Resource
  - Identifier Type
  - Identifier Value

Components of a Whole

Title: *Jamie Oliver's Ministry of Food*
Content Class: *whole product*
Content Type: *cookbook*

Ingredients
- a handful of Parmesan, grated
- 2 x 250g tubs of mascarpone
- 100g taleggio cheese, grated
- zest and juice of 2 lemons
- a handful of chopped walnuts
- 180g bag of baby spinach, chopped
- sea salt and freshly ground black pepper
- 20g pack of fresh sage
- 2 knobs of butter
- 1 packet of fresh lasagne – 12 sheets

More Pasta and pizza

baked cannelloni
Serves 6
Try these simple cannelloni – they're great as a vegetarian alternative.

Preheat the oven to 190°C/375°F/gas 5. Mix half the Parmesan, the mascarpone, the taleggio, the lemon zest and juice, and the walnuts. Put ¼ of the mixture to one side, then combine the remaining cheese mixture with the spinach and season to taste. Fry the sage leaves in hot butter and crumble ½ into the cheese and spinach mixture, saving the rest for the top. Put a good spoonful of the cheese and spinach mixture along one of the longer edges of each lasagne sheet and roll up. Put them in a flat oven dish, dot with the leftover cheese mixture, drizzle over ¼ of a glass of water and sprinkle with the remaining Parmesan and crispy sage leaves. Cover with foil and bake in the preheated oven for 20 minutes.

RR Content Type: **ingredients**
RR Title: **baked cannelloni**
RR reference ID: **988300_JO_08en**

RR Content Type: **image**
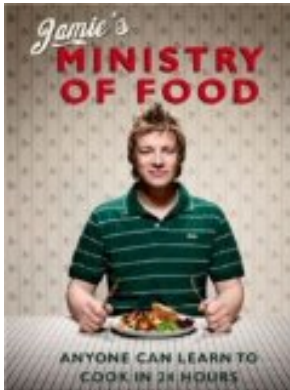RR Title: **baked cannelloni**
RR reference ID: **pasta_0093877.jpg**

RR Content Type: **cooking instructions**
RR Title: **baked cannelloni**
RR reference ID: **934720_bcnn**

RR Content Type: **recipe**
RR Title: **Beautiful Courgette Carbonara**
RR reference ID: **MOF_93719**

RR Content Type: **recipe**
RR Title: **Chicken and Mushroom Pasta Bake**
RR reference ID: **MOF_337488**

RR Content Type: **recipe**
RR Title: **Farfalle with Carbonara and Spring Peas**
RR reference ID: **MOF_38267591**

equivalents

Assets that could potentially stand on their own

pasta

RR Content Type: **recipe**
RR Title: **eggplant cannelloni**
RR reference ID:
hazan_ooeuui29_cnnloni

Secrets of Fat-free Cooking
Sandra Woodruff

Conceptually related

Content Class: composite
Content Type: recipe

Ingredients
- a handful of Parmesan, grated
- 2 x 250g tubs of mascarpone
- 100g taleggio cheese, grated
- zest and juice of 2 lemons
- a handful of chopped walnuts
- 180g bag of baby spinach, chopped
- sea salt and freshly ground black pepper
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baked cannelloni

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More Pasta and pizza

Italian cuisine

Accompanying relationship

RR Content Type: **supplement**
RR Title: **Teacher's Guide to Success**
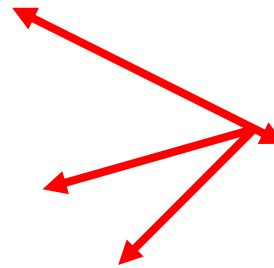RR reference ID: **3320098098**

Accompanying material

Title: Teacher's Guide to Success,
Content Class: product
Content Type: instructional book

RR Content Type: **class instruction 11**
RR Title: **Teacher's Guide to Success**
RR reference ID: **22837408j_11**

