Slide 1

This background/overview presentation examines the things that have influenced the development of RDA.

I'll start with a brief history of cataloging codes, then talk about the development of principles, and basic concepts that form the foundations used in creating RDA: Resource Description and Access.

At the end of your handout is a list of all the initialisms and acronyms I use in this presentation along with links to relevant Web sites.

I have based today's presentation on several of my earlier presentations, so if you who have heard me cover this before, hearing it again from a different perspective may allow you to see different connections.

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RDA is a new cataloging code designed for the digital environment. As with other cataloging codes before it, RDA reflects both the technology of the time and the types of materials that we are organizing, describing, and making available to our users.

The goals for RDA are directly targeted to improve how we catalog and to take better advantage of today's digital environment. Over the past two centuries, we have moved from book catalogs to card catalogs to OPACs. We now are ready for the next generation of systems that use machines to search and display the rich metadata that we provide. Our metadata is our cataloging information. RDA also recognizes that this cataloging data has value beyond an individual library and in fact reaches an international audience.

One of the most significant changes from AACR2 is the move in RDA from AACR2's class of materials concepts to identifying elements needed to describe things. RDA offers more specific controlled vocabularies for some of the elements to prepare us to use machines to manipulate the data more than ever before.

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Spiral Salary NGC 3370, Home to Supernova Seen in 1994

from NASA HubbleSite.org/gallery/album/gallery_collection

We continue to have an expanding universe of information resources to organize and make available to our users. This bibliographic universe is not just books, but rather many galaxies and worlds of content packaged in various information carriers. For example, the content of a visual image can be captured on an information carrier like film, or a YouTube moving image viewable online; another type of content is sound, that can be recorded as notation in printed scores or captured as MP3 files that carry that content to play on an iPod; or we have an ever changing mix of content that we can find on Web pages.

The cataloging rules and systems of the past are very outdated for today's information seeking behaviors. So we are now developing guidelines for describing all of the things in our bibliographic universe in a way that makes our descriptions more usable in the digital environment.

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Today we will focus our attention on the foundations for RDA: Resource Description and Access and how it is preparing us for the future generation of information search and discovery systems. The guidelines now under development are built on a rich tradition of cataloging that includes internationally shared cataloging principles, standards (like the International Standard for Bibliographic Description - ISBD), and more recently conceptual models of FRBR and FRAD – Functional Requirements of Bibliographic Records and Functional Requirements for Authority Data.

RDA arose from a recognition of the increasing need to describe digital materials and to use the Internet as the means of reaching our users. It has involved collaborations with other metadata communities beyond libraries and has benefited from worldwide comments during its developmental stages. I'll touch on each of these influences briefly. Let's start with the Anglo-American cataloging tradition.

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It goes back at least to the 91 rules that were printed in the British Museum's catalogue in 1841 by Antonio Panizzi, then the "Keeper of the Books."

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Printed book catalogs were typical at that time. The British Museum's catalog was what Antonio Panizzi called a "full and accurate" catalog rather than just an inventory list.

It had some features that are important to us today in online displays – it grouped together – or "collocated" - all the works of an author and provided visual clues to the user from variant names to authorized names. We'll come back to this example in a minute.

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On the other side of the ocean, Charles Ammi Cutter completed his study of cataloging practices in the United States and issued his rules in 1876 that gave guidance about the objectives of cataloging (finding and collocating in particular). These objectives still hold today and were reflected in the British Museum's rules. Cutter's rules were the basis for the British and American attempts to collaboratively create a set of rules for card catalogs of their time. Unfortunately, the initial attempt at collaboration didn't work out, and the American Library Association and the Library Association of the United Kingdom ended up issuing separate rules <click> in 1902 and again in 1908. The Library of Congress was very much involved with ALA work on cataloging rules at the time. LC had its own rules and later issued supplementary rules to augment the ALA rules. The British and American Library Associations, along with the Library of Congress continued to work together to develop rules, but by 1941, <click> the American Library Association decided to publish its own updated code. Then in1949 <click> the ALA rules for author and title entries were accompanied by the Library of Congress Rules for descriptive cataloging. Many of the differences about rules were specific rules for case law that reflected past practices. During the 1950's there were cries for more principle-based rules to show the commonalities across all kinds of resources.

