Standards

Categories for the Description of Works of Art
Categories for the Description of Works of Art is a metadata standard for art objects and their visual surrogates, developed by a task force sponsored by the College Art Association and the Getty Trust. Version 2.0 includes a fully revised text, new sections covering artist, subject, and other "authorities," an entity relationship diagram, and 32 cataloging examples of different types of works of art and material culture, with accompanying images. The CDWA definitions document (with examples) is available as a PDF file for easy printing.

CIMI
The Consortium for the Computer Interchange of Museum Information (CIMI) is designed to bring museum information to the largest possible audience and to encourage an open standards-based approach to the management and delivery of digital museum information. CIMI has reported on a Dublin Core Testbed Project. CIMI has now made available a Best Practices [PDF] document for the creation of Dublin Core records.

CIMI's International Z39.50 Interoperability Testbed - An Update
An article on CIMI's (Consortium for the Computer Interchange of Museum Information) demonstration project for distributed searching and retrieval of museum and bibliographic information using the Z39.50 protocol standard. The ultimate goal of this two-year project was to produce an application profile that details Z39.50 specifications for use by museums and other cultural heritage information centers.

Collection Level Core Cataloging Record Proposal
The Collection Level Core Cataloging elements are based on the work of a group of visual arts librarians concerned with developing specifications for ephemeral materials. The data elements may be used to describe and provide access to materials treated as collections for purposes of bibliographic control.

Conversion of MARCXML records to MODS
An update to the DLF Aquifer Metadata Working Group XML stylesheet developed for the Aquifer project, for conversion of MARCXML records to MODS. Changes are briefly documented in the comments at the beginning of the stylesheet.

CORC
CORC—Cooperative Online Resource Cataloging is a research project exploring the cooperative creation and sharing of metadata by libraries. CORC is designed to help OCLC and libraries to move more quickly in coping with the huge amount of material becoming available on the World Wide Web.

Digital Geospatial Metadata
The Federal Geographic Data Committee has provided a crosswalk from digital geospatial data content standards to MARC, as well as from MARC to FGDC. The FGDC has also developed a FAQ. More information on FGDC metadata is available.

International Imaging Industry Association (I3A)
International Imaging Industry Association (I3A) is a consortium of image and imaging companies engaged in the development of digital imaging standards and technologies for the consumer market. The membership of more than 80 participants includes Eastman Kodak, Digimarc, Fuji, and Polaroid. According to their white paper, their metadata standards are based on XML formats and are designed to support the evolution of digital imaging technology over the next 5-10 years. Because of their near-future and consumer, home use, focus these standards are not appropriate for libraries, museums, archives, and historical societies.

Dublin Core Homepage
The Dublin Core is a metadata element set intended to facilitate the discovery of electronic resources. Originally conceived for author-generated description of Web resources, it has attracted the attention of formal resource description communities such as museums, libraries, government agencies, and commercial
organizations. The building of an interdisciplinary, international consensus around a core element set is the central feature of the Dublin Core. Some of the characteristics that distinguish the Dublin Core as a prominent candidate for description of electronic resources include: simplicity (elements have roughly the same complexity as a library catalog card); semantic interoperability (a common set of descriptors will promote searching across discipline boundaries); international consensus, and extensibility (an economic alternative to elaborate description models such as MARC). View the 15-element metadata set.

**Dublin Core - Library Application Profile - Draft**
The document proposes a possible application profile that clarifies the use of the Dublin Core Metadata Element Set in libraries and library-related applications and projects. It was prepared by the DCMI-Libraries Application Profile working group, a subset of the DCMI-Libraries Working Group. There are numerous questions and issues that need to be addressed, so it is a work in progress.

**Dublin Core/MARC/GILS Crosswalk**
This site provides mapping between MARC/GILS bibliographic data elements and the Dublin Core (DC) metadata element set. Conversion is mapped from DC to MARC only; since many MARC fields go into one DC element, MARC to DC conversion is not covered here. Conversion is often necessary between these sets and is used for enhancement of simple resource description records or for searching across different syntaxes and databases. Simple mapping as well as mapping when DC elements use qualifiers is demonstrated at this site. A GILS profile is also available.

**Dublin Core and Metadata: a Tutorial**
From the Metadata Workshop, Luxembourg, December 1997.

**Dublin Core Metadata Initiative - Library Application Profile**
This document proposes a possible application profile that clarifies the use of the Dublin Core Metadata Element Set in libraries and library-related applications and projects. It was prepared by the DCMI-Libraries Application Profile working group, a subset of the DCMI-Libraries Working Group.

