

Committee on Cataloging: Description & Access

The Logical Structure of the Anglo-American Cataloging Rules — Part I

**UNOFFICIAL NOTES on a Presentation by Tom Delsey
to the Joint Steering Committee for the Revision of AACR
Washington, DC
July 1 & 2, 1998**

[[Outline of the Presentation](#)] [[Full Report in .PDF Format](#)]

The following unofficial notes describe a special meeting of the Joint Steering Committee for the Revision of AACR (JSC), meeting at the Library of Congress, Washington, DC, on July 1 & 2, 1998, and were compiled by John Attig and Laurel Jizba.

CAVEAT LECTOR: These personal and unofficial notes are the sole responsibility of John and Laurel, who take responsibility for any errors in reporting or interpretation.

NOTE: The [full report](#) is available in PDF format. The Introduction (40 p.) and the figures are in separate files to facilitate printing.

The purpose of this meeting was to hear a presentation by Tom Delsey of the data model of Part I of the *Anglo-American Cataloging Rules*. Following the International Conference on the Principles and Future Development of AACR in Toronto, Tom was commissioned by JSC “to provide a logical analysis of the principles and structures that underlie AACR” using a data modeling technique. Tom has completed his analysis of Part I of the code; his analysis of Part II will be presented to JSC at their meeting in November in the United Kingdom. [At the end of the meeting, there was also a report by Jean Hirons from the working groups that she set up to carry out another commission from JSC: to develop the proposals regarding seriality that were presented and discussed at the International Conference. [Jean’s report](#) is summarized at the end of this document.]

This document is based upon (a) a set of overhead slides that Tom used to facilitate his presentation — recreated here within the boxes; (b) a 37-page introduction to Tom's report; (c) notes made by John and Laurel of the discussion. Neither of us had access to another piece of documentation — the report itself, which consisted of a 2+ inch ring binder with 36 tabbed sections setting forth the details of the model.

Note that the model relies a great deal on visual imagery. Therefore, close examination of Tom's slides — and particularly the diagrams — is essential for comprehending the model. The text of this report is only a commentary on the visual imagery. Unfortunately, in order to be legible, the diagrams had to be reproduced as rather large graphics which probably won't fit across the screen and certainly can't be viewed simultaneously with the text. Therefore, it is recommended that you print a copy of each diagram to follow while reading the text; remember to set your printer to landscape orientation.

In what follows, the slides will be interspersed with a description of the model and of the discussion, much of it quoted directly from the written introduction. It also contains occasional personal comments from John ("JA") or Laurel ("LJ").

This document is an interim report and a supplement to the full document. It is presented so that groups working on the revision of AACR, and particularly the Task Force on Rule 0.24 that has been appointed by the Committee on Cataloging: Description and Access, can benefit from the insights that Tom's model provides into the logical (and semantic) structure of the code. As with all documents relating to the rule revision process, it needs to be kept in mind that nothing presented here in any way **changes** the rules nor does it constitute an authoritative interpretation of the rules. It is a tool for understanding the code so that the rules can be developed in a coherent manner. This document should **only** be used in this way.

The Logical Structure of the Anglo-American Cataloging Rules — Part I

**Drafted for
The Joint Steering Committee for Revision of
AACR**

by Tom Delsey, National Library of Canada

**with assistance from
Beth Dulabahn, Library of Congress
Michael Heaney, Oxford University
Jean Hirons, Library of Congress**

June 1998

Outline of the Presentation

Objective

Methodology

“Bibliographic” Entities

“Real World” Entities

Key Issues

Issue No. 1. The Concept of Class of Materials

Issue No. 2. The Concept of Physicality

Issue No. 3. The Concept of Publication

Issue No. 4. The Concept of Seriality

**Issue No. 5. The Assumption of Fixity of Content and its
Exceptions**

Recommendations on the Key Issues

Progress Report on the Redefinition of Seriality (Jean Hirons)

Objective

“The principal objective of this study is to develop a formalized schema to reflect the internal logic of the *Anglo-American Cataloguing Rules*.” It is firmly grounded in the current text of the code. The model is not a new code or a design for a new code. However, it can serve as a tool for looking beneath the surface of the code and can be used in a number of ways:

Objective

Develop a tool to:

- clarify concepts that are integral to the logical design of the code
- highlight anomalies and inconsistencies in the application of basic principles
- provide a frame of reference for developing and extending the code to accommodate new media, new forms of publication, and new modes of dissemination and access

Methodology

The study presents an **entity-relationship model** of the code. It is based on the terminology and definitions found in the AACR glossary, supplemented as needed from the *ALA Glossary of Library and Information Science* and other special glossaries or dictionaries. The model maps each data element in Part I of AACR2 to a particular entity type or to a relationship between particular entities. The rules themselves (both general and specific) are mapped to relevant data elements.

