

RDA: Resource Description and Access  
A Cataloging Code for the Future (and related IFLA initiatives: FRBR, FRAD, IME ICC)  
Keynote Address for  
III Encuentro Internacional de Catalogadores  
"Tendencias actuales en la organización de la información"  
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by  
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*Abstract: IFLA has taken the lead for decades in cataloging standards and principles. Current work on a new cataloging code, known as RDA: Resource Description and Access, builds on the IFLA conceptual models of FRBR (Functional Requirements for Bibliographic Records) and FRAD (Functional Requirements for Authority Data) as well as the IFLA draft "Statement of International Cataloguing Principles" with a view to producing a code that is more international and designed for the future. RDA, which replaces the Anglo-American Cataloguing Rules (AACR2), is intended to be a new generation Web-tool to provide principle-based instructions for description and access with well-structured metadata.*

*This presentation is based on earlier presentations on RDA, such as those given in Durban to IGBIS, August 24, 2007.*

Director Gonzalez and Deputy Director Elsa Barber, thank you for inviting me to be with you today and a special thanks to the conference organizers. It's wonderful to return to Buenos Aires!

I was asked to talk about RDA and also the FRBR model that provides a foundation for the concepts in RDA. So, here are the topics for today: IFLA initiatives (FRBR, FRAD, and IME ICC), What is RDA and why a new standard, the goals, structure, and content of RDA, and preparing for RDA.

As we prepare for RDA there are some international developments that are shaping the future and that have influenced RDA itself. One of the principal ones is FRBR – Functional Requirements for Bibliographic Records. You have a handout on “What is FRBR?” to give you a bit more information. There are also some copies in Portuguese that I hope the conference organizers will share with our Portuguese speaking colleagues. I will only be able to very quickly cover FRBR today.

IFLA has been the center for international bibliographic standards for many decades. How many of you have heard of FRBR? The IFLA conceptual model, Functional Requirements for Bibliographic Records, or FRBR, reinforces the basic objectives of catalogs and the importance of relationships to help users to fulfill basic tasks with respect to the catalog – enabling people to find, identify, select, and obtain information they want.

FRBR also offers us a structure to meet these basic user tasks. It includes an entity-relationships model - a conceptual model of how the bibliographic universe works – identifying its entities and relationships. It provides ways to bring together records at the level of works and expressions, to show relationships. It also includes the functional

requirements, that is, the set of data elements or attributes that are mandatory for a national level bibliographic record. Those attributes in FRBR translate directly into RDA as the basic data elements for bibliographic description and access.

Applications of FRBR, such as the VTLIS's Virtua system and OCLC's WorldCat and other products, have demonstrated how users can benefit from a well-structured system designed around FRBR's entities – grouping bibliographic records for manifestations under expressions of named works.

And now there is a companion data model for authorities: FRAD – Functional Requirements for Authority Data. Besides FRBR and FRAD, IFLA has also produced a draft statement of international cataloguing principles to update the 1961 Paris Principles – this new set of principles is being reviewed by cataloguing experts and rule makers worldwide through the IFLA Meetings of Experts on an International Cataloguing Code, known as IME ICC. All of these international developments are taken into account by the Joint Steering Committee for Development of RDA as we are looking towards the future in developing RDA.

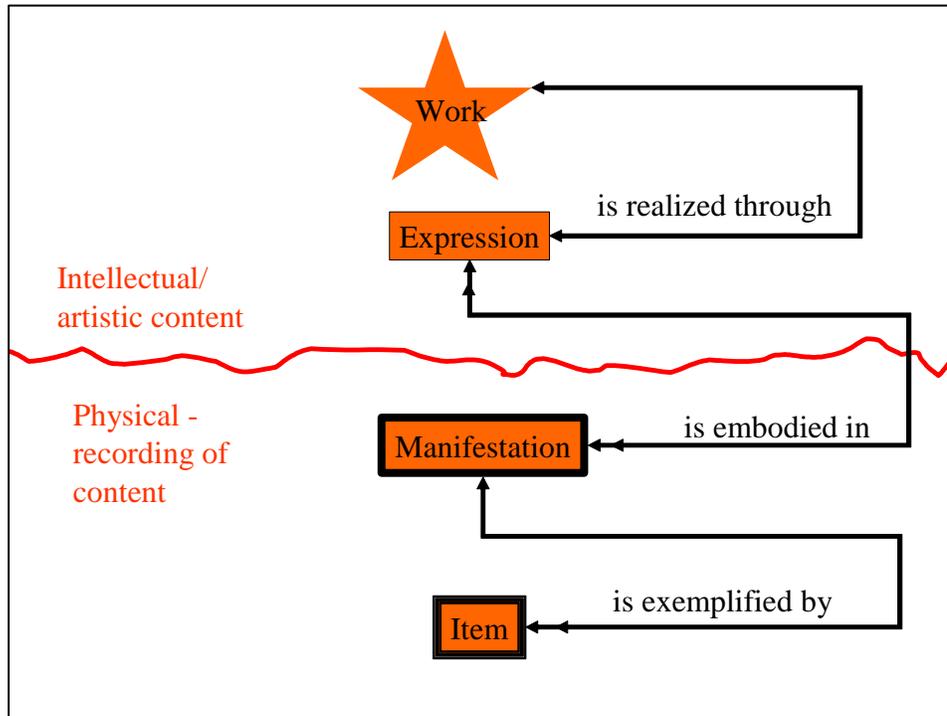
Before I get into talking more about RDA, let me take a moment to go back to FRBR to provide at least a little more explanation of what it is and how it affects RDA. FRBR was the result of several years of work by the IFLA Study Group on Functional Requirements for Bibliographic Records – I was a consultant to that group along with Tom Delsey and Elaine Svenonius. Our report was published in 1998 and introduced some new vocabulary.

Vocabulary is really very important in times of change and across communities that might use RDA – including system designers. For FRBR, terminology was carefully selected to be more clear than our current English language. Let me give you an analogy from Patrick LeBoeuf (formerly chair of the FRBR Review Group for IFLA) – using the English word for “book.”

- When we say ‘book,’ what we have in mind may be a distinct, physical object that consists of paper and a binding and can sometimes serve to prop open a door or hold up a table leg – FRBR calls this an ‘item.’
- When we say ‘book’ we also may mean “publication” as when we go to a bookstore to ask for a book identified by an ISBN – the particular copy does not usually matter to us, provided it belongs to the general class of copies we require and no pages are missing- any of the copies with the same content and in the same format will do – FRBR calls this ‘manifestation.’
- When we say ‘book’ we could use the word as in “who translated that book?” – we may have a specific text in mind in a specific language or a translation – FRBR calls this ‘expression.’
- When we say ‘book’ as in “who wrote that book?” - we could also mean a higher level of abstraction, the conceptual (intellectual or artistic) content that underlies all of the linguistic versions, the basic story being told in the book, the ideas in a person’s head for a book – FRBR calls this ‘work.’

We want our language to be more precise to help with future system design and future cataloging rules.

Figure 1. FRBR Group 1 Entities: Work, Expression, Manifestation, and Item



As shown in Figure 1, in the FRBR entity-relationships model, we have works and expressions – abstract entities of intellectual and artistic content. They are useful to identify in our bibliographic records, because we can use them to collocate or cluster together the things we collect and organize in libraries or display in our catalogs. When we **record** the intellectual or artistic content, we move from the abstract “work/expression” to a physical entity. As FRBR puts it, a *manifestation* is the physical embodiment of an expression of a work. In order to record something you have to put it **on** or **in** some container or carrier. So, manifestations appear in various “carriers,” such as books, periodicals, maps, sound recordings, films, CD-ROMs, DVDs, multimedia games, Web pages, etc. A manifestation represents all the physical objects that bear the same characteristics of intellectual content and physical form. In actuality, a manifestation is itself an abstract entity, but describes and represents physical entities, that is, all the items that have the same content and carrier. When we create a bibliographic record, it typically represents a manifestation – that is, it can serve to represent any copy of that manifestation held in any library anywhere.

One example or exemplar of a manifestation is called an *item*. Usually it is a single object, but sometimes it consists of more than one physical object, e.g., a monograph issued in 2 separately bound volumes or a sound recording on 3 separate CD’s. With an item entity, we are able to identify an individual copy of a manifestation and to describe

its unique attributes - this may be information relevant to its circulation or preservation. *Work, Expression, Manifestation, and Item* are known as FRBR's Group 1 entities.