*Cutter: 1876 (1st ed.), 1889 (2nd ed.), 1891 (3rd ed.), 1904 (4th ed. Rules for a Dictionary Catalog)

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In the 1950's, Seymour Lubetzky, who was then working at the Library of Congress, was commissioned to study the rules. As part of that study, he developed some basic principles. He took those principles to IFLA – the International Federation of Library Associations and Institutions for their famous conference in 1961 – a meeting of experts.

The resulting "Paris Principles," as we know them today, became the foundation of nearly all of the major cataloguing codes used worldwide. This was an incredible step towards global harmonization of cataloging practices, still a worthy goal.

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After the 1961 Paris Principles, attempts once again were made to create a unified Anglo-American Cataloguing code. However, again there were enough disagreements that two "texts" were published in 1967<click> – one the "British text" and the other a "North American text." One reason behind the need for separate texts was the desire of large libraries in the United States not to change their practices for entry of some corporate names under place. The North American libraries retained their old practices and "superimposed" them on headings made under the new rules; that is, they continued their case law approach and old practices (e.g., AACR retained some exceptional rules - rules 98 and 99 - for names of local churches, educational institutions, libraries, airports, etc. entering under the city where they were located). The North American edition of AACR specifically footnotes that those rules are exceptions that were (I quote) "required primarily by the economic circumstances obtaining in many American research libraries. The cost of adapting very large existing catalogs to the provisions of the general rules for corporate bodies without such exceptions is considered to be insupportable." (end of quote) The British took a more principled approach in their edition of the rules.

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At the end of the 1960's, IFLA held another meeting of experts to develop the International Standard Bibliographic Description. ISBD's descriptive rules for various types of resources are used worldwide and are basic to cataloging codes everywhere. In some countries they are used in place of cataloging rules for building the descriptive portion of cataloging records.

The ISBDs provide basic descriptive elements arranged in a prescribed order with prescribed punctuation.

There is now a consolidated edition of ISBD. The makers of RDA are watching the work of IFLA and sharing information to harmonize ISBD and RDA.

Following agreements on the International Standard for Bibliographic Description, the English-speaking countries again worked together to agree on rules, and by 1978, AACR2 was issued.

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It was a traumatic time of a very big change for libraries following the old "North American text." This was the move of "desuperimposition" when libraries changed from the old rules that entered corporate names under place, to enter them directly under their names when they have distinctive names. "Desuperimposition" finally changed headings to a more principled approach that was closer to the Paris Principles agreement. This was a very expensive prospect for libraries in the United States at the time, but we did it. It was a time of split or closed card catalogs, and it gave a big push to the creation of online catalogs that used the MARC format that was then ten years old. That second edition of AACR, known as AACR2, was the first time that both sides of the Atlantic (the US/Canada and the UK) shared the same rules. However, even then there were differences in some choices regarding options allowed in the rules, such as with application of the General Material Designators.

AACR2 incorporated the ISBDs and came closer to the Paris Principles, making it even closer to other cataloguing codes used throughout the world. <Click>

Then we saw revisions to AACR2 in 1988, 1998, and 2002 – they all basically followed the same structure as AACR2 with revised rules to reflect some of the changes in our cataloging environments, such as a new perspective on electronic resources and expanded coverage of serials and integrating resources. Part 1 on description by class of materials is based on ISBD, and Part 2 is on the choice and form of entry. Over the past 30 years we have adjusted both AACR2 and our systems, moving from card catalogs to online catalogs, but it's now time again for a change.

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During the 1990's IFLA again took the lead in bibliographic control to develop a conceptual model, known as FRBR, Functional Requirements for Bibliographic Records. Published in 1998, FRBR reinforces the basic objectives of catalogs and the importance of relationships. This helps users to fulfill basic tasks with respect to the catalog – enabling people to find, identify, select, and obtain information they want. These are known as the FRBR user tasks.