- clarify concepts that are integral to the logical design of the code
- highlight anomalies and inconsistencies in the application of basic principles
- provide a frame of reference for developing and extending the code to accommodate new media, new forms of publication, and new modes of dissemination and access

Methodology

The study presents an ***entity-relationship model*** of the code. It is based on the terminology and definitions found in the AACR glossary, supplemented as needed from the *ALA Glossary of Library and Information Science* and other special glossaries or dictionaries. The model maps each data element in Part I of AACR2 to a particular entity type or to a relationship between particular entities. The rules themselves (both general and specific) are mapped to relevant data elements.

Methodology

Methodology derived from entity-relationship modeling techniques

- model designed to reflect the internal logic of the code
- terminology and definitions derived directly from the code to the extent possible
- each data element in Part I mapped to an attribute of a particular entity type or to a relationship between particular entities
- both general and specific rules mapped to relevant data elements

- model reflects only what is made explicit through the rules and only what is recorded in the descriptive record

The model consists of a logical structure made up of entities, relationships, and attributes:

Entities / Relationships / Attributes

Entities:

- represent key agents, processes, objects, and concepts
- primary coordinates for mapping the logic of the code

Relationships:

- represent key associations between entities
- logical connectors between the key entities

Attributes:

- represent characteristics of an entity
- defined with reference to the entity itself

“Bibliographic” Entities

The primary bibliographic constructs found in AACR are set out in **Figure 1**. These entities are all abstract concepts that act as points of reference or devices for structuring the rules. They are categories into which the cataloger places the **“real world” entities** that are described in a bibliographic record.

- **ITEM** is a document or set of documents in any physical form,

published, issued or treated as an entity. Tom refers to **ITEM** as a “cipher” entity; it is a bibliographic concept that serves within the structure of the code as a “handle” to facilitate reference to the “real world” entity that is the focus of the bibliographic record. This “real world” entity may be a **DOCUMENT**, **DOCUMENT PART**, **COLLECTION**, or **CONTENT PART**. See the discussion of **DOCUMENT** below.

- **SERIES** is a group of separate items related to one another by the fact that each item bears, in addition to its own title proper, a collective title applying to the group as a whole. **SERIES** is also a “cipher” entity, in the sense that it may be any of a number of aggregates depending on what “real world” entity is the focus for the description. An **ITEM** may belong to one or more **SERIES**. A **SERIES** may comprise one or more **SUBSERIES**.
- **SUBSERIES** is a series within a series.
- **CLASS OF MATERIALS** is the broad class or specific class of materials to which an item belongs (or is assigned). It functions to organize the rules for description and is the basis for the chapters in Part I of AACR. The **CLASS OF MATERIALS**, along with the **TYPE OF PUBLICATION**, determine the **CHIEF SOURCE OF INFORMATION**.
- **TYPE OF PUBLICATION** is the category to which a published item belongs (or is assigned) with respect to its intended termination (i.e., whether it is a serial or a monograph). The **TYPE OF PUBLICATION**, along with the **CLASS OF MATERIALS**, determines the **CHIEF SOURCE OF INFORMATION**.
- **CHIEF SOURCE OF INFORMATION** is the source of bibliographic data to be given preference as the source from which the bibliographic description is prepared. The **CHIEF SOURCE OF INFORMATION** is determined by the **CLASS OF MATERIALS** and the **TYPE OF PUBLICATION** to which an **ITEM** belongs.

“Real World” Entities

The six basic entities described above define the primary structure of the code. They are all “cipher” entities — abstract concepts that act as points of reference or devices for structuring the rules. They are categories into which the cataloger places the “real world” entities (real agents, processes or objects) that are to be described in a bibliographic record.

Tom provides detailed diagrams that apply the bibliographic constructs to the following entities:

1. Item = unpublished document
2. Item = publication master
3. Item = published document
4. Item = collection
5. Item = document part
6. Item = content part
7. Multilevel description of a multipart document
8. Multilevel description of a series
9. Multilevel description of a collection of documents

Rather than discuss each of these diagrams, we will look specifically at the case of a published document (**Figure 2**).

In this diagram, something real identified as the **ITEM**, in this case, a **DOCUMENT**. The specific entities that are part of the bibliographic construct **ITEM** are

- **DOCUMENT** is an object that comprises intellectual and/or artistic content and is conceived, produced, and/or issued as an entity. **DOCUMENT** has two sub-types: published and unpublished. A **DOCUMENT** may contain one or more document parts.

DOCUMENT is a fundamental entity within the code, and most of the key issues discussed later relate to implicit assumptions about **DOCUMENTS** — that they are in some sense physical entities, that they are either published or unpublished, monograph or serial, etc.