Let's now move on to relationships for the Group 1 entities. Relationships are naturally a big part of the FRBR entity-relationship model.

There are also several types of relationships that we can consider.

Within FRBR there are relationships that are inherent among the entities: A work "is realized by" by an expression – that's a relationship, and an expression "is embodied in" a manifestation – that's a relationship. A manifestation "is exemplified by" an item – that's a relationship.

But how do we know about these relationships? We rely on information that we pick up from examining an item. Sometimes that item will self-describe which work it contains. A characteristic of a work (like its subject or what it is about or its name or the name of its creator) is carried to all the entities below it in the hierarchy. This is important because we could associate certain descriptors at the work level that then could apply to all records for the associated manifestations... more about this when we look at scenarios.

So, there are inherent relationships among the entities, like saying "a work is realized through an expression or "an expression is embodied in a manifestation".

Another way to look at this is through the **content relationships** among works, that are then inherited by their expressions, manifestations, and items. Many years ago I suggested a taxonomy of relationships: equivalence, derivative, descriptive, whole/part, and part-to-part (sequential and accompanying), and shared characteristics relationships. These content relationships and the inherent relationships will be covered in RDA. Some of these relationships are described in FRBR, such as equivalent, derivative, and descriptive relationships of the content. There are also whole-part relationships with aggregates and their components mentioned in FRBR.

Any of these content relationships that are identified at the work level are also inherited by the hierarchically related expressions, manifestations, and items.

Figure 2 is from my latest update of the taxonomy of bibliographic relationships that was published by Kluwer<sup>1</sup> in 2001 (and in the "What is FRBR?" brochure). It shows a continuum of the relationships within a family of works as represented in manifestations moving from left to right. On the left are those that are equivalent, that are from the same expression of the work. Once we introduce a change to the content, like a translation, we have a new expression of the same work and further changes move us to the right, farther away from the original.

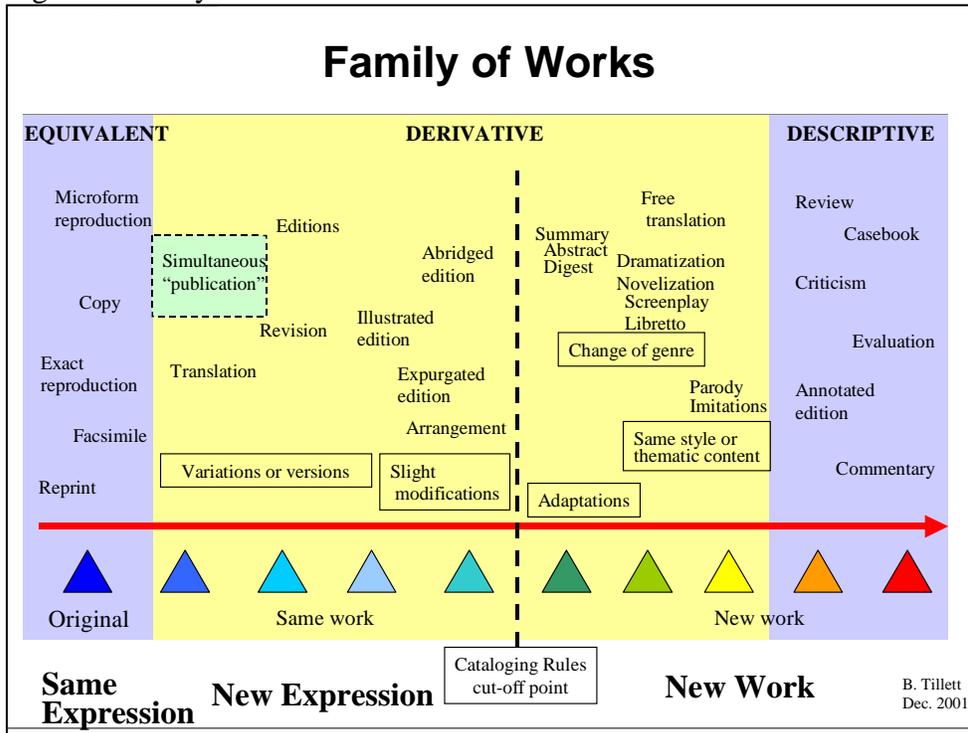
Once that derivation crosses the magic line of becoming more of the work of another person or corporate body, we consider it a new work, but it is part of the family of related works, even when the work moves on to be only describing a work in the family at the

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<sup>1</sup> In: *Relationships in the Organization of Knowledge*. – Carol Bean and Rebecca Green, eds. – Kluwer, 2001 (ISBN: 07923-68134)

right end of this continuum. The entities in descriptive relationships at the right side of this picture can even be considered to be in subject relationships in FRBR terminology and the conceptual model. The ability to inform the user of these related works ties back to the collocating and finding functions of a catalog again. The FRBR model reminds us of these important relationships that we should reflect in our catalogs for our users.

Figure 2 Family of Works



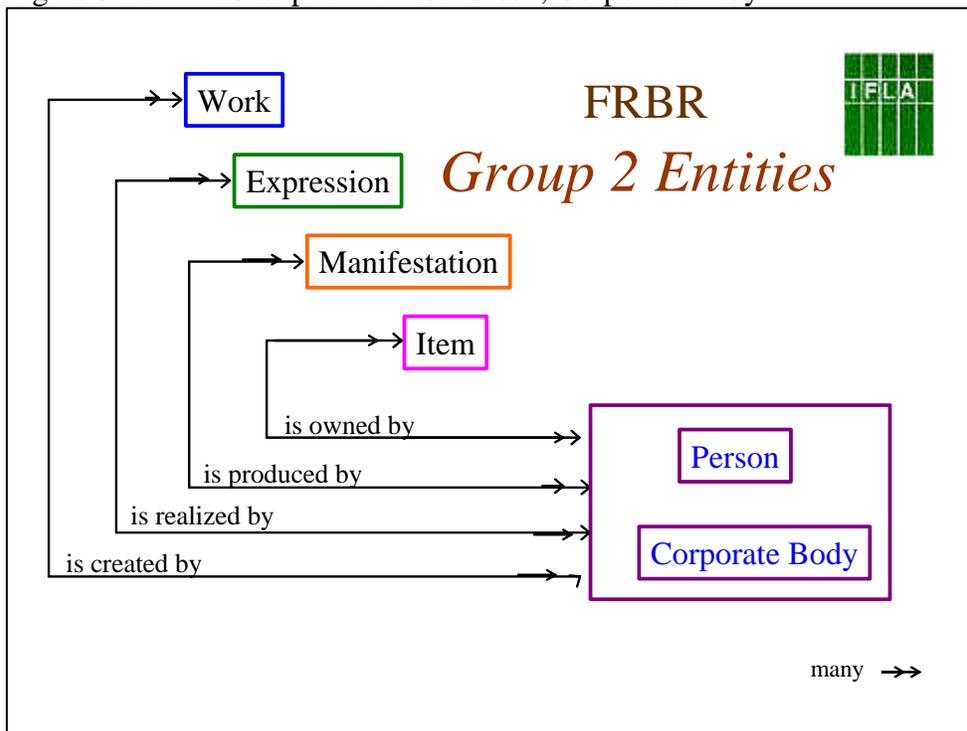
Moving on, the attributes in FRBR (or “metadata” or data elements), there are some essential attributes or elements that we associate with each of the primary entities. The elements are used to build a bibliographic description and its access points. For a *work*, the main elements are a title, date, possibly its identifier (if it has one, e.g., for rights management). What’s missing?

You notice we don’t have “author” (or creator) as an attribute for *work* or *expression*, because that information is treated in this model as a relationship between the *work* or *expression* and a *person* or *corporate body*. In naming a *work*, it’s essential to declare that relationship to the name of the creator of the *work*, but by keeping it a separate entity we are better able to control the display of the names.

Yet for a *manifestation*, we have the statement of responsibility as found on the *item* being cataloged - that is information unique to the *manifestation* and is description. For our purposes the activity of **recording** an *expression*, turns an entity into something of interest to a library - something we would add to library collections and catalog - for which we would provide bibliographic control – namely a *manifestation*. In the digital world often we find the basic bibliographic description is an integral part of a digital

object - the software that helps create the digital object or digitizes an analog object, can automatically provide a basic set of metadata, that is attributes or data elements. Think of how the software for word processing, like Microsoft's Word, suggests a name for your document based on the first words you type - ironically the "titles" for early manuscripts were the first line of text. Software now also automatically provides the date you created it. There is already a camera that has built in the MPEG-7 standards for creating basic metadata for the digital images it captures. So we can envision the automatic creation of some of the attributes we'd need for bibliographic control for description and access. The draft of RDA builds on this to emphasize transcribing what you see for the basic elements of bibliographic description following the principle of accurate representation.