FRBR also offers us a structure to meet these basic user tasks. It includes an entity-relationship model - a conceptual model of how the bibliographic universe operates – identifying all the things in this universe and how they are related. It allows us to group together the things that share the same intellectual and artistic content. It gives us a new way of looking at our bibliographic universe – it's like putting on a new pair of glasses to see the universe in a new way. It also includes the set of data elements or attributes that are mandatory for a national level bibliographic record. Those elements in FRBR translate directly into RDA as the basic data elements – or core elements – for bibliographic description and access. RDA combines the FRBR conceptual model with cataloging principles to give us the intellectual foundations to build cataloger's judgment and better systems for the future. FRBR is not itself a cataloging code, nor is it a data model to design systems. However, applications of FRBR have demonstrated how users can benefit from a well-structured system designed around FRBR's entities and relationships. It has been recognized worldwide as a very useful model for bibliographic information. IFLA has an extensive Webliography that identifies FRBR implementations (the URL is given at the end of your handout). Some examples are OCLC's WorldCat, AustLit and other research products coming from Australia and several European countries, and the experiments at the company VTLS with their system called Virtua. FRBR has recently been used as the foundation for the Dublin Core Abstract Model. We can expect more experimentation and systems designs that will take advantage of FRBR's grouping of bibliographic data for manifestations under expressions of named works – back to Cutter's collocation that I mentioned earlier.

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Now let's briefly review some basics about FRBR.

An entity-relationship model was chosen for FRBR, as it was a well accepted modeling technique at the time. It's a conceptual model, which means a very high level theoretical model – it's not a data model to be used by a system designer to build an application, but it would guide such a data model. In the FRBR conceptual model, the bibliographic universe consists of several entities that are related to each other and can be described through data elements (or attributes). The entities themselves are sorted into 3 groups.

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Group 1 are the products of intellectual and artistic endeavor that are named or described in bibliographic records: work, expression, manifestation, and item.

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The Group 1 entities work, expression, manifestation, and item are related as shown here –
A work is realized through and expression – that's a relationship.
An expression is embodied in a manifestation – that's a relationship.
A manifestation is exemplified by an item – that's a relationship.

These entities are all present when we hold an item in our hand – the item is one copy of a manifestation that embodies, captures, or records an expression of a work.

In RDA, this set of relationships between the Group 1 entities is referred to as primary relationships that are inherent among these entities. You will notice it isn't just a straight hierarchy, but has one-to-many and many-to-many relationships. This is a feature that is often overlooked. However, let's get back to the vocabulary.

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The vocabulary is really very important. Let me give you an analogy from Patrick LeBoeuf, who was formerly the chair of the IFLA FRBR Review Group.
When we say 'book,' what we have in mind may be a distinct, physical object that consists of paper and a binding and can <click> sometimes serve to prop open a door or hold up a table leg – FRBR calls this <click> an item.

When we say 'book' we also may mean <click> "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 has the content we want in a form we want and no pages are missing – FRBR calls this <click> manifestation.

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*When we say ‘book’ as in <click> “who translated that book?” – we may have a specific text in mind in a specific language or a translation – FRBR calls this <click> expression.

*When we say ‘book’ as in <click> “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 <click> work.

We want our language to be more precise to help future catalogers and future systems designers speak the same language during this time of change.

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Moving on to the attributes in FRBR (or "elements"). ..

Here are some of the essential attributes or elements that we associate with each of the Group 1 entities. For a **work**, the main elements are a title, maybe a date, possibly its identifier (if it has one, e.g., for rights management), etc. What's missing? You notice we don't have "author" as an attribute for work or expression, because such information is treated in this model as a *relationship* between the work or expression and a person or corporate body.

Yet you see at manifestation, we have the statement of responsibility as found on the item being cataloged - that is information unique to the manifestation and is transcribed 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 - description and access. A manifestation.

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FRBR's Group 2 entities are the entities responsible for
the intellectual or artistic content,
the physical production and dissemination or
the custodianship of such products. These are person and corporate body. IFLA recently added <click> "Family" from the new conceptual model called FRAD – *Functional Requirements for Authority Data*. This was added in particular for the needs of the archival community.