- **DOCUMENT PART** is a physically separate component of a document. (Note again, the assumption of physicality.) The **DOCUMENT PART** may itself be the **ITEM** being described. However, even when the **ITEM** is the **DOCUMENT** as a whole, the rules provide for the inclusion of data elements that pertain specifically to one or more **DOCUMENT PARTS**, e.g., accompanying material.

Both **DOCUMENT** and **DOCUMENT PART** consist of **CONTENT**.

- **CONTENT** is the intellectual or artistic substance contained in a **DOCUMENT** or **DOCUMENT PART**. Again, data elements within the record may pertain specifically to the **CONTENT**, e.g., a summary of the contents. **CONTENT** may contain one or more **CONTENT PARTS**.
- **CONTENT PART** is an individual component of the intellectual or artistic content. The **CONTENT PART** may itself be the **ITEM** in the case of a component part, or there may be rules that pertain specifically to the part, e.g., a list of contents. Note that the distinction between a **DOCUMENT PART** and a **CONTENT PART** is that the former is physically separate, while the latter is not. **CONTENT** and **CONTENT PARTS** are “set as” **INFIXION**.
- **INFIXION** is the formatting of intellectual or artistic content. This is a

term Michael Heaney discovered in the *Oxford English Dictionary* and is used to make a distinction between the unformatted **CONTENT**, the **PHYSICAL CARRIER**, and the formatted information that is placed on the carrier, a distinction which is found in the rules, but for which no specific term is provided. Tom's example of a rule that applies to the **INFIXION** is a note on the aspect ratio of a film. **INFIXION** is stored on one or more **PHYSICAL CARRIERS**.

- **PHYSICAL CARRIER** is the physical medium in which data, sound, images, etc., are stored. The code provides rules for describing aspects of the **PHYSICAL CARRIER**. The **PHYSICAL CARRIER** may be housed in a **CONTAINER**.
- **CONTAINER** is any housing for a **DOCUMENT**, etc., that is physically separable from the material housed. Again, the code provides rules for describing aspects of the **CONTAINER**.

[NOTE (LJ): When the various images of the model are all considered at once, the visual relationship of **CONTAINER** to **DOCUMENT** to **DOCUMENT PART** to **ITEM** in the 10 or so views of single descriptions and multilevel descriptions lead to some questions about the language of the code regarding the nature, value and use of containers vis-a-vis real world cataloging problem solving for materials with containers. The relationships become particularly complex where variations exist in the relationship of the **CONTAINER** to the **ITEM**.]

All of the above entities are internal to the **ITEM**. Most of the bibliographic description is based on one or more of these entities or on *labels* (including such sources of information as title pages) in or on these entities. However, the rules also include reference to additional entities **external** to the **ITEM** which may be the basis for certain data elements. Normally, these entities are relied upon only when the relevant information is not provided within the **ITEM** itself. Within the model, these entities are invoked only when the rules allow the cataloger to provide factual information from external sources (as opposed to information transcribed from internal sources).

- **PERSON** and **CORPORATE BODY** is an individual or an organization. A **PERSON** or **CORPORATE BODY** may be responsible for the **PRODUCTION** of a **DOCUMENT**, the **CREATION** of its **CONTENT**, or the **MANUFACTURE** or the **RELEASE** of **COPIES**.
- **PRODUCTION** is the act of physically creating a document.
- **CREATION** is the act of originating intellectual or artistic content.
- **MANUFACTURE** is the act of making **COPIES** of a **DOCUMENT** by means of a mechanical or electronic process.
- **RELEASE** is the act of making **COPIES** of a **DOCUMENT** available to the public.

- **COPY** is a single specimen of a **DOCUMENT**. A **COPY** belongs to an **IMPRESSION**. [**COPY** is an ambiguous entity within the code. On the one hand, it is an aspect of the concept of **ITEM** (“item in hand”) and **DOCUMENT**; on the other hand, it is part of the set of external entities that aggregates **COPIES** into **IMPRESSIONS**, **ISSUES**, and **EDITIONS**. The rules imply that copy-specific information is an inherent part of the **DOCUMENT**, although such information logically should be at a lower level.]
- **IMPRESSION** encompasses all **COPIES** of an **EDITION** of a **DOCUMENT** manufactured at one time. An **IMPRESSION** belongs to an **ISSUE**.
- **ISSUE** encompasses all **COPIES** of an **EDITION** forming a distinct group that are distinguished from other copies by minor but well-defined variations. An **ISSUE** belongs to an **EDITION**.
- **EDITION** encompasses all **COPIES** produced from essentially the same image or master copy and issued (released?) by the same entity.

[Note that the **EDITION** entity is distinct from the Edition Statement (which is an attribute of a **DOCUMENT**. The Edition Statement is part of a “label” within the **DOCUMENT**, which may or may not conform to the definition of **EDITION** as an entity (e.g., an unaltered reprint may bear an Edition Statement). Within the logic of the rules, the **EDITION** entity allows the cataloger, in the absence of an Edition Statement, to identify the **ITEM** as a distinct **EDITION** and to supply an Edition Statement.]