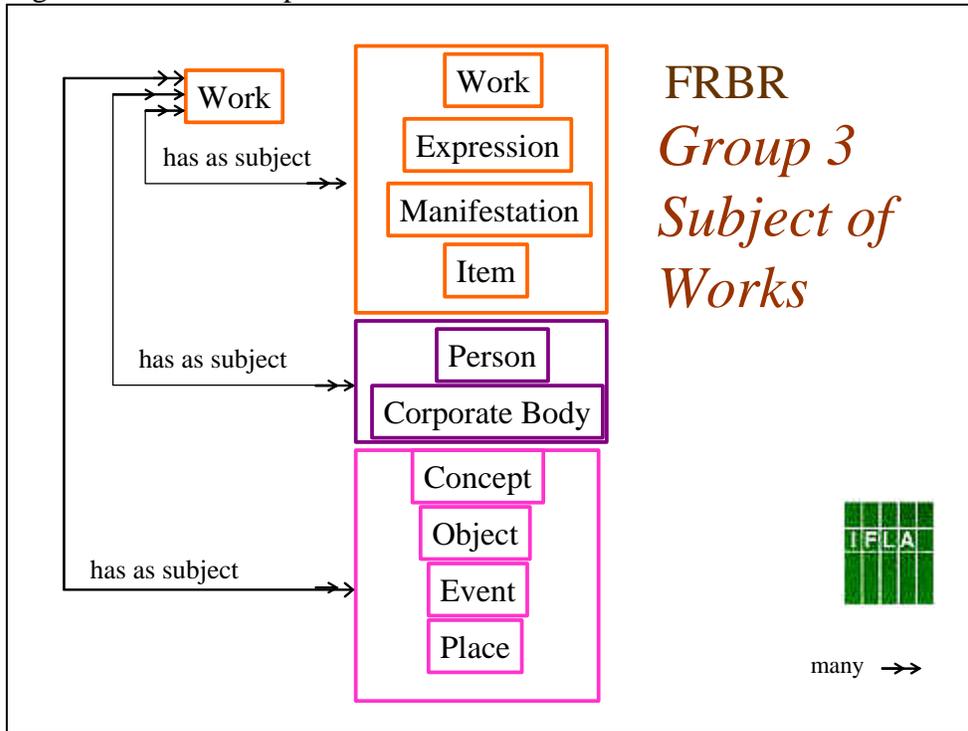
Figure 3. FRBR Group 2 Entities: Person, Corporate Body



Let me now move on to some relationships for what FRBR calls the Group 2 entities: *person* and *corporate body*. You see the relationships with the Group 1 entities in Figure 3: a *work* is created by a *person* or *corporate body*; an *expression* is realized by a *person* or *corporate body* - this could be a performance or an editorial compilation or a translation and so on. A *manifestation* is produced by a *person* or *corporate body*, and an *item* is owned by a *person* or *corporate body*. These are entities that are of interest in authority work - as well as the Group 3 entities we will soon see. The names of these entities are controlled when they are used as access points in bibliographic records.

Figure 4 shows Group 3 entities in FRBR, which introduce all the entities that can be the subject of works: *concept*, *object*, *event*, *place*, and all of the Group 1 and Group 2 entities because, for example, you can have a *work* about another *work*.

Figure 4. FRBR Group 3 Entities



### FRBR Applications

So we have all these entities and relationships and attributes in the conceptual model – how might we apply this model? There are many ways we could apply FRBR and some system designers are exploring several implementation scenarios.

Let's look at scenario A (Figure 5). It is basically how we catalog now, and you will see the FRBR entities and relationships as we walk through this scenario. Our current MARC format has authority records, bibliographic records, and holdings records. We start with an *item* we have at hand. In some of our systems, the attributes of an *item* are documented in a holdings record. From the *item* we have at hand, we construct a bibliographic record building the set of data elements that are intended to describe the *manifestation*, that is any copy held anywhere, so the record can be re-used by others in a shared cataloging environment.

We also make authority records to control the way we identify *works* and *expressions* that are embodied in the *manifestation* we are describing, and that in turn may be linked to a name authority record for the *person* or *corporate body* that is responsible for creating the *work* or *expression* or to subject headings or concepts. In some integrated library systems this link between the bib and authority records is real, which also makes database maintenance and global update changes easier than when these links are not present.

Figure 5. Scenario A - Current cataloging

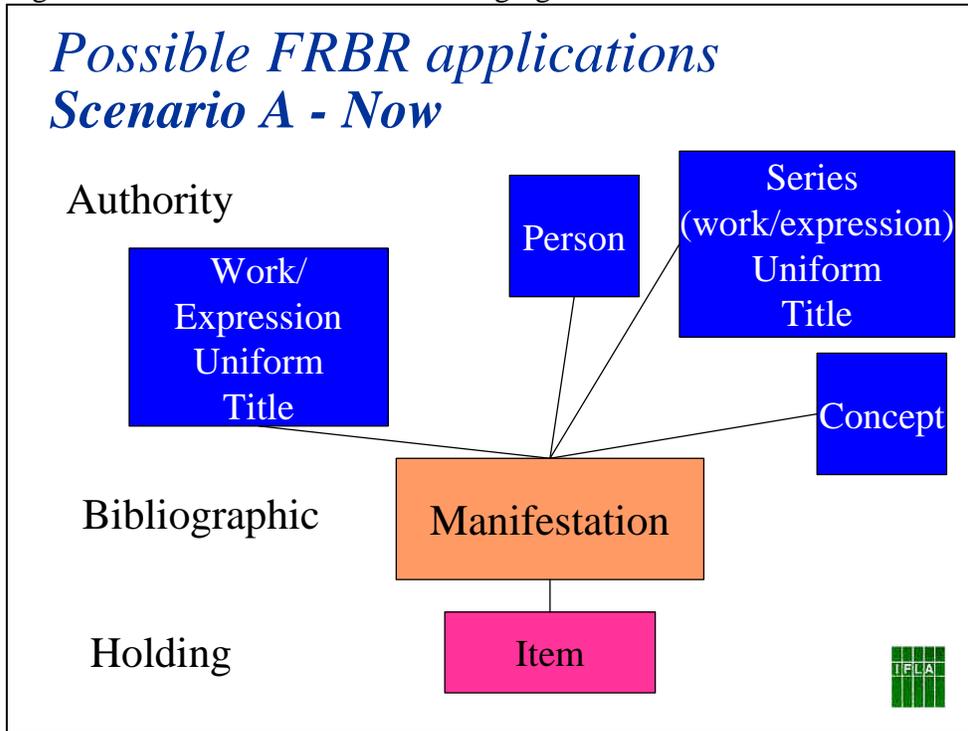
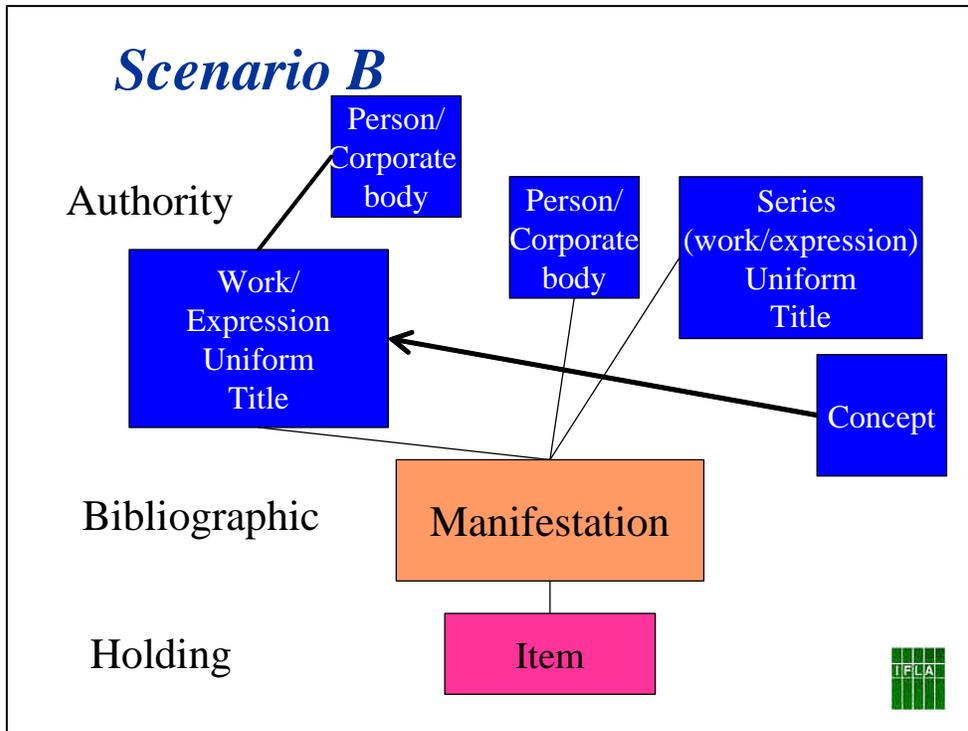


