Components of Metadata

Wait, we’re not yet through our explanation! Besides the types just noted, metadata has three main components: syntax, semantics, and standards. As in language, metadata syntax, or encoding, defines the rules for construction of metadata “sentences.” Examples of syntax include Machine Readable Cataloging (MARC), a numerical encoding which enables one to go online to determine a library’s holdings, and Extensible Markup Language (XML), a “human readable” or language-based encoding which allows Web publishing, electronic data exchange, and portable, reusable metadata. XML is used in personal digital assistants, cellular phones, and automatic phone banking—and will be used in the library catalogs of the future.

In semantics, by contrast, we find the meaning of semiotic markers—in a metadata scheme as in language. But, because the word “chair” can refer to the piece of furniture or to the person presiding over a committee, a metadata system requires its third element, standards, which fix meanings that would otherwise—as in actual language—be undefined, subjective, and contextual. Standards make possible the exchange of information by making metadata records compatible with each other and aiding interoperability between databases. There are standards for metadata element sets or schemes, element content, controlled vocabularies, and encoding.

Metadata Schemes

Because of the need for differences and levels of complexity in semantics for describing different types of resources, several different, but standardized metadata schemes have been developed; some are geared to specific disciplines and purposes. Among the most common are the:

* Visual Resources Association Core (VRA), used for describing cultural objects and works of art;
* Encoded Archival Description (EAD), for describing archival collections; the
  * Text Encoding Initiative (TEI), which facilitates the description and marking up of texts; and, most prominent, the
* Dublin Core, an all-purpose metadata scheme that, used in its simple or qualified forms, can integrate many different formats, including maps, images, and texts. In its simplest form, Dublin Core is a “lowest common denominator” scheme that facilitates system-to-system operability.

The original purpose of the Dublin Core was to organize the Web. Back in 1995, it was thought that the Web could be organized like a library if Web site creators would assign access points, descriptors, and subject headings to their content so that it could be located more easily. Web site creators did not have the motivation to catalog their Web sites, but museum curators, librarians, and visual arts librarians adopted the Dublin Core and were instrumental in its development and significance as a key component of the semantic Web.

WMU Metadata Projects

The Dublin Core metadata has already been used to describe the Caroline Bartlett Crane Collection and the Ward Morgan Photographic Collection (see Gatherings, No. 35, Fall 2004, p. 5) at WMU. Caroline Bartlett Crane was an early 20th century social activist. She designed an award-winning home, still standing in Kalamazoo, which was one of the first focusing on family spaces and convenience for women. The digitized collection includes blueprints of the house, photographs, and letters from Presidents Calvin Coolidge and Herbert Hoover congratulating her on winning the Better Homes in America 1924 Model Home contest. Dublin Core metadata is used to describe the objects, and, just as importantly, to provide a wide audience Web access to a rare and important collection that is otherwise difficult to view.

Ward Morgan was a 20th century Kalamazoo commercial photographer. The digitized collection includes hundreds of photographs of businesses, homes, and schools in the Kalamazoo area. Using the metadata, the researcher can look for specific known businesses and buildings, neighborhoods, types of buildings, objects or people in the photographs, such as “women,” “soda fountain,” or “automobile dealers.” In addition, all photographs “about” certain topics may be gathered using browseable categories including education, advertising, and business products.

Two additional and exciting metadata projects in the works will be of great benefit to Western faculty and students. The first involves tens of thousands of slides featuring art objects that are in the process of being digitized and made available electronically for classroom use. VRA is the metadata scheme chosen for this project. VRA includes a set of elements, which may be encoded in XML, that is designed to describe digitized images of art objects, analog slides or photographs of the objects, and the physical objects themselves. Because of the specific art-related VRA elements used in the cataloging of the slides, the searcher will be able to bring together from this collection all the works of art by a certain artist or architect, from a specific time period or genre, and even all works created using a particular technique or material.

As described in Sharon Carlson’s article, also in this issue of Gatherings, Western Michigan University recently received a grant of $95,000 to digitize and provide Web access to eight Civil War diaries currently housed in the Archives and Regional History Collections. Each diary is in the process of being digitized so that the actual pages may be viewed electronically from anywhere, and also transcribed into an easy-to-read format. The metadata scheme chosen to describe, provide access to, and preserve these valuable pieces of American history was TEI encoded in XML. Using TEI provides a way, not only to create an item-level record for each diary similar to a library catalog record, but also to “mark up” the transcribed text. Places in the text will be marked for retrieval where particular people, places, battles, military units, and topics are mentioned.

Thanks to metadata, information has indeed escaped its containers. Information resources, deteriorating, hidden, and remote, are rediscovered, shared, and preserved. Threatened cultures and histories, muted voices that have been long lost, are given a global stage. Metadata, the magic behind the scenes, makes it possible.

Books as Art

By Pam Rups, Coordinator,
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People feel so empowered when they make a book. I’ve seen that reaction when I teach and also felt it in my own experience. Because most of us tend to buy everything ready-made—our clothes, our food, our homes, our toys, and, especially our printed books—most of us have lost the ability to consider making something from scratch—unless the item is available in a kit or is some “thing” simple to put together. As a result, when someone makes a book for the first time, he or she feels the magic of creation.

On the other hand, the physical structure of books seems uninteresting to those who stop to think about them. I know very few people, especially in today’s electronic world, who have ever given any thought as to how a book is put together. Although most of us still use books almost daily: for reference, for study, for fun, and for training, we seem not to care about the package itself. If you ask people how this object, this book that

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Books as Art
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they use every day, came into being, you
get a shrug of the shoulders, or a "who
cares?" look.