[Note also that, within the logic of the rules, **EDITION** is defined in terms of an aggregation of **COPIES**. Some of those present noted that this seemed conceptually backwards: an **EDITION** should be defined in terms of **DOCUMENT CONTENT** or perhaps in terms of **WORK** and **EXPRESSION** (entities that do not appear in the model until Part II).]

- **EQUIPMENT** is a device used to play, project, operate, or use a **DOCUMENT** whose **CONTENT** cannot otherwise be accessed by the unaided senses. The **INFIXION** or the **PHYSICAL CARRIER** may require particular **EQUIPMENT** and the rules call for description of the **EQUIPMENT** whether or not the information is obtained from internal or external sources.

The remaining diagrams are similar to Figure 2, the principal differences being how the **ITEM** is defined in terms of a **DOCUMENT**, **DOCUMENT PART** or **CONTENT PART**. The diagrams include both entities and relationships (most of which are listed with the definitions above). They do not include attributes, and Tom’s presentation did not detail either the list of attributes for each entity or the rules that are mapped to each attribute and relationship. His full document, however, does include all of this detail,

arranged in 36 numbered tabs.

The only other entity left to be defined is **COLLECTION**, which is defined as a collection of **DOCUMENTS**, normally formed by or around a person, family, corporate body, or subject, assembled by a library or by a previous owner — and, yes, the use of the word “collection” in the definition is intentional and possibly unavoidable.

[There are additional problems with **COLLECTION** in the code. Often, the term is used to refer to *published* collections of **DOCUMENTS**. Collections can be produced by a collector (in which case, the ownership relationship is paramount) or they can be produced by a publisher or distributor. These different uses of the term may not be referring to the same entity, and the glossary may need to be modified.]

Key Issues

The second part of the presentation was a discussion of five key issues that Tom had identified. These issues related primarily to “the implications of extending the code to accommodate the introduction of new media, new forms of publishing, and new modes of disseminating information in a digital environment.”

Key Issues

1. Does the “**class of materials**” concept serve as a viable basis for an extended structure accommodating new forms of digital materials?
2. Does the “**physicality**” inherent in the concept of document constrain the logical development of the code to accommodate electronic resources?
3. Is the division of the universe of objects described into two categories — **published** and **unpublished** — adequate to accommodate digital objects disseminated online?
4. Can the notion of “**seriality**” be extended to accommodate electronic forms of dissemination of documents “intended to be continued

indefinitely”?

5. What are the implications of applying the logic of the code to documents in which the content is not permanently “**fixed**” within a physical object?

Issue No. 1: The Concept of Class of Materials

Does the concept of class of materials as currently reflected in the code serve as a viable basis for an extended structure accommodating new forms of digital materials?

According to Rule 0.24, the class of materials to which an item belongs determines the subset of the rules (i.e., the chapter in Part I of AACR2) which are to be applied. The wording of Rule 0.24 implies that the form of the physical carrier determines the class of materials to which the item belongs. However, this is a gross oversimplification of the actual situation.

Tom presented a **table** that shows what factors go into the definition and scope of the various “classes of materials.” Specifically, the classes may be defined in terms of:

- form of content (e.g., literary, cartographic)
- form of expression (e.g., sound, moving image)
- form of physical carrier (e.g., book, sound disc)

The table shows that while form of physical carrier is often the primary defining criterion for many classes, some are defined by a form of content (e.g., Chapter 3 – cartographic) or a form of expression (e.g., Chapter 5 – music notation). Chapter 2 is ambiguous; it includes some forms of content (literary, graphic) and excludes others (cartographic, musical), includes some forms of expression (alphanumeric, still image), and includes some forms of physical carrier (book, pamphlet, sheet) while excluding others (microforms).

There are other problems:

- The categories of physical carriers are not unambiguously defined, nor are they mutually exclusive.
- The class of materials determines only where to begin applying the rules; some chapters (11, 12 and 13) are chapters “of partial generality” — they contain rules that may be applied to other classes of materials. Other chapters are explicitly generalized. For example, the rules for

Area 4 in Chapter 4, Manuscripts, are generalized to cover unpublished materials in other chapters. The partial generality of the rules in Chapter 9, on the other hand, is not specifically recognized in the code.

- There are no clear guidelines to follow when an item belongs to more than one class of materials. There is, for example, no order of precedence in applying applicable chapters. [NOTE (LJ): It may not always be possible or appropriate to apply a single order of precedence. There may need to be different orders of precedence based on the nature of the object or the context of the catalog in which the record is being created.]
- The concept of class of materials and the concept of type of publication (serial vs. monograph) are not mutually exclusive.