Figure 6 shows a scenario B for the future, where we would make use of authority records for *works* and *expressions* and do more linking directly at the authority record level for the creators of *works* and classification and subject headings that are appropriate to the *work*. Those authority records would also be available to display for each linked bibliographic record, and we could save cataloger's time by not needing to classify and provide subject headings for all the *manifestations* of that same *work/expression* combination. Using FRBR helps us see these possibilities and hopefully will aid system designers in developing future systems.

I really like this model, but we need to experiment to see if this is best or perhaps there is a better implementation model for FRBR.

Figure 6. Scenario B – Future



### FRBR Benefits

VTLS was the first vendor of integrated library management systems to embrace FRBR and to test their vision of how to implement FRBR. In their presentations they explain their views of the benefits of applying FRBR to their system. They find that with FRBR, the principle of collocation is expressed in a much better way because you have a better and more easily understood organization to the catalog. It's more intuitive to group the translations and editions and performances (*expressions*) and the various *manifestations* of those expressions under the *work* that is contained in those *manifestations*.

Cataloging is easier with FRBR, because the system can take advantage of the FRBR structure to automate the inheritance of identifying information – metadata from the highest levels (*works* and *expressions*) of linked descriptions. FRBR *work* and *expression* records need only to be cataloged once. Right now, under traditional cataloging, catalogers have to repeat the *work* and *expression* elements every time they catalog a new edition of a *work*. Remember the scenario I showed you earlier of using the authority records for *work* and *expression* records with linked subject information....

In the area of circulation, the VTLS system uses FRBR to make it easier to find all of the *manifestations*. A user can place holds and requests at the *work* or *expression* level when they do not really care which edition of a particular title they get; they may just want any copy of the *work*.

With a traditional system when you had multiple editions of a particular title (*work*) you had to place individual requests on each edition (*manifestation*). With a FRBR system,

you only have to place a request at the *work* or *expression* level, and ANY item of ANY *manifestation* will satisfy the request. So, system design can take advantage of this FRBR model to improve user service.

Figure 7 shows an example of how FRBR can work for a serial in the VTLS system. A serial is a *work of works* within *works* – going from individual articles within an issue or special volume to the entire serial title and its history over time. This is where Virtua uses records for “superworks” as collocating devices to show the user the history of this serial and to offer paths for whatever time period or format the user needs.

The entire family of *works* can be brought together to help users find the specific articles they want in the specific format or carrier they want – paper, online, or whatever.

Figure 7. VTLS display of Serial “Superwork”

The screenshot shows a web interface titled "Serial Example". Below the title, it states: "Each of the five basic titles in the 'family' of Atlantic Monthly is a 'sub-work' under the Super Work." The main content area displays a "View Bibliographic Record - Demo 95" window. This window has a navigation bar with "<" and ">" arrows and "4 / 8". Below the navigation bar is a tree view with a root node "[Atlantic Monthly super work]" and five child nodes, each with a plus sign and a lightbulb icon: "Atlantic monthly (Boston, Mass. : 1993)", "Atlantic (Boston, Mass. : 1981)", "Atlantic monthly (Boston, Mass. : 1971)", "Atlantic (Boston, Mass. : 1932)", and "Atlantic monthly (Boston, Mass. : 1857)". Below the tree view, there are tabs for "Full" and "MARC". The "Full" tab is selected, showing a "Uniform Title:" field with the value "[Atlantic Monthly super work]" and a "Notes:" field with the text "A virtual record for the 'family' of works for Atlantic Monthly". The VTLS logo is visible in the bottom left corner of the interface.

For example, the user may want the paper/print version for an issue of Atlantic Monthly in the late 1990's – they can also see a microform version is available. And they can view the full *manifestation* record (Figure 8).

Figure 8. VTLS Display of Serial with *Manifestation* Listings

This the Manifestation level record which has information like the title page, imprint, LCCN, and ISSN.

**View Bibliographic Record - Demo 95**

4 / 8

- [Atlantic Monthly super work]
  - Atlantic monthly (Boston, Mass. : 1993)
    - Language material - English
      - The Atlantic monthly. - Atlantic Monthly Co., c1993-
      - The Atlantic monthly - [microform]. - Atlantic Monthly Co., c1993-
  - Atlantic (Boston, Mass. : 1981)
  - Atlantic monthly (Boston, Mass. : 1971)
  - Atlantic (Boston, Mass. : 1932)
  - Atlantic monthly (Boston, Mass. : 1857)

Full | MARC

Title: The Atlantic monthly.  
 Other Title: Some issues have cover title: Atlantic  
 Imprint: Boston, MA : Atlantic Monthly Co., c1993-  
 Description: v. : ill. ; 28 cm.  
 Notes: Title from masthead.  
 Notes: Latest issue consulted: Vol. 293, no. 1 (Jan./Feb. 2004).  
 ISSN: 1072-7825  
 LCCN: 93-642583

Figure 9. Sample screen from OCLC's "Curiouser"

Microsoft Internet Explorer provided by OCLC, Inc.

http://levan-r:8080/Curiouser/index.jsp?language="English"&oclcNum=50028252

**WORK**

**The lion, the witch and the wardrobe; a story for children.**  
 Four English school children find their way through the back of a wardrobe into the magic land of Narnia and assist Aslan, the golden lion, to triumph over the White Witch, who has cursed the land with eternal winter.

Manifestations (99) Annotations (0) Comments (0) Reviews (0)

Find by Publisher	Find by Language	Find by Date	Find by Type
<a href="#">Macmillan (3307)</a> <a href="#">HarperCollins (2917)</a> <a href="#">Collier (1613)</a> <a href="#">HarperTrophy (896)</a> <a href="#">Scholastic (400)</a> <a href="#">more</a>	<a href="#">English (10667)</a>	<a href="#">1950 (4757)</a> <a href="#">2000 (1470)</a> <a href="#">1994 (1381)</a> <a href="#">1978 (978)</a> <a href="#">1970 (640)</a> <a href="#">more</a>	<a href="#">Text (9395)</a> <a href="#">Sound (1216)</a> <a href="#">braille (54)</a> <a href="#">kit (1)</a> <a href="#">Image (1)</a>

**MANIFESTATION**

There are 10,667 copies of 99 editions for The lion, the witch and the wardrobe; a story for children.

- The lion, the witch and the wardrobe; a story for children.**  
 Lewis, C. S. Illustrated by Pauline Baynes.  
 Date: 1950.  
 Type: text  
 Held by: 1889
- The lion, the witch, and the wardrobe /**  
 Lewis, C. S. C. S. Lewis ; illustrated by Pauline Baynes.  
 Date: 1994.  
 Type: text  
 Held by: 1139

**Subjects**

- Children
- Compact discs
- Critical thinking
- Fairy tales
- Fantasy
- Fantasy drama, English
- Fantasy fiction
- Fantasy fiction, English
- Good and evil
- Hawaiian language
- Imaginary places
- Imaginary places in literature

[http://levan-r:8080/Curiouser/index.jsp?language="English"&oclcNum=50028252](http://levan-r:8080/Curiouser/index.jsp?language=)