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Let me now move on to relationships for the Group 2 entities: person, family, and corporate body.
You see the relationships with the Group 1 entities in this picture:
work is created by a person, family, or corporate body
expression is realized by a person, family, or corporate body
manifestation is produced by a person, family, or corporate body
item is owned by a person, family, or corporate body.
The names of these Group 2 entities are controlled when they are used as access points in bibliographic records.

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So back to the elements for a work and what we thought was missing – the author or creator of the work. We can now see it is treated as a separate Group 2 entity in FRBR. The decision in conceptual modeling of whether to make something an attribute or a separate entity depends on the future use – in this FRBR case we saw major advantages in declaring persons and corporate bodies (and now families) as separate entities that would be related to other entities. We have traditionally thought of controlling the names for persons and corporate bodies through authority records. Declaring persons and corporate bodies as entities enables much more flexibility in the controlled naming and eliminates redundancies that would occur if we made them attributes. In an application of FRBR, we could make a single authority record for a person or corporate body and link it to other authority records or to bibliographic records or holdings records as needed.

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Group 3 - are the entities that serve as the subjects of intellectual or artistic endeavor. It includes any of the Group 1 or Group 2 entities, plus concept, object, event, and place.

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And here we see the subject relationships between a work and all these other entities – you can have a work about another work or about a person, and so on.

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Remember earlier when describing cataloging rules, I mentioned the British Museum's printed book catalog that collocated works of an author. Let's look at that entry in the book catalog again – this time from an FRBR perspective, wearing our FRBR glasses.

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Notice here we have two works of the person, Christoval Acosta. These are all of his works brought together for the user in this catalog display. The title proper from the original work is used to name the work.

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The first work, the tract on drugs and medicines in the East Indies, appeared in two manifestations – one from 1578 and another from Venice in 1585.

The British Museum entry displayed the place and date and size, which they felt were key elements to identify the manifestations.

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For the first manifestation, we have two copies – one implied by the presence of the first description and the <click> second specifically indicated by the words “Another copy. These are the FRBR items.

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Then we see the second manifestation is actually of a new expression in Italian that was published in 1585 in Venice – also with 2 copies <click>. The little crown indicated it was from the royal collection (of King George III that King George IV gave to the British nation). That is an attribute of that particular copy – item-level information. So we are displaying for the user some attributes of the work, expression, manifestation, and item for these 4 copies held by the British Museum at that time.

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Then the second work is displayed with its manifestation information and the existence of the item is implied.

The point is, we have collocation under the name of a person of the various works in all of their expressions, manifestations, and items, reflecting what we can find at the British Museum.

This information was in their book catalog, which you either had to use at the British Museum, purchase for yourself, or borrow from someone.

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Now let's put on our FRBR glasses to look at our online catalogs.

The Library of Congress uses the Voyager integrated library system. If we take a look at the display for Shakespeare's Hamlet, you will see that our OPAC display includes all of the FRBR Group 1 entities – in a sense it is already "FRBR-ized."
Let's walk through this one to see the Group 1 entities from the FRBR perspective.

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When we browse under Shakespeare in the online catalog, we should group the various works together and let the user select which work they want. Then we should group the various expressions we have of that work – sort of like what we already do with uniform titles.
With AACR2, we provided a uniform title that included the name of the creator of the work, a preferred title for the work.

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We also include expression-level information in the uniform title to indicate that this particular description is for a French translation of Hamlet. The OPAC display also shows us the specific

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manifestation in terms of the body of the bibliographic description and also the individual

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items that we hold in our collections – with location information.

You see, FRBR is not so very different from what we do now. The point of using this FRBR model is to help clarify concepts that have been very muddy in our rules in the past and to clarify things we typically ended up learning through experience. Using the FRBR language in the rules and identifying the specific elements or attributes of each entity should make concepts clearer to the next generation of catalogers.

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For several years now work has been underway to extend the FRBR model into the realm of authority data. The Functional Requirements for Authority Data, known as FRAD has been available in drafts for a couple of years now as it evolves. The Joint Steering Committee has included FRAD's basic concepts in RDA. We expect FRAD to be finalized later this year. Glenn Patton is leading IFLA's working group to complete this task.