**Dublin Core within the Resource Description Framework**
The Dublin Core Model Working Group has announced a draft document offering guidance on the expression of Dublin Core within the Resource Description Framework (RDF). Comments from the community are invited.

**Encoding Dublin Core Metadata in HTML**
The first draft of the "Encoding Dublin Core Metadata in HTML" is available for comments. The draft was written in response to the need to document current practice while development of data models and XML/RDF encodings moves forward. The draft explains how these elements are expressed using the META and LINK tags of HTML. A sequence of metadata elements embedded in an HTML file is taken to be a description of that file. Examples illustrate conventions allowing interoperability with current software that indexes, displays, and manipulates metadata such as SWISH-E, and the PERL scripts in the appendix.

**Encoded Archival Description (EAD)**
EAD is a SGML encoded "Document Type Definition" (DTD) intended to assist in the creation of electronic finding aids. Developed at UC-Berkeley, it is now maintained and supported as a standard by the Library of Congress and is sponsored by the Society of American Archivists. EAD can be used to represent complete archival structures, including hierarchies and associations. The kinds of functionality that the EAD affords can also be implemented using the Dublin Core. It is possible to migrate records from the Dublin Core into the EAD format if necessary. It is also possible to create EAD files that point to digital images, scanned texts, and other electronic documents. EAD Help Pages are also available.

**From MARC to Markup: SGML and Online Library Systems**

**IMAP Cataloging Project**
There are many groups addressing the issues of organizing digital objects. The Independent Media Arts Preservation group has a website that will assist independent producers and arts and cultural organizations catalog their collections. The focus is non-commercial production including video art, audio art, technology based installation art, etc. The site provides a standardized template for use by these organizations. The template is based on MARC and AACR-2 cataloging rules.
International Federation of Libraries Association
IFLA's extensive section on metadata is a very good starting point for research and links to metadata resources on the web and in print.

International Guidelines for Museum Object Information: The CIDOC Information Categories
Produced by the International Council of Museums (ICOM). A description of the information categories that can be used when developing records about the objects in museum collections.

Interoperability Focus
The UK Office for Library and Information Networking (UKOLN) is host to the "Interoperability Focus," a program to channel knowledge and expertise related to the effective sharing of information across a wide range of data providers and Gateways from sectors as diverse as libraries, museums, and archives. The program is concerned with standards development such as Dublin Core and Z39.50, and with the procedural, structural, and semantic issues related to the manner in which data might most usefully be made available in order to ensure widespread accessibility.

MARC
"The USMARC formats are standards for the representation and communication of bibliographic and related information in machine readable form." They contain an explicit set of rules for the structure of fields and the conventions and content values within those fields. More information about the MARC standard is available at this website.

MARC to Dublin Core
A crosswalk from MARC to Dublin Core is now available from the MARC 21 website. This document marks MARC 21 fields to Dublin Core elements; there are separate sections for unqualified and qualified Dublin Core.

Metadata Encoding and Transmission Standard (METS)
The METS scheme is a standard for encoding descriptive, administrative and structural metadata regarding objects in a digital library, expressed using the SML schema language. METS is an initiative of the Digital Library Federation and is maintained by the Library of Congress.

Metadata Object Description Schema (MODS)
The Library of Congress' Network Development and MARC Standards Office, with interested experts, has developed a schema for a bibliographic element set that may be used for a variety of purposes, and particularly for library applications. As an XML schema, the "Metadata Object Description Schema" (MODS) is intended to be able to carry selected data from existing MARC 21 records as well as to enable the creation of original resource description records.

Museum Computer Network
The Standards working group of the Museum Computer Network (MCN) is interested in testing and demonstrating all types of standards as they relate to computer technology and museums.

Museum Information Standards Resource Guide
Information categories for international guidelines to museum objects information, developed by the International Committee for Documentation of the International Council of Museums. Links to a resource guide to museum and cultural heritage information standards is also available.