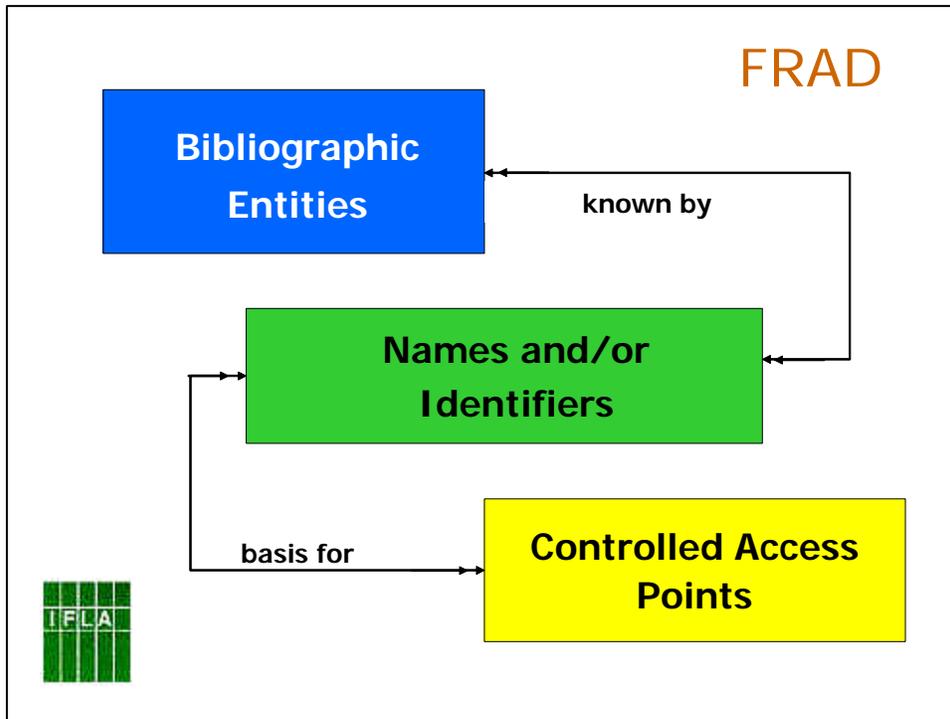
Figure 9 shows Curiouser from OCLC – they also have been experimenting with FRBR for some time now and you will see it reflected in WorldCat and in some of their other products like xISBN and Fiction Finder. Here in Curiouser you see a display for the work, “The Lion, the Witch, and the Wardrobe;” and its *manifestations* are identified. The user of this tool can select among the *expressions* – at the right are the language groupings for English ‘*expressions*’ (in the FRBR terminology) and the ability to group together the *expressions* by their type of content – text, sound, image, etc. And then at the bottom you are shown the specific *manifestation* information. It’s these groupings to cluster information about entities and their attributes that is proving such a useful application of FRBR in today’s systems.

### FRAD

There is another conceptual model from IFLA, in addition to FRBR, that extends the FRBR model into the realm of authority control. This new model is FRAD – Functional Requirements for Authority Data. The report on this model was sent out for worldwide review in April and comments were due July 15 to Glenn Patton, who is the chair of the IFLA Working Group that developed this model. In August the Working Group reviewed those comments and hopes to finish work soon. There is more information about this on IFLANET.

The fundamental basis for the FRAD conceptual model of authority data is very simple (see Figure 10). Entities in the bibliographic universe (such as those identified in the *Functional Requirements for Bibliographic Records*) are known by names and/or identifiers. In the cataloguing process (whether it happens in libraries, museums or archives), those names and identifiers are used as the basis for constructing controlled access points.

Figure 10. FRAD model

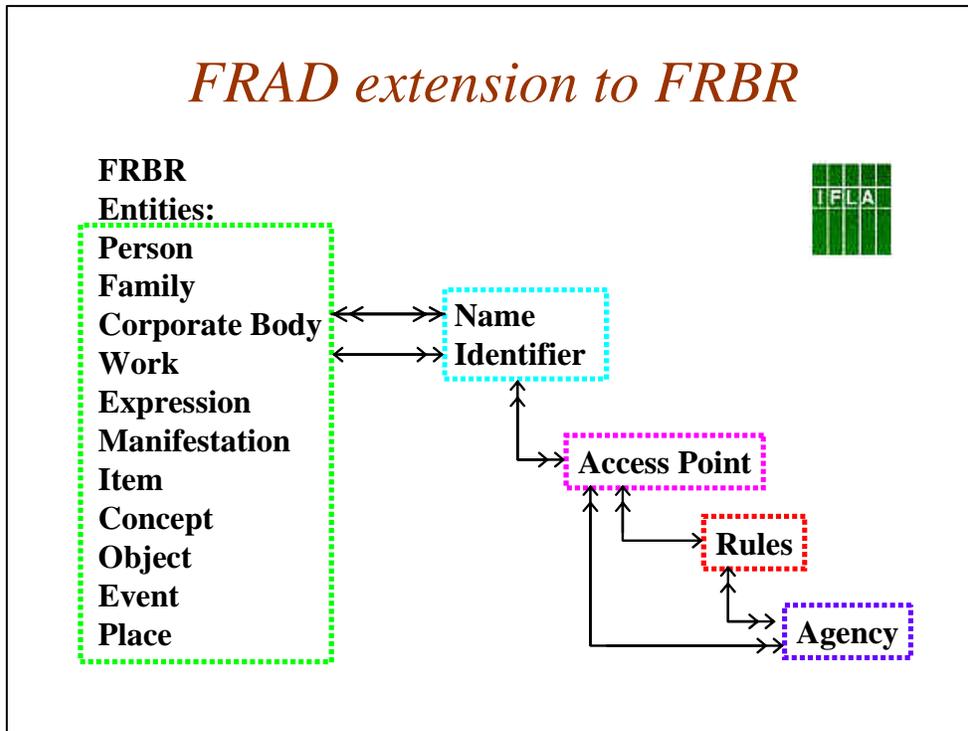


This model is an underlying model for the part of RDA on access point control.

In Figure 11, I'm not showing the specific relationships or any of the attributes from this model, but this picture is meant to give you an idea of the direction FRAD is taking. The arrows represent the relationships. For example, an FRBR entity at the left is "known by" a name and is "assigned" an identifier. An access point is "based on" a name or identifier. Access points are "governed by" rules that are in turn "applied by" an agency, and the access points are also "created by" or "modified by" an agency.

IFLA is currently working on yet another model for the FRBR group 3 entities that are the subjects of works – namely FRSAR – Functional Requirements for Subject Authority Records. The FRSAR Working Group started in 2005 and is being led by Marcia Zeng of Kent State University and Maja Žumer from the National Library of Slovenia. This Working Group also met in Durban, South Africa in August and they hope to have their report in 2008 or 2009.

Figure 11. FRAD relationships



### Cataloging Principles

Another IFLA activity besides the conceptual models of FRBR and FRAD and FRSAR, is the establishment of cataloging principles. In 1961, IFLA held a meeting of cataloguing experts in Paris that resulted in the famous “Paris Principles,” as we know them today. These principles formed the foundation of nearly all of the major cataloguing codes now used worldwide. This was an incredible step towards global harmonization of cataloguing practices, which still remains a worthy goal.

The goal of the current series of IFLA regional meetings that we call IME ICC (IFLA Meetings of Experts on an International Cataloguing Code), is to increase the ability to share cataloguing information worldwide by promoting standards for the content of bibliographic and authority records used in library catalogues. The objectives are to develop an internationally agreed statement of cataloguing principles and also to see if we can get closer together in cataloguing practices and to make recommendations for a possible future International Cataloguing Code.

The 5 meetings of IME ICC to date are shown in Figure 12. The report from the second meeting held here in Buenos Aires and hosted by the Universidad de San Andrés is available in English and Spanish. I recommend going to these Websites for more information.

Figure 12. IME ICC Websites

*IME ICC Regional Meetings* 

- IME ICC1 – Europe/Anglo-American (2003)  
  
[http://www.d-nb.de/standardisierung/afs/imeicc\\_index.htm](http://www.d-nb.de/standardisierung/afs/imeicc_index.htm)
- IME ICC2 – Latin America-Caribbean (2004)  
  
<http://www.loc.gov/imeicc2>
- IME ICC3 – Middle East (2005)  
  
<http://www.loc.gov/loc/ifla/imeicc/>
- IME ICC4 – Asia (2006)  
  
<http://www.nl.go.kr/icc/icc/main.php>

 *IME ICC5*

- **2007 August 14-15 subSaharan Africa**
  - Hosted by the National Library of South Africa, Pretoria, South Africa

<http://www.imeicc5.com> 

The fifth IME ICC meeting was held in August for the sub-Saharan African countries. That meeting was hosted by the National Library of South Africa in Pretoria. The Web

site is in English, French, and Portuguese. The report from this meeting will be published by IFLA and appear next year – again with text in English, French, and Portuguese.