The fundamental basis for the conceptual model for authority data is very simple:
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 those names and identifiers are used as the basis for constructing controlled access points.

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Here's a more detailed view of that diagram showing the bibliographic entities – notice these are the FRBR Group 1, Group 2, and Group 3 entities (circle around each) – linked to their names/identifiers.

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And then we see the names/identifiers are related to the controlled access points that are linked to the rules and the agency making the controlled access point.

So we have these two models from IFLA – FRBR and FRAD – that give us a picture of how we might design systems in the future, and we are using them as the concepts behind RDA - the new cataloging code.

We've now seen how RDA builds on a rich history of past cataloging codes, the Paris Principles of 1961, the ISBDs, AACR2, and FRBR and FRAD. Another major influence on RDA is the changing technology.

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The evolution of technologies took a major turn with the creation of the Internet. Catalogs are no longer just stand-alone, end points in isolation, like book catalogs, card catalogs, or stand-alone OPACs of the past. Catalogs and especially bibliographic data can now be integrated into the wider Internet environment. New kinds of links can be made; new displays can be generated for users from data packaged in new ways – all of it on a global scale. We now have the technology to provide global connection anywhere that computers can operate – that includes the digital connections of cell phones with Internet connections.

RDA is being designed to prepare us for the technological capabilities of the Internet, today and into the future.

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Our current cataloging environment continues to evolve to be more and more Web based.
We need to catalog a much wider range of information carriers than we used to. We also need to deal with many more types of content 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 is now available from many publishers using ONIX, which is information we can capture for our bibliographic records.
In the digital world we sometimes 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, automatically provides 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, too! Software now also automatically provides the date you created it. So we can envision the automatic creation of some of the attributes we'd need for bibliographic control that our cataloging systems can capture, saving the cataloger's time. RDA builds on this to emphasize transcribing what you see for the basic elements of bibliographic description – the principle of accurate representation.
A key aspect of this new environment is that it is built on element-based metadata schemas- I'll come back to this in a minute.

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In the late 1990's those of us on the Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules decided to actively try to make changes for the future of the *Anglo-American Cataloguing Rules*. We realized that all these changes in our environment and the development of conceptual models that give us a new way to look at our environment, also gave us new opportunities for improving how we catalog and how we deliver bibliographic information to users.
In 1997, we held the **International Conference on the Principles & Future Development of AACR** in Toronto. We invited experts from around the world to share in developing an action plan for the future of AACR.
Some of the recommendations from that meeting have guided the thinking about new directions, such as the desire to document <click> the basic principles that underlie the rules and <click> explorations into content versus carrier and <click> challenging the logical structure of AACR.
Some recommendations from that conference have already been implemented, like the <click> new views of seriality – with continuing resources and harmonization of serials cataloging standards among the ISBD, ISSN, and AACR communities. Other recommendations from that conference are still dreams, like <click> 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 2002 work began on a draft revision of AACR2 then called AACR3. However, by April 2005, the plan had changed. The reactions to the initial draft of AACR3 particularly raised concerns about the need to move to closer alignment with the FRBR model and to build an element set. 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.

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With the 2002 edition of AACR2, the Joint Steering Committee developed a Strategic Plan for AACR and now for RDA. The text of the Strategic Plan for RDA is on the Web at the address shown here. The plan lays out the goals for RDA.

RDA is intended to be a new code that will be more consistent across all types of content and media, and that demonstrates the commonalities of different types of resources, which in turn should make the rules easier to remember and apply.

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The Joint Steering Committee stated our goals for RDA as follows: We envision RDA as a new standard for resource description and access, designed for the digital world.

In other words RDA will be: a Web-based tool that is optimized for use as an online product, a tool that addresses cataloguing all types of content and media, and a tool that results in records that are intended for use in the digital environment – through the Internet, Web-OPACs, etc. The records created using RDA will be readily adaptable to newly emerging database structures.

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The Goals in the RDA Strategic Plan declare that RDA will provide a consistent, flexible, and extensible framework for both the technical and content description of all types of resources and all types of content; that it will be compatible with internationally established principles, models, and standards.