Extending the concept of class of materials to accommodate new forms of digital materials would require

- defining each form of carrier in **unambiguous** terms
- ensuring that the rules for each class of materials are **co-extensive** with the types of work and forms of expression accommodated by the defined form of carrier
- determining whether form of carrier takes **precedence** over form of expression in classing digital materials
- establishing an **order of precedence** for the application of rules to an item falling within more than one class

There seem to be significant problems with organizing the rules on the basis of “classes of materials.” Fortunately, the model offers an obvious alternative. By breaking the entity **DOCUMENT** into its constituent elements — **CONTENT**, **INFIXION**, and **PHYSICAL CARRIER** — provides a re-mapping of the attributes of these entities in such a way that clarifies what attributes (and what rules) really relate to the form of content and which relate to the form of physical carrier. Most of the rules that relate to the physical carrier are confined to Area 5 of the description.

Tom's general **recommendation** is to **use the model developed for this study to assess options for restructuring Part I of the code to facilitate the integration of rules for new forms of expression and new media**. His specific recommendation is **to use the ISBD(G) areas of description as the primary organizing element for the overall structure of Part I**.

This suggestion moves the problems of selecting relevant rules down to the ISBD area or element level, where they are likely to be simpler. The concept of "chief source of information," for example, becomes instead the concept of prescribed source for Area 1 (and secondarily, the concept of prescribed sources for each subsequent area). The suggested reorganization of the rules doesn't solve all the problems. There are still rules of partial generality – rules for serial (or ongoing) publications, for example. The rules for electronic publications will probably also be partially general in that the electronic nature of the item will be reflected in most of the areas.

In the discussion, there seemed to be strong (although tentative) support for Tom's recommendation, and the various parallel efforts that seem to be moving in this direction were noted with approval. When asked specifically whether there were other models that should be explored, none were suggested.

Issue No. 2: The Concept of Physicality

Does the physicality inherent in the concept of DOCUMENT constrain the logical development of the code to accommodate the cataloguing of electronic resources?

The code assumes that a **DOCUMENT** – as the basis for "the **ITEM** in hand" – has a physical dimension. In addition to basing the concept of "class of materials" (see [Issue No. 1](#) above) on the "physical form of the item in hand" (O.24), the rules imply physicality in a number of ways:

Physicality

Implicit assumption that a document has a physical dimension:

- “**physical form** of the item in hand” is the starting point for description
- scope of each chapter defined largely with reference to **physical form**
- data elements in the **physical description** area generally assumed to be applicable to all items within a given class of materials
- key concepts such as “multipart item,” “serial,” and “series” all defined with reference to **physically separable parts** of a document

There seem to be two major sets of problems with de-linking the concept of **DOCUMENT** from the notion of physicality. First, the logic of the code normally implies that the document is a physical manifestation of the document content. To re-conceptualize documents as non-physical entities would remove a distinction between document and content that is deeply embedded in the logic (and the text) of the rules. Second, the rules tend to define the boundaries of a document in physical terms. If the physical object cannot be relied upon to determine the boundaries of the document, how are such boundaries to be determined? This is a significant problem for digital objects such as Web sites: does the document include all of the content that is associated with the document through hyperlinks or none of them or only some of them?

Indeed, the application of the present code, with its reliance on physicality, to electronic materials presents a number of significant challenges:

Extending the concept of document to include non-physical entities would require:

- defining **DOCUMENT** in terms that are not necessarily linked to the notion of physicality
- extending the attributes defined for **DOCUMENT** to include attributes unique to networked electronic resources

- defining **DOCUMENT PART** in terms that are not necessarily linked to the notion of physical separability
- treating the “stored on” relationship between **INFIXION** and **PHYSICAL CARRIER** as optional
- ensuring that the criteria for determining **CHIEF SOURCE OF INFORMATION** could be applied to non-physical elements of a document
- establishing non-physical criteria for determining the “boundaries” of a document

Clearly the code needs to deal with documents that are not defined in physical terms. [NOTE (JA): This has been true ever since Chapter 9 was written. The inability of the rules to deal with non-physical documents is what has given us Area 3 in that chapter and the empty Area 5 for remote-access computer files. It is high time that the rules dealt more forthrightly with non-physical documents.] Tom’s **recommendation** is to **use the model developed for this study as the basis for examining the feasibility of modifying the internal logic of the code to accommodate documents that are defined in non-physical terms**. He further suggests consultation with experts in the area of electronic document architecture, particularly on the question of document boundaries.

Issue No. 3: The Concept of Publication

Is the division of the universe of objects described into two categories — published and unpublished — adequate to accommodate the description of digital objects disseminated online?