The participants from all of the meetings have found this to be a very exciting process, and we hope it will provide guidance to simplify cataloging practices and improve the user's experience in finding information they need. A side benefit of these regional meetings worldwide has been the opportunity to get to know each other – to get to know the cataloguing experts in the region and also worldwide as part of this process.

So, now, all of these international efforts are influencing the work on RDA – which is to be a new cataloging standard. RDA is NOT an IFLA activity but is firmly based on IFLA principles, standards, and conceptual models.

### Why a New Standard?

Why do we even need a new cataloging standard? Briefly stated, we now have an opportunity to simplify our cataloging code and to establish it as a content standard for resource description for various metadata schema, and to encourage its use worldwide.

We need a new code that will be more consistent across the various types of content and media, and that demonstrates the commonalities of different types of resources. We want to address current problems with rules in AACR2, such as with GMDs (general material designators) and for cataloging digital materials, and we want to change the approach to cataloging, to get back to more principle-based rules that build cataloger's judgment and are simple to use. We also want a new standard that will encourage the application of the FRBR data model (Functional Requirements for Bibliographic records) and now also FRAD (Functional Requirements for Authority Data).

But you might ask why can't we just keep revising AACR2 to achieve these goals? As you may know, AACR2 has been under constant revision since it was first published in 1978. The revisions to AACR2 in 1988, 1998, and 2002 (and updates through 2005) all basically followed the same structure as AACR2 with revised rules to reflect the incremental changes over time, such as updated rules for electronic resources and integrating resources. Unfortunately, there are a lot of problems with AACR2 that simply make it too inflexible for it to be useful as the basis for a new cataloging code. It's too print-biased; the Structure is based on class of materials, which doesn't work for digital materials; and it perpetuates outdated terminology from the days of card catalogs (referring to main entries, added entries, headings, and so on).

### RDA Background

In 1997, the Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules held the **International Conference on the Principles & Future Development of AACR** in Toronto. Experts from around the world were invited to share in developing an action plan for the future of AACR. At that time we thought we would be developing AACR3. Some of the recommendations from that meeting have guided the thinking about new directions, such as the desire to document the basic principles that underlie the rules and explorations into content versus carrier and the logical structure of AACR; and

some have already been implemented, like the new views of seriality – with continuing resources and harmonization of those cataloging standards among the ISBD, ISSN, and AACR communities. Other recommendations from that meeting are still dreams, like further internationalization of the rules for their expanded use worldwide as a content standard for bibliographic and authority records. But we now want to make those dreams a reality in RDA.

The original work after the 1997 conference was a draft revision of AACR2 called AACR3. However, by April 2005, the plan had changed. The reactions to the initial draft of AACR3 particularly raised concerns about coverage of digital resources. So, a new structure and plan were developed and the name was changed to *Resource Description and Access* to emphasize the two important tasks of description and access. Importantly from the world perspective, we removed the Anglo-American emphasis so we could take a more international view.

Beyond acknowledging that there are problems with the old rules, we also need to keep in mind that we now have a totally new cataloging environment in which we need to work. We need to catalog a much wider range of information carriers that we used to, and we also need to deal with a much wider depth and complexity of content in the resources that we catalog.

Metadata is now created by a wider range of personnel: not only by skilled professional catalogers, but by support staff, non-library staff, and also publishers - who have a wider range of skill levels. Some of us are using structures other than the MARC format for our records – like using Dublin Core for some digital resources.

And we now have access to descriptive data for resources in digital form – even when the resource is in standard book format, the descriptive data from the publisher is now available from many publishers using ONIX – that is information we can capture for our bibliographic records.

A paper by the RDA editor on potential implementations of RDA is posted on the public JSC Web site. It illustrated three different database structures. The goal identified there is a relational/object-oriented structure although many libraries are still “stuck” in one of the other less-flexible structures with today’s integrated library systems and online OPACS (online public access catalogs). RDA is being developed to allow implementation in any of these structures. VTLS’s Virtua system is very similar to the relational-object-oriented structure described in the JSC editor’s paper.

So how will RDA fit into this new cataloging environment? The Joint Steering Committee stated its goals for RDA as follows: We envision RDA as a new standard for resource description and access, designed for the digital environment. By digital environment we mean three things: RDA will be

- a Web-based tool – but we expect a paper version also will be available
- a tool that addresses cataloging digital and all other types of resources

- and a tool that results in records that are intended for use in the digital environment – through the Internet, Web-OPACs, etc.

RDA will be “a multinational content standard for providing bibliographic description and access for a variety of media and formats collected by libraries today” – quote from the Strategic Plan. RDA is being designed to be used in all language communities. We are expecting that many countries will translate it and adjust its instructions to follow preferred language and script conventions – just as there are now many translations of AACR2. Instructions are being worded to allow for use of other languages and scripts, other calendars, other numeric systems, etc. so the rules themselves are more international than AACR2 was. We really want to remove all English and Anglo-American bias to be a truly international code.

The JSC decided to make RDA a content standard – for the content of bibliographic and authority records - rather than a display standard, like the ISBDs. While RDA continues to be based on the ISBD standards, this shift to focus on the data elements to be included in bibliographic and authority records allowed us to be independent of display format – by not requiring ISBD punctuation. So we’re trying to build in compatibility with the ISBD, yet flexibility for use with other display standards at the same time.

Although the basic instructions will not include ISBD conventions of punctuation, there will be an appendix on ISBD display of RDA records to indicate the order of elements and punctuation to be used and RDA-created records can be displayed in an ISBD display, if that is desired. Certainly RDA owes a great deal to the ISBDs and continues to be generally based on the ISBD elements.

RDA is also based on the conceptual models of *FRBR* and *FRAD* – the *Functional Requirements for Bibliographic Records* and the *Functional Requirements for Authority Data*. RDA will support the FRBR user tasks for find, identify, select, and obtain. You will see in a few minutes more about how we’re aligning the structure of RDA with these user tasks AND enable users to find and use resources appropriate to their information needs. Users are the reason we catalog at all!

So all of these are part of our goals and objectives for RDA.

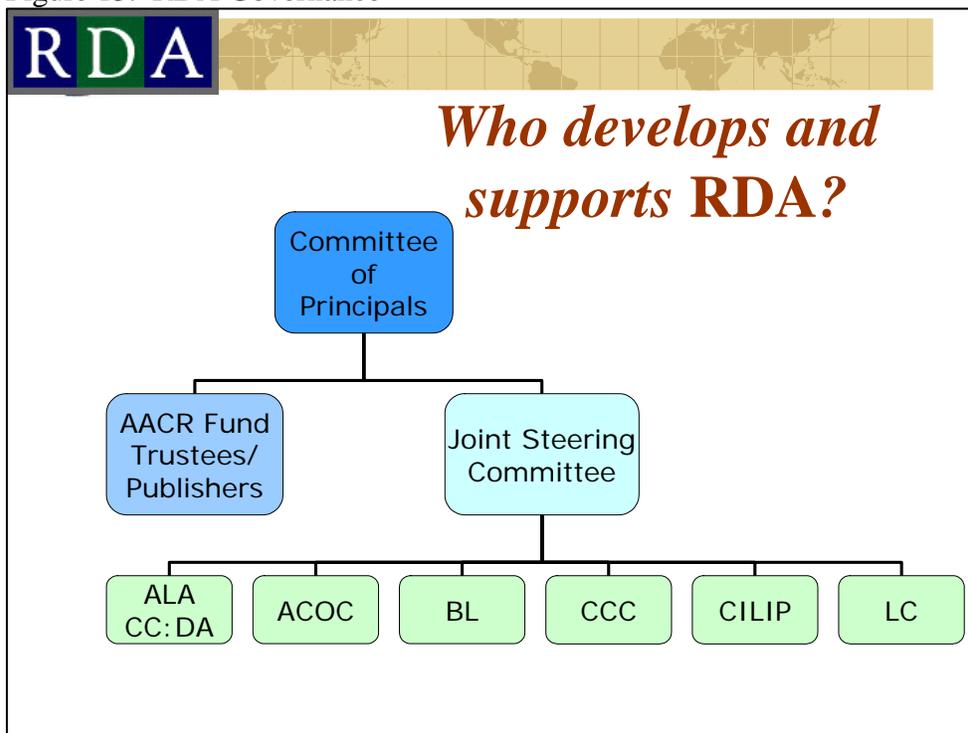
#### The Joint Steering Committee for Development of RDA

I want to briefly show you the ownership and management that oversees the development of AACR and now RDA (see Figure 13). There is a Committee of Principals – who are the directors or their representatives from the American Library Association, the Canadian Library Association, the Chartered Institute of Library and Information Professionals (CILIP) in the United Kingdom, as well as the British Library, the Library of Congress, the Library and Archives Canada, and newly added, the National Library of Australia. The governance for the future is being explored by this Committee of Principles.

