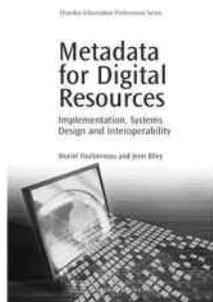# Reviews

Muriel Foulonneau and Jenn Riley. 2008
*Metadata for Digital Resources: Implementation,
Systems Design and Interoperability.*
Chandos Publishing (Oxford) Ltd

**Metadata, as many of us understand it, is data
about data.** An example is the old card in the
library card catalog that contains basic data about a
book or other library material. To the extent that
cataloging is similar to indexing (at least database
indexing), we indexers may be interested in meta-
data. But metadata goes beyond cataloging. In the
digital world, metadata has become especially
important in making data retrievable as the both the
volume of data and the expectations of rapid com-
plex retrieval have grown. Indexers who are inter-
ested in expending the application of their skills to
web indexing, taxonomy work, and database index-
ing, would find it very valuable to understand how
to make the most of metadata.

The connection between metadata and database-
style indexing is as follows. Each document, file, or
record has multiple types of structured metadata
fields describing it, such as: title, author, date cre-
ated, format, language, audience, original source,
subjects, and names. Subject and names, the
descriptive "aboutness," are fields of metadata that
are filled in with index terms that the indexer
chooses as most appropriate, ideally from a con-
trolled vocabulary. The other metadata fields are
much simpler fill in. Thus, if you can index, you
can complete the metadata for a document. But per-
haps you want to take on more analytical work and
actually design the metadata fields and require-
ments. This is where reading up on the subject
would be useful.

The use of metadata also brings together the two
rival methods of making information findable:
human indexing and automated "indexing" or
search. The human designs the metadata and usu-
ally also manually indexes with terms assigned to
specific metadata fields. The computer then com-
pletes the automated search based on the metadata.

There are a number of books recently published
about metadata. In fact, there are more books dedi-
cated to metadata than there are on taxonomies,
another related area of interest to indexers. The new
metadata book I chose to review, *Metadata for Digital
Resources: Implementation, Systems Design and Interop-
erabilty*, is from the same publisher, Chandos Pub-
lishing, as the book on taxonomies that I reviewed
last year, so I figured it would be a worthwhile
book, and I was not disappointed. Chandos is a
leading international publisher of books on library
and information science, knowledge management,
the Internet, and a few other subject areas.

Although a British publisher, one of the authors,
Jenn Riley, is American and the other, Muriel
Foulonneau, is French but has worked in the United
States. Riley is the Metadata Librarian with the Digi-
tal Library Program at Indiana University, Blooming-
ton. Foulonneau works on the archive of scientific
publications at the Centre pour la Communication
Scientifique Directe. She is also co-chair of the
Dublin Core Collection Working Group of the
Dublin Core Metadata Initiative.

The book is well organized and thoroughly covers
all areas of metadata design and implementation.
Reflecting its sub-title, the chapters are grouped
together within four main parts: 1) Introduction, 2)
Implementation of metadata creation activities, 3)
Systems design, and 4) Metadata interoperability.

The introductory chapter "What is metadata?"
provides a solid background and scope. Even
though we may have a general idea of what it is,
exact definitions vary. For example, metadata may or
may not be limited to digital media. For the scope
of this book: "Metadata is structured information
about a digital resource and its properties." The
focus of the book is also restricted to the application
of metadata in the "cultural heritage" sphere, such as
libraries, museums, archives, and historical societies.
Thus, metadata on web HTML pages is not a subject
that is covered, but then again, that metadata is so
simple it would probably not require more than a
couple pages anyway. The requirements of institu-
tional metadata projects, on the other hand, are
much more demanding, and this book does a good
job addressing those requirements

The next section, on implementing metadata,
opens with factors in choosing a metadata standard.
Depending on your library science background,
some of these acronyms for standards may or may
not be familiar: MARC, AACR2, PREMIS, and
SKOS. The decision in choosing a metadata stan-
dard is not quite the same as choosing an editorial
style standard for indexing, because the various
Metadata standards have differences in their scope of

coverage, so some may be totally unsuitable for a given project. There may be none that are completely suitable, but rather a combination of two or more standards may be used, and even then they may be used as only a basis with modifications. As stated in the text, "There is no monolithic, one-size-fits-all metadata record." It's the metadata usage guidelines that are more akin to any indexing style policies, and there is in fact an entire chapter just on how to create the metadata usage guidelines. It quickly becomes apparent, therefore, that designing metadata involves coming up with your own editorial policy. (This could be fun.) Other topics include designing the workflow, metadata creation user interface, and managing quality control.

The third section, on systems design, starts off with a chapter on the functions performed by a "digital library system." Basically, in order to design the metadata you need to understand how it will be used. This could include search/browse for information, digital object management, data preservation, and/or supporting functions of another system. I found it interesting that the book uses language of the broader Web world than that of library science, such as function of "discovery" instead of "literature retrieval." There is also emphasis on the importance of being centered on users and having user studies. Another chapter includes screenshots of possible website user interfaces including browse hierarchies, facets, and even a tag cloud. This section also discusses "indexes" and "indexing," but in the context of

what a search engine does to full text. So, be aware.

The final section, on interoperability, begins with an explanation of why resource sharing is important. Too often creators of metadata think only of their own organization's internal needs without considering expanded use through third parties, such as other institutions or commercial companies, or through other applications such as search engines and web portals. Interoperability needs to consider sharing of both content and technology. For sharing of content, determining the degree of equivalence between two sets of metadata may be required. This is known as "mapping," and something I have done before with controlled vocabularies. For metadata, the term "crosswalk" is also used to mean mapping. Some aspects of interoperability can get a little technical, as the aptly title chapter "Technical interoperability" explains.

The concluding chapter, "The future of metadata," explores such topics of automated metadata exploration, Web 2.0, and "mashups." While such an up-to-date book is great, the rapidly changing world of online information calls into question the length of time that this book will be relevant before it needs a revision.

The book is definitely a practical "how-to," rather than being theoretical. As such, it is probably most useful if you have an actual metadata project to plan from start to finish. If you are looking for a general overview introduction to the subject, you might consider one

of the other books on metadata, especially if it costs less. This book is rather dense on information and is certainly not a light read. Many readers may choose not to initially read it from beginning to end, but rather to consider certain chapters for their immediate needs. Even if you have a project that is not even defined as "metadata" but involves planning and arranging for database indexing from scratch, this book would be very valuable.

While this book could be used as a reference, it is very unfortunate that its index is so poor. Like the other Chandos Publishing book I had reviewed, the index lacks any subentries and over-arching topics such as standards, guidelines, interoperability, software, etc. I don't know if it was author-indexed, but I have my suspicions.

It should be understood that, even though it is a "how-to" book, neither this nor any book on metadata can give you all the answers you need, because each metadata project is unique in its content, requirements, users, etc. In many cases, the book presents merely the types of questions one should address, rather than giving all the answers. Questions include deciding which if any standards to use, which categories should be preserved as search options, or what level of detail (granularity) to cover. Fraught with decision-making at every step of the way, metadata design is thus again similar to indexing. I hope I'll have a metadata project some day to put some of this book's wealth of advice to good use.

— *Heather Hedden*