RR Content Type: **interview**
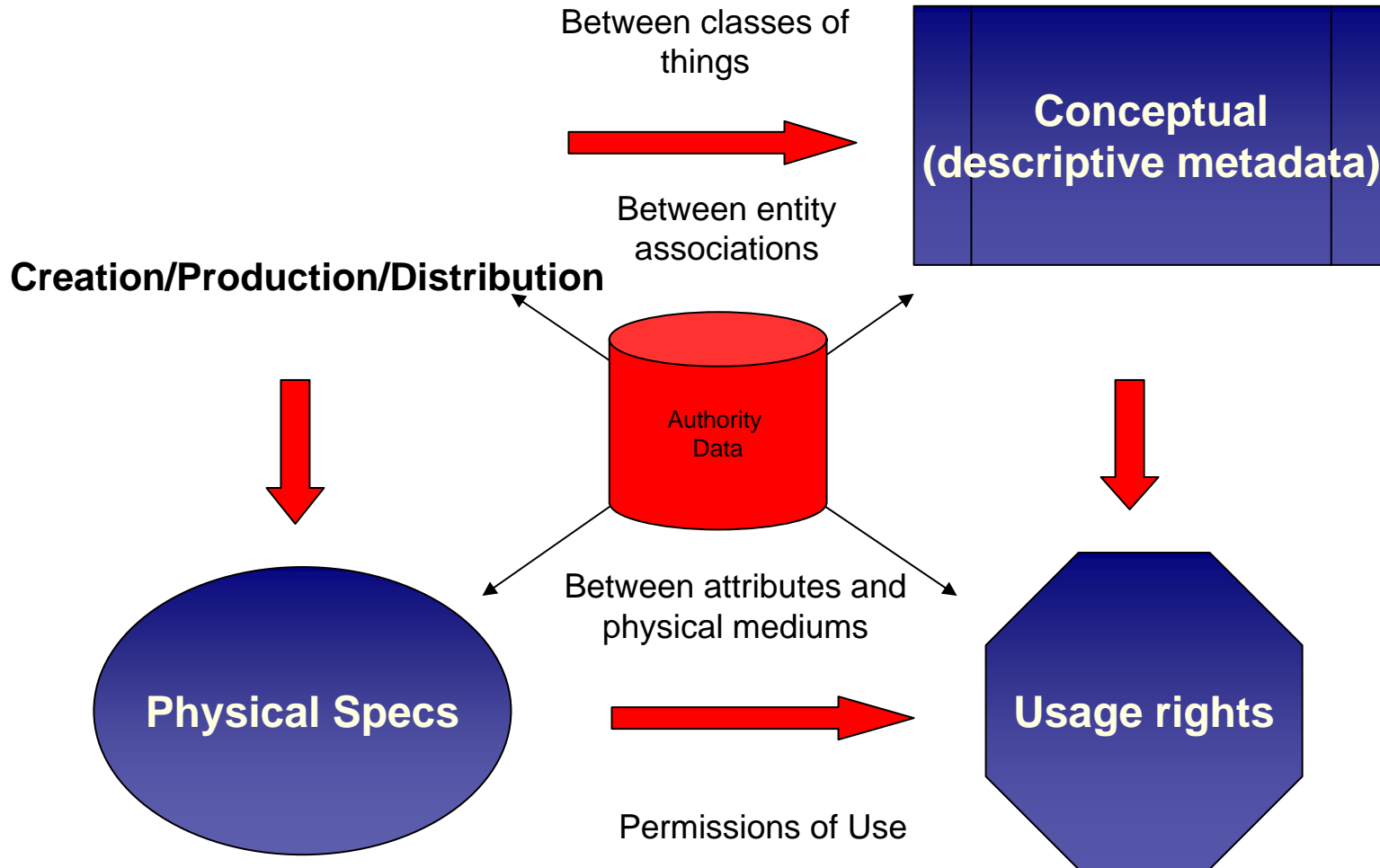RR Title: **Ellen Does it Old School**
RR reference ID: **CHN_t4898739**

Equivalents

Relating entities

Between classes of things

Conceptual (descriptive metadata)

Between entity associations

Creation/Production/Distribution

Authority Data

Between attributes and physical mediums

Physical Specs

Usage rights

Permissions of Use

Customisable Content

Thank you

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