There are rules in Part I that are identified as being applicable specifically to “unpublished” materials. The implication is that the rest of the rules are applicable to “published” materials and, unless otherwise states, also to “unpublished” materials. This distinction is present in various aspects of the code:

Published and Unpublished Documents

Distinction between “published” and “unpublished” documents reflected at several levels:

- sub-types of **DOCUMENT** and **DOCUMENT PART**
- attributes unique to each sub-type
- distinction between processes of **PRODUCTION** and **MANUFACTURE/RELEASE**
- attributes associated with each of the process entities
- **RELEASE** and **COPY** central to the concept of “publication”

The term “publication” is not defined in the code.

[NOTE (JA): There is definitely a need for this. This month, a thread on AUTOCAT has been discussing the question. In the absence of a definition in the code, we are left to apply various legal and dictionary definitions. It has been argued that what libraries do in making copies publicly available satisfies many of these definitions. So **everything** we collect should be considered published. This is perhaps not a satisfactory solution to this problem, and the rules need to address it directly.]

[NOTE (LJ): During discussions in the ISBD (ER) review process, there was a consensus that all electronic networked items need to be considered to be published. That is reflected in the 1997 *ISBD (ER)*.]

In the case of networked materials, the choices seem to be to apply the rules for “unpublished” materials or to extend the concept of “published” to these materials — perhaps somewhat arbitrarily. The present rules for unpublished documents are rather limiting, but defining networked materials as published has some additional implications in the code:

Extending the code to accommodate the networked dissemination of digital objects would require:

- determining the applicability of the concept of **MANUFACTURE** to a networked environment
- extending the notion of **RELEASE** (i.e., “making copies available to the public”) to modes of dissemination in which the copies are not necessarily physical in nature
- extending the notion of **COPY** to include online displays, document source, printouts of screen displays, etc.
- extending the attributes of **COPY** to include attributes unique to “copies” of digital objects
- reworking the concepts of **IMPRESSION,ISSUE,** and **EDITION** to accommodate groupings of “copies” that are the product of online transmission
- distinguishing between characteristics that apply to all “copies” of the document and those that apply only to the “copy” in hand

[NOTE (JA): The last point above is once again the question of multiple manifestations or versions to which networked objects are particularly prone. If the rules in general do not do a good job making distinctions among different categories of differences between copies, then this issue will become even more problematic as we try to deal with networked materials.

Tom does not have a specific solution to propose, although he directs attention particularly to the entities **RELEASE** and **COPY**. His **recommendation** is to use the model to study the problem and (again) to consult experts in the area of electronic documents.

Issue No. 4: The Concept of Seriality

Can the notion of “seriality” as reflected in the code be extended to accommodate electronic forms of “publication” or dissemination of documents “intended to be continued indefinitely”?

In AACR2, the world is divided into two **TYPES OF PUBLICATION**: serials and monographs. Note, first that the entire category is defined using the term “publication” — which raises the question as to whether these categories have any application to “unpublished” materials and, if not, where are the rules for describing unpublished materials intended to continue indefinitely? (See [Issue No. 3](#) above.)

The definition of seriality has three components — successive issue, numbering, and intent to continue indefinitely. Since all three criteria must be met, the division of the world between serial and monograph is not exhaustive — possibly in the case of sets of documents and certainly in the case of unnumbered series. (See Tom’s [diagram](#).) It is also the case that certain attributes may be shared by types of serial and monograph publications, for example, both multipart monographs and serials may have frequency of issue or numbering. Mapping the relevant rules to these attributes can therefore be unusually complex.

Seriality

Three defining criteria for a serial:

- issued in successive parts
- parts bear numeric or chronological designations
- intended to continue indefinitely

“Seriality” reflected at several levels within the logic of the code:

- attributes that are uniquely associated with serials as a sub-type of **DOCUMENT**
- specific criteria for determining **CHIEF SOURCE OF INFORMATION**
- specific criteria for determining the “boundaries” for the set of issues of a serial described in a single bibliographic record
- data elements for attributes of several entities have rules that are specific to serials
- several **ITEM-to-ITEM** relationships defined specifically for serials

Applying the concept of seriality to electronic resources exposes the problems with the code’s treatment of **TYPE OF PUBLICATION**. It is not clear that electronic resources should even be considered as publications. Those that are intended to continue indefinitely are typically updated continuously rather than being “issued successively.” Even if there are distinct “issues,” these are not physical in nature (see [Issue No. 2](#) above). And the issues are often not numbered.

Extending the concept of “seriality” to accommodate electronic forms of dissemination of documents “intended to

be continued indefinitely” would require:

- determining whether the criteria relating to the issue of successive parts could be extended to apply to parts that are not physical in nature
- examining the implications of treating a “serial” issued as a continuously updated database of articles, etc., not as a set of document parts but as a single document intended to be continued indefinitely
- reworking the concept of type of publication to reflect alternatives to the current division between monographic and serial publications

Tom’s **recommendation** is to continue the investigations begun by Jean Hirons as a follow-up to the Toronto Conference. He suggests using the framework of his data model as a tool to test the feasibility of any proposed modifications to the concept of seriality in the code.