There is also the group of co-publishers who manage the AACR Fund (which is the money generated by sales of AACR that supports the maintenance and development of the rules) – the publishers are at ALA, the Canadian Library Association, and CILIP.

Then there is the Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules (now called the JSC for Development of RDA) comprised of representatives from the constituent organizations: the American Library Association’s Association for Library Collections & Technical Services’ Committee on Cataloging: Description and Access (CC:DA), the Australian Committee on Cataloguing (ACOC), the British Library, the Canadian Committee on Cataloguing (whose representative is also from the Library and Archives Canada), CILIP, and the Library of Congress.

Figure 13. RDA Governance



We met in October 2007 in Chicago. Figure 14 shows the Joint Steering Committee for Development of RDA, our Secretary and the RDA editor – missing from the picture of the Project Management Team is our Project Manager, Marjorie Bloss.

Figure 14. Joint Steering Committee for Development of RDA, October 2007

## *JSC and Project Management Team*



Left to right – Tom Delsey, the RDA editor  
Deirdre Kiorgaard – ACOC and the chair of the Joint Steering Committee  
Hugh Taylor – CILIP  
John Attig – ALA  
Barbara Tillett – Library of Congress  
Marg Stewart, CCC (LAC)  
Alan Danskin – BL and  
Nathalie Schulz, the JSC Secretary.

### Creating RDA

Many people from many countries are involved in the process of creating RDA. It isn't the work of just the JSC members.

In Figure 15 you see the various stages of the process here that explains how we are involving others. The JSC receives comments and suggestions from around the world, because many countries outside the Anglo-American community use AACR2. We also find that many other countries that had their own rules are interested in the development of RDA itself and the possible use of RDA as a standard in their countries. Comments are also being made by publishers and archivists among others.

Figure 15. RDA Process



## *Creating RDA*

- Process of creating *RDA*
  - Editor drafts chapters
  - JSC reviews chapters
  - Editor revises chapters
  - JSC constituencies (and others) review chapters
  - JSC considers comments and requests changes to text by the Editor

### RDA Framework

Next, I'd like to give you an overview of the RDA framework and how the content is organized.

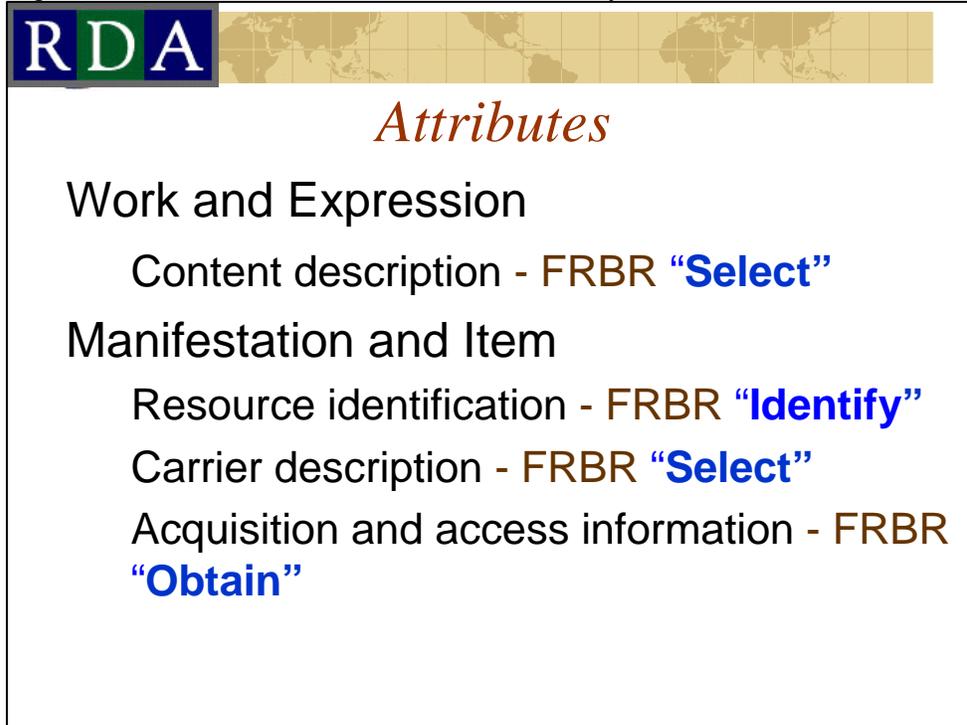
In October 2007, the JSC agreed to a new structure that the Editor proposed to more closely follow FRBR structures – starting with the attributes of each of the FRBR entities and then relationships. There will be a general introduction to provide background for teaching the rules (or as we now call them, the “instructions”) and for building cataloger’s judgment. The rules are based on the IME ICC set of principles and the FRBR conceptual model. We also use the FRBR vocabulary for entities and user tasks throughout.

### Outline for RDA

- General introduction
- Attributes
- Relationships
- Appendices
  - Capitalization, Abbreviations, Initial articles
  - Presentation (ISBD display, etc.)
  - Controlled lists
- Glossary
- Index

Figure 16 shows an example of how the elements align with the FRBR user tasks: “identify,” “select,” and “obtain.” The arrangement and approach in RDA is very different from AACR2. RDA is organized by data elements not by ISBD areas – although it tends to follow a similar order of the elements that ISBD uses. This new structure will provide more flexibility to describe resources, such as many that are digital and have multiple characteristics. It also makes more apparent that all types of materials follow the same basic principles and rules, and indicates when there need to be exceptions.

Figure 16: RDA and FRBR User Tasks: Identify, Select, and Obtain



The last half of RDA will address relationships: There will be chapters on persons, families, and corporate bodies associated with a resource. These are the relationships between the FRBR Group 1 and Group 2 entities: persons, corporate bodies, and families (added from FRAD) that play some role with respect to the resource being described.

There also will be chapters on relationships among resources – the Group 1 entities in FRBR: that is, inherent relationships between the work, expression, manifestation, and item entities, and then content relationships among the Group 1 entities. These relationships address part of the FRBR user task, “Find” - to help users find information they need.

RDA will cover controlling the forms of names of entities – that includes the naming of works and expressions. We now call this activity authority control, and we provide authority control in order to ensure consistency in how we express and display the names of things and to help with precision in searching.

RDA will cover the identification and choice of access points, particularly the identification of the creator of a work, which will be described in the context of naming works and expressions within a resource.

RDA will cover both authorized or “preferred” forms of names and the variant forms that could be used as references or in clusters for alternative display forms. There will be separate chapters for the constructions of names for persons, families, corporate bodies, places, and the FRBR Group 1 entities: Works, expressions, manifestations, and items.

RDA generally will be guided by the new “FRAD” model (Functional Requirements for Authority Data ), but for this first release of RDA, it will retain most of the AACR2 Part 2 rules. RDA headings will generally be compatible with the old AACR2 rules.

RDA will also address the recording of the decisions about the form of the names for these entities in authority records, now not a part of AACR2. However, this will just be noted as one option for how to accomplish authority control and how to link authority data. We have designed RDA with several implementation scenarios in mind, and the RDA instructions will try to accommodate those scenarios.

Throughout RDA, we’re making an attempt to update the card catalog-based terminology that remains in AACR2. The AACR term “heading” of course comes from the text that was typed at the top or “head” of catalog card. We will be replacing this term with “access point.” So, “Main Entry” and “Added Entry” headings will become “access points,” and the term “authority control” becomes “access point control.”

The term Uniform Title is problematic because it actually has three different definitions in AACR2 (a standard way of naming the work, like Hamlet; a collective term, like “Selections”; or a unique title to distinguish among works with the same name, as for serials), so instead of using the term “uniform title,” we’re proposing to use the term, “preferred title,” which can be for either a work, an expression, or a manifestation for when we want to cite the manifestation that contains the work and expression.

We also have some new elements being added to RDA: some to solve problems in AACR2 and some to add elements that are lacking in AACR2. Data elements for Media type, Carrier type, and Content type will be used instead of the GMDs (general material designators) currently in AACR2. One of the complaints about the GMDs now found in AACR2 is that they are not consistent – being a mixture of content and carrier types and the lists are incomplete. We consulted with the publishing community and the group that maintains the ONIX format that is used by publishers for their machine-readable standard. We agreed on a set of terms or a vocabulary to use for these types of carrier and types of content. This is important for future interoperability of the bibliographic descriptions we create in our respective communities.