Preservation Metadata for Digital Objects: A Review of the State of the Art
Preservation Metadata for Digital Objects is a review of the state of the art as of January, 2001. This white paper prepared by the OCLC/RLG Working Group on Preservation Metadata identifies best practices for the long-term retention of digital objects. The Working Group included leading experts to review current practices, share expertise and identify best practices and common approaches. The white paper addresses issues related to the use of metadata to support the digital preservation process. The paper presents a comprehensive preservation metadata framework applicable to a broad range of digital preservation activities. They also addressed related issues such as the specification of preservation metadata elements and the evaluation of the implementation strategies. Membership included representatives from Library of Congress, British Library, Bibliotheque Nationale de FRance, National Library of Australia, UKOLN, New York Public Library, Cornell University, University of California-Berkeley, Harvard University, Koninklijke Bibliotheek, and OCLC and RLG staff.
PREMIS Data Dictionary for Preservation Metadata
The PREMIS Data Dictionary is a comprehensive, practical resource for implementing preservation metadata in digital archiving systems. It defines metadata that: supports the viability, renderability, understandability, authenticity, and identity of digital objects in a preservation context; represents the information most preservation repositories need to know to reserve digital materials over the long-term; emphasizes “implementable metadata” and embodies technical neutrality.

Understanding PREMIS
“Understanding PREMIS” is an overview of the PREMIS preservation metadata standard's scope and goals. It does not give enough information to implement PREMIS, but it will make the document more familiar and give you an idea of what PREMIS is all about.

REACH element set (RLG)
The REACH project explores how existing information in museum collections could be extracted and repurposed to provide online access to museum object descriptive information. REACH provides a set of metadata elements for the shared description of museum objects.

Recordkeeping Metadata Standard for Commonwealth Agencies
The National Archives of Australia has made available on their website metadata standards that the National Archives of Australia recommends should be captured in the recordkeeping systems used by Commonwealth government agencies. This standard has its roots in the Dublin Core and is worth looking at, especially in light of the importance of defining a workable metadata standard. Part One of the standard explains the importance of standardized recordkeeping metadata and details the scope, intended application, and features of the standard. Part Two of the standard provides details on the basic set of 20 metadata elements and 65 sub-elements and defines them in relation to their purpose and rationale.

Resource Description Framework
The RDF, developed in collaboration with the W3 consortium, is designed to provide an infrastructure to support metadata across many web-based activities. Example applications include digital collections, search engine data collection, and distributed authoring. The RDF allows different application communities to define a metadata element set that best serves the needs of that community. Using XML as a transfer syntax, the RDF provides a uniform, interoperable means to exchange metadata between programs and across the web and a machine-understandable semantics for metadata. The W3C has granted Proposed Recommendation Status to the RDF Model and Syntax specification.

RLG EAD Support Site
A site for information on EAD and RLG member institutions implementing EAD, as well as RLG Recommended Application Guidelines for EAD.

Technical Metadata Elements for Images Workshop Report
NISO (National Information Standards Organization), CLIR (Council on Library and Information Resources), and RLG (Research Libraries Group) sponsored a workshop in April to examine the technical information needed to manage and use digital still images that reproduce a variety of pictures, documents, and artifacts. Attendees represented libraries, museums, archives, universities, the government, the digital imaging community, and digital imaging vendors. The participants discussed the characteristics and features of images, image production and reformatting features, and image identification and integrity issues. The report addresses a preliminary list of technical metadata elements and identifies the need for categorizing elements as mandatory or optional, the need for metadata to help evaluate the utility of an image for a particular use, the importance of the persistence of metadata through transformations of an image, the desirability of solutions designed to work in a variety of contexts, and many other issues.

Technical Online Processing Tools
TPOT, from the University of California at San Diego, maintains a bibliography on metadata resources, as well as resources on cataloging electronic resources and links to other relevant resources.

TEI Guidelines for Electronic Text Encoding and Interchange
The Text Encoding Initiative (TEI) is an international project to develop guidelines for the preparation and exchange of electronic texts for scholarly research. The TEI has created a set of SGML encoded Document Type Definitions (DTD's) for social science and humanities-related texts. One of TEI's most useful innovations is the TEI header, a place where a TEI-conformant document's metadata is found.
**Visual Resources Association Core Categories**
These elements are mapped to MARC, the Categories for the Descriptions of Works of Art (CDWA) and the RLG REACH element set for description of museum objects. The Core Categories for Visual Resources is “intended as a guideline for describing visual documents depicting works of art, architecture, and artifacts or structures from material, popular, and folk culture.” The categories allow for the description of the original work as well as for the visual documentation of that work.

**Z39.50 Maintenance Agency Homepage (LC)**
Z39.50 is an international standard that allows for communication across networked computers used for searching and retrieving information. As many libraries begin delivering web-accessible searching of their catalogs, Z39.50 may become an important standard to watch when considering the integration of online digital image resources with other online resources.