Following Tom’s presentation, Jean Hirons gave a brief **progress report**, a description of which is given at the end of this report. In general, Tom was non-committal about Jean’s proposed new category of “ongoing entities” and reiterated his suggestion to test the proposal against his data model to determine whether the new categories could be incorporated into the entities, attributes and relationships expressed in the code.

Issue No. 5: The Assumption of Fixity of Content and its Exceptions

What are the implications of applying the logic of the code to documents in which the intellectual or artistic content is not permanently “fixed” within a physical object?

There is an assumption that the content of a document is permanently fixed within the physical object. This is the basis for the assumption that certain attributes will be identical from copy to copy. Based on this assumption, the rules focus on (a) selecting an appropriate source of information and (b) providing guidelines for transcribing information from that source. There are

also usually rules for giving information that does not appear on the source.

The code recognizes that content is not always fixed forever, and that documents issued in successive physical objects may contain multiple versions of the same information. There are a number of techniques for dealing with this situation, techniques which Tom characterizes collectively as “snapshot” description:

“Fixed Content”

Implicit assumption that the content of a document is permanently “fixed” in a physical object:

- assume the **prescribed source of information** will be the same from one copy to another
- assume the form in which the **“labeling” information** is presented will be the same from one copy to another
- assume the **content** of the document will be the same from one copy to another

For items comprising multiple physical objects issued successively, the code provides for a “snapshot” description:

- **new record** created (e.g., successive entry for serials)
- **data elements revised** (e.g., change in responsibility for a multipart monograph)
- data displaced re-incorporated in **notes**
- certain details left **open-ended**
- significant variations recorded in notes; others ignored

Digital technologies have effectively destroyed the validity of the assumption of fixed content. Copies of digital documents may differ significantly (or insignificantly) in content. The information on the document that is the basis of the description may not be the same in all copies — or indeed in the same copy at different times. Application of the snapshot technique is particularly difficult in the case of digital materials, because different results may be obtained by viewing the file at different times. In the real world, every

cataloger might come up with a different bibliographic description because of changes to the document over time and between copies. The snapshot technique is further complicated by the fact that each revision to the document typically wipes out all traces of previous versions, making it impossible to reconstruct and record details of those previous versions; the snapshot description of a digital object is particularly prone to obsolescence. This set of issues may in fact be the most difficult to solve.

For the code, the problem is to determine what attributes are subject to change, to determine what changes need to be reflected in the bibliographic description, and to provide rules for recording multiple values for these attributes. It will also be necessary to determine in which cases a change in an attribute signals a new instance of the document — and thus a new bibliographic record.

Tom's **recommendation** is to **review the conventions and rules for reflecting change in the attributes of the item described, as currently established, to determine their applicability to changes in the attributes of digital objects, and extend them as necessary to accommodate a broader range of variables.**

Recommendations on the Key Issues

At the end of his presentation, Tom summarized his recommendations concerning each of the key issues:

Recommendations

1. Use the model to **assess options for restructuring Part I** of the code to facilitate the integration of rules for new forms of expression and new media. One option for consideration would be to use the ISBD(G) areas of description as the primary organizing element for the overall structure of Part I.
2. Use the model as the basis for examining the feasibility of modifying the internal logic of the code to **accommodate documents that are defined in non-physical terms.** Consultation

should be undertaken with experts in the area of electronic document architecture.

3. Using the model as a frame of reference, examine the issues raised with respect to the notion of **“publication” in a networked context** in consultation with experts in the area of electronic documents.
4. Continue the **examination of the “seriality” issue** initiated as a follow-up to the Conference on the Principles and Future Development of AACR, using the frame of reference set out in the model as a tool to assist in the analysis of the issues.
5. Review the **conventions and rules for reflecting change** in the attributes of the item described to determine their applicability to changes in the attributes of digital objects, and extend them as necessary to accommodate a broader range of variables.

Recommendation #1 was the most specific. Reorganizing Part I of the code around the ISBD(G) areas would eliminate rule 0.24 and would make the problem of “classes of materials” much more manageable. The group seemed comfortable with pursuing this recommendation, although they did not explicitly endorse it.

Regarding the concept of seriality, Tom cautioned against broadening the concept of serial indefinitely. The concept has specific and limited application in the code.

Regarding the extension of the code to cover electronic resources, Tom noted that the catalogue does two things: record description (based on transcription) and record access (which supports retrieval and identification). In a digital environment, what is the relative significance of the two parts of the code? It might be more important to connect user requests as directly as possible to the relevant objects, i.e., retrieval might be more important than description.