A few of us, however, have a great curiosi-
ty about these essential tools of our daily
life—and especially someone who
is a student of medieval history must look
to the beginnings of books. And, so, sev-
eral years ago, I gave myself the task of
making a medieval manuscript and writing
about the experience for my Master of
Arts thesis. Of course, I was very anxious
about making a mistake by not getting
some part of the process exactly correct,
but I had to move forward step by step
to completion. And so, I

• split a hunk of aged oak for the
  cover boards and planed and
  scraped them flat; then
• spun my own flax fibers on a
  spindle I made;
• ground my own pigments for
  painting the miniatures;
• wrote in medieval Latin with a
  goose quill pen using ink made of
  oak galls;
• made a piece of vellum from a
  goat’s skin;
• made my own brass fittings and
  rivets; and
• more...

Despite my fears, I found that
these tasks were not impossible or
even all that difficult to do, but did
take time and patience. At each
stage, I reminded myself that
manuscripts had been made for hun-
dreds of years by hand, long before
any of our modern technology and
machines existed. Certainly, skills had to
be rediscovered and a few learned from
scratch. At the same time, as I progressed
through the medieval book creation, it
became evident that some of these ancient
skills had some special benefits. Besides
the basic satisfaction in discovering man-
ual skills that were once fairly common,
there is another "value added" considera-
tion. Almost all contemporary books are
made by machines, which gives people a
very limited idea of what a book can or
should be. Modern books are held
together mainly with a lot of glue and
other materials that do not necessarily
contribute to easy opening and prolonged
use. As a result, many of today’s books
are simply another quickly deteriorating
and disposable item in our lives. But
when making a book by hand, the maker
chooses the materials, and is free to use
paper and boards and threads and such
that will not break down quickly—nor
will the wisdom and ideas contained in
that book disappear.

My Books and Thoughts

Pocketbook, an early creation, is a book
of mine whose idea is based on a play on
words. I gathered pockets from my own
clothing and items I found in thrift stores.
I backed and sewed pairs of pockets
together and then sewed the pairs much
as one would sew a book with paper
pages. I even added some conservative
gray "endpapers," also of cloth. The cover
has a pocket into which I inserted a letter-
press-printed label reading Pocketbook.
I’ve often thought about putting small
objects in the pockets as hidden surprises
for viewers to find.

Another of my books presents an idea
that had long been looking for a means
of being expressed. As a child and even into
adulthood, I somehow had this sense that
the world was, on the surface, a stable
place yet this same world underwent
alterations from time to time. And, as I
explored the spiritual aspects of life, I
began to comprehend how nothing
remains the same, even our seemingly
stable Earth. I also realized I could ex-
perience those changes during my short
lifetime.

To convey this, I hunted down old
world atlases and took apart one from
1985. This atlas was 21 years old—that
seemed significant—and was actually
quite difficult and time-consuming to
take apart because of the adhesives,
which were mostly not water-soluble.
After choosing certain sections to use, I
interleaved an archival translucent paper
so that each page would have an overly-
ing sheet. I then sewed this new set of
pages together being careful to use the
original sewing holes in order to do the
least damage structurally. I gave the book
a brand new binding and two attached
bookmark ribbons. Onto the end of one
ribbon I tied a silver mechanical pencil,
and onto the second, an eraser. On the
tracing paper I have crossed out the
names of cities and countries that have
changed, scribbled out borders that no
longer exist, and redrawn shorelines. The book is titled The Unstable World Atlas
because I like the ambiguity.

The idea of constant change has found
expression in a second book as well. This
book is made of CDs, many of them those
wonderful freebies that clutter our mail-
boxes—well, I just had to do something
with them! I copied pages from various
books of well-known authors and pressed
the copied texts onto the CDs in a flat hot-
press. This meant the text was backwards
on the CDs, which I didn’t like at first, but
later realized better contributed to the dif-
culty of recognizing the text. I
included pages from Fahrenheit 451 by Ray Bradbury and The Handmaid’s
Tale, by Margaret Atwood, both for-
bidding pictures of what the future
could be. I added a Table of
Contents and a short introduction
explaining the piece, and then bound
it in a medieval limp goat vellum
binding with cherry wood to rein-
force the long stitching on the spine.

The title of this book is The Silent
Future: How Will We Speak from the
Past? This artful book demonstrates
a serious issue facing all of us. Most
of our communication in this 21st
century is done by e-mail and Web
pages and word processors, whereas
in the past it was written down by
hand on paper. We still have writ-
ings from hundreds of years in the
past, but already I have computer
files from only five years ago that are
unreadable. And what about when
your computer crashes and you
haven’t backed up your files? Our chil-
dren will not find old letters and diaries
and photo albums in the attic. It will be
a very different future indeed.

In the final analysis, making a book
gives people a feeling of power because
they can understand and even produce
something whose structure was once
unfathomable. And, since books are pur-
veyors of information and ideas, making
a book also bestows the power to give
physical substance to one’s own ideas,
just as computers and the Internet have
enabled once obscure voices to find
forums.

So it is that when people start making
books, they soon want to personalize
them: to decorate the covers, use special
end papers, write or edit the text, and cre-
ate their own illustrations. From there, the
process can evolve to the point where the
physical book no longer merely carries
the message, but is itself part of the mes-
se in its appearance and construction.
And that is when books become art.