Other elements are missing in AACR2:

- File characteristics for digital materials
- Video format characteristics

- Custodial information for archival resources
- Braille characteristics
- URLs
- Entity identifiers (person, corporate body, work)
- Language of the person, etc.

RDA will include them.

The JSC is identifying a required minimal number of mandatory data elements needed to identify a resource. All of the RDA instructions for the data elements will include a label indicating if a data element is “Required” or is “Optional.” This arrangement highlights the similarities across all types of resources. For some elements, there are also additional instructions applying to specific categories of resources or content, for example, for serials or music resources.

### Transcription

Besides reviewing vocabulary, RDA also gives us a chance to reassess the importance of transcribing data from a resource. This has always been an important aspect of our cataloging tradition, but we’re finding that with describing digital materials, transcription often is much less important than for other resources. For example, transcription is extremely important for rare books catalogers, but less important for digital libraries where Web data is constantly changing. One of our goals is to make RDA more usable for automated record matching and duplicate detection.

We’re addressing this by simplifying the process of transcription by “taking what you see” on the resource – this eliminates many of the rules that instruct catalogers to alter the data that they are transcribing. For example, in RDA for most elements, the capitalization, abbreviations, introductory words, and inaccuracies will be recorded as they are found on the item, and the corrected data will be provided separately, if needed. This and other simplifications to the transcription rules are designed to facilitate automated data capture and reusing metadata from other sources, such as from publishers – that some of us now capture from ONIX data. So for example, with RDA, the cataloger will have more flexibility to take capitalization and abbreviations as they appear on the resource.

### RDA Drafts – Web Tool

When you read the drafts for RDA, you will see what seems to be a lot of repetition of information, but that is necessary for the Web tool, where a user will be jumping into the instruction, not reading linearly through a print product.

What you won’t be able to see in the Web RDA or in a printout of the drafts is the coding of the instructions in the file behind the scenes. The instructions are being coded by the JSC Editor so that you can create a customized view of RDA if you want. For example, if you are a map cataloger, you could indicate that you want to see only the general instructions and the specific instructions related to cartographic resources.

If you haven't already looked at the Frequently Asked Questions – with answers – on the JSC Web site, I recommend you read them. I'm touching on some of the information in this overview today but you'll find much more information there:

<http://www.collectionscanada.ca/jsc/rda.html> .

### Interoperability

Those of you using MARC 21 will continue to do so – we expect that most *RDA* data elements can be incorporated into the existing MARC 21 structure using current MARC 21 guidelines for coding and order of data elements.

However, there are a few changes that we know about now, such as the new data elements to replace the GMD. There may also be other changes that we haven't identified yet.

If you are using Dublin Core or some other metadata schema in some capacity in your institution, you may want to consider whether there are advantages to using *RDA* for the content of metadata records that might increase the compatibility of DC and MARC records.

The JSC discovered in April 2007 that the Dublin Core community has also embraced FRBR as an underlying model, and we are working towards closer collaborations to enable *RDA* to be more useful to the digital community, especially for information in the Web and the future Semantic Web environment.

### RDA Implementation

One thing everyone will need to keep in mind about *RDA* is that there are options and alternatives to some of the instructions. Your institution, or the cooperative program or regional consortium that you belong to, may want to state its views on which options to prefer – or they may decide to leave it all to cataloger's judgment. Only a few data elements will be required, so, just as now, your institution may want to declare its choices in requiring more.

There will be alternatives for how to record relationships – and your institution may wish to declare the method you prefer for particular types of relationships.

The national libraries in the United States, Canada, the UK, and Australia are already talking about how and when to make these implementation decisions. We expect that other governance entities such as OCLC and the Program for Cooperative Cataloging (PCC) will also need to make decisions about what they want to require for various record levels, and how data should be encoded. And individual libraries may also need to make decisions.

If you remember the transition between AACR and AACR2 with 'desuperimposition' and its split files and closing of card catalogs, you may be wondering whether libraries will have to make major changes like that to our existing records. At this point, while *RDA* is still in development, we can't promise that there will not be a need for ANY changes to existing records. And although we recognize that it is easier now to change the

form of names used as access points than it was in the 1970's, when AACR2 came out, we are making every effort to avoid major changes. Another one of our goals is to have the RDA records be compatible in a file with AACR2 records.

### RDA Timeline

The timeline for getting from today to the first release of RDA is as follows. At our October meeting of the Joint Steering Committee, we reviewed drafts and comments for updating the drafts of several chapters and Appendices. These chapters will now be reworked for the new structure, but basically will contain the same instructions. December 2007, Tom Delsey, the editor, will send out the updated draft of what was Part B on authority control – focusing on the relationships of works and expressions. Then we expect a complete draft of the entire standard next year; with the first release of the Web tool in 2009.

Some people say “why will it take you so long?” Given the need to consult with constituent groups in four countries, plus other rule making bodies worldwide and other communities beyond libraries, this is actually very ambitious.

### Your Involvement

As we are developing RDA, I encourage you all to actively participate in reviewing the drafts of RDA. The drafts are being posted to this URL: <http://www.collectionscanada.ca/jsc/rda.html> . We have also made public the vast majority of JSC documents through the JSC website.

If you want to simply engage in informal discussion of RDA, consider joining our discussion list, RDA-L. There is a link for how to join at the JSC Web site – the same Web address as shown above. I want to point out that comments posted to RDA-L will not automatically be considered by the JSC for inclusion in RDA, although we are monitoring the list and are open to new ideas that we could incorporate either now or with future updates to the rules in the future.

To have your comments formally considered for inclusion in RDA, you should contact the JSC Chair, Deirdre Kiorgaard at [dkiorgaa@nla.gov.au](mailto:dkiorgaa@nla.gov.au).

There is a lot to do and your help really is welcome.

An early prototype of the online RDA is expected in time for the American Library Association Midwinter Conference in January 2008.

We are also hoping a beta version of the Web tool will be available in mid or late 2008 – perhaps for the IFLA conference in Québec City in August 2008 – to give more people a feel for the Web product. And we are still seeking feedback on what you like, don't like, or want to see in this new tool.

### Training for RDA

A quick mention about training for RDA – we are beginning to talk with various groups that generally provide cataloging training (such as ALA/ALCTS and the Library of Congress) about the need to provide training for RDA. But we also are looking at options for people who can't attend conferences and workshops, and so are looking at "train the trainer" models as well. The Committee of Principals stresses that we hope the training will be more "orientation" to the new instructions, and that they will be easy to comprehend, so extensive training will NOT be needed.

It's a bit early to develop a specific orientation plan, because the content of RDA is not yet set. But you will definitely start hearing more about this over the next year. We anticipate that the nature of the RDA product itself will help catalogers to learn to use RDA, because it will lead you through the cataloging process and allow catalogers to customize the product for the type of resources that they are cataloging.

The co-publishers have told us there will be different pricing structures for different types of users. The Library of Congress also will be talking with the RDA co-publishers about incorporating RDA into *Cataloger's Desktop*. As an aside, you may know that *Cataloger's Desktop* now has a user interface in Spanish and many tools that have been translated into Spanish. *Cataloger's Desktop* is a product from the Library of Congress.

The co-publishers of RDA also know that some constituencies will want a printed-text-on-paper product and perhaps other products. There will be several opportunities for potential users of RDA to give the publishers information about what you want or you can write to Deirdre Kiorgaard, the JSC Chair.

Your views count, and we do want to hear from you.

### Conclusion

So, a new standard for knowledge organization is being created, based on internationally agreed principles coming from the IME ICC meetings, and the new standard is based on the well-structured conceptual models of FRBR and FRAD.

RDA is a collaborative effort not only of the RDA editor and the Joint Steering Committee, but also involving consultation with rule makers around the world and interested communities, such as those involved with Dublin Core, IEEE/LOM, and the Semantic Web. We have also been talking with archivists and representatives from the publishing community that developed ONIX.

We hope this international standard will further the goals of IME ICC to increase the ability to share cataloging data worldwide, reducing the costs of cataloging globally, while improving the users' experience. 2009 is not that far away! There is a lot to do and your help in commenting on the drafts and the prototype really is welcome.

Thank you very much for your attention – muchas gracias! And special thanks to the simultaneous interpreters.