[NOTE (LJ): It became evident during TD's report that much work is needed on glossary terms, both a) refining existing terms and b) providing new terms and definitions as needed to fill in conceptual gaps. One example of is a term that needs reconciliation within the glossary and the text is “collection.” Two examples of terms that need to be added

are "publication" and "infixion", (if infixion is ultimately deemed useful).]

Progress Report on the Redefinition of Seriality

from Jean Hiron, Library of Congress

Goals and Objectives

The goals of the revision include:

- harmonization of AACR with other relevant standards, including the International Standard Bibliographic Description for Serials (ISBD(S)) and the guidelines of the ISSN Network, both of which are currently undergoing revision. [Apparently this harmonization was given particular emphasis by the Committee on Principles in reviewing JSC's action list following the Toronto Conference.]
- clarity, inclusiveness and simplicity in the rules, with minimal redundancy
- facilitate reliance on the judgment of catalogers

The objectives of the revision are:

- to introduce the concept of "ongoing entities" as a general concept that includes both those entities issued in successive parts (which includes serials as presently defined in the rules) and those entities whose content is updated over time (such as loose-leaves and many online databases and web sites)
- to recommend appropriate rules for ongoing electronic publications, including those that do not meet the current definition of a serial
- to improve the existing rules for serials
- to recommend rules for traditional publications such as loose-leaves and unnumbered series that do not meet the current definition of a serial
- to improve the rules for title changes for all types of ongoing publications, by examining the concept of a "serial work"

- to examine separately each type of ongoing entity and each area of the description in order to determine the appropriate rules for description, rather than looking at the bibliographic description as a monolithic whole

Progress Report: Work to Date and Current Thinking

The Model of the Bibliographic Universe: Jean discussed the graphic model of the bibliographic universe, with its division of the world between monographic and ongoing entities. She emphasized that, unlike Tom's model of the way the code currently works, this model represents significant changes from the status quo. On the other hand, the current thinking is perhaps less dramatic than the model proposed in Toronto. That model had suggested expanding the category of serials to include, not only unnumbered successively-issued entities, but also many entities that are not successively issued in discrete parts. The current model recognizes successive entities and "integrating" entities as distinct categories, and serials are one example of successive entities that are intended to continue indefinitely. Instead of expanding the definition of serials, this model adds an overarching category — **ongoing entities** — that covers anything not complete as first issued, including those things that are issued successively and those whose content changes over time. Within this model, the definition of serial changes very little (probably expanded to remove the requirement that successive parts be numbered).

Jean emphasized that this model lends itself to maximum flexibility in developing appropriate rules for describing all types of ongoing publications. It will not be necessary to formulate rules that can be applied to all types of ongoing entities; instead, the model provides a variety of categories that can be the basis for particular rules. When combined with the suggested reorganization of Part I of the rules by areas of description rather than by classes of materials, this flexibility can be significant. It would be possible, for example, to look at the various techniques that Tom has identified for dealing with changes in bibliographic data elements ([Issue No. 5](#) above) and choose the appropriate technique for a given piece of information and for a given category on the model. It is emphatically **not** intended, for example, that the serial rules for title changes would be applied to all ongoing entities or that the practice of omitting data elements that are expected to change over time would have to be applied to ongoing multipart entities.

Working Groups: There are working groups established to investigate:

- Description of Ongoing Entities: These groups will be suggesting rules for the description of ongoing entities, working area by area to determine appropriate rules, making sure that there are adequate rules for all categories, including loose-leaves and

electronic resources.

- **Entry Conventions for Ongoing Entities:** This group is looking at the concept of the work and its application to the various categories in the model; it will evaluate the use of successive vs. latest entry techniques for various categories, and will examine the concept of “incorporating entry” as a possible technique for describing integrating entities.
- **Uniform Title Issues and Title Changes:** This group is looking at some issues that are relevant to harmonization with ISBD(S) and ISDS: the relation of the rules for uniform titles to the ISDS rules for key titles; the use of uniform titles for translations of serials; the specific distinctions between major and minor changes in title.

Plans

Jean made two suggestions to JSC. First, she asked for approval of her model of the bibliographic universe, in particular the addition of a broad category of ongoing entities to the rules. Second, Jean noted that all of the related efforts — the revision of rule 0.24, the ISBD(S) review and the revision of the ISSN guidelines — are working on a two-year time frame. She suggested that, while she hoped to have some specific revision proposals to present to JSC in the spring of 1999, it might make more sense to take additional time to develop the proposals and coordinate them with the other parties.

JSC agreed to extend the time frame for the review. Jean’s working groups will present a report to JSC in April 1999, which will concentrate on general recommendations for revising the rules. There will be a 6-month period for extensive international review. If needed, JSC will sponsor a working meeting in the fall of 1999 that will include all the JSC constituencies and other appropriate parties (such as the ISBD(S) and ISSN Network) to harmonize rules and practices. After all this review, the working groups will write specific rule change proposals.