While RDA is being developed for use in English language communities, it can also be used in other language communities. We are expecting that other countries will translate it and adjust its instructions to follow their preferred language and script conventions just as there are now many translations of AACR2. Options are also being added to allow for use of other languages and scripts, other calendars, other numeric systems, etc., beyond those commonly used in Anglo-American countries.

We also intend that RDA will produce information that is compatible across many communities like publishers, archives, museums, and other information organizations.

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Also in the RDA Strategic Plan we make it explicit that RDA instructions for descriptions and access points will enable users to find, identify, select, and obtain resources appropriate to their information needs. RDA directly relates the elements of descriptions and access points to the FRBR user tasks that they support. The RDA instructions are arranged by the attributes and relationships needed to meet the FRBR user tasks. For the FRBR Group 2 entities (persons, families, and corporate bodies), RDA also includes the user tasks from FRAD to find, identify, contextualize, and justify.

Focusing on user tasks is very important to help a cataloger to decide what data to provide for our users.

And we want to change the approach to cataloging, to get back to more principle-based rules that build cataloger's judgment and are easier to use. But speaking of principles…

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The Paris Principles of 1961 were built to maximize on card catalog technology with main entries and added entries. In 2001 Natalia Kasparova of the Russian State Library and a member of the IFLA Cataloguing Section, reminded us it had been 40 years since the Paris Principles and was time to review them for today's digital environment. IFLA took on the work, and there have been 5 meetings of the IFLA Meetings of Experts on an International Cataloging Code (known as IME ICC). The Web sites for each of the 5 meetings are given at the end of your handout. We hope to finalize the principles this year and will be meeting to discuss comments from the worldwide review during this IFLA conference.

IFLA's new Statement of International Cataloguing Principles covers both bibliographic and authority records and all types of resources. Because the principles are to guide rule makers, the Statement begins with some basic principles behind the cataloging principles to first and foremost think of the user.

We want the future codes and rules to be easy to understand and to provide only as much metadata as is needed to meet user tasks - to provide accurate data and the minimally necessary elements to identify the resources. In addition the cataloger should include data to help the user navigate the pathways to related resources. And if principles seem to contradict each other in a particular situation, the cataloger should take a defensible, practical solution. The idea is to build cataloger's judgment in deciding how to describe or provide access to bibliographic resources.

RDA is being based on these new principles.

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There have been 5 meetings of the IFLA Meetings of Experts on an International Cataloging Code (known as IME ICC). The first was in 2003 for Europe and the Anglo-American rule makers and cataloging experts from Europe, held in Frankfurt, Germany. The second for the countries of Latin America and the Caribbean, was held in Buenos, Aires, Argentina in 2004 conducted in Spanish and English. The third for the Arabic-speaking Middle East was held in Cairo, Egypt, conducted in English and Arabic. The fourth for all the Asian countries was held in Seoul, Korea in 2006 – with simultaneous translation into Chinese, Japanese, Korean, and English. The fifth for the sub-Saharan countries of Africa was held in Pretoria, South Africa, in English, French, and Portuguese. Each of these meetings has a published report (the 5th one is now available from IFLA) and more information is on the Web sites at the URLs shown here.

I recommend going to these Websites for more information.

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To give you an idea of how following these principles means a change from AACR2, let's look at the principle of representation shown on the previous slide. This comes into play for transcribed information. RDA will simplify the process of transcription by usually "taking what you see" on the resource – this eliminates many of the AACR2 rules that instruct catalogers to alter the data that they are transcribing. For example, in RDA, 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. Catalogers will also have more flexibility in RDA to take capitalization as it appears and will take abbreviations as they appear on the resource in most cases. The similarities and differences between RDA and AACR2 will be pointed out during training.

In fact, the Joint Steering Committee will be working with trainers to help prepare for a smooth implementation.

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The Joint Steering Committee has also paid close attention to developments in other metadata communities, and initiated collaborations with the publishers who were developing their own metadata set called ONIX. Together we developed controlled vocabularies for media types, content types, and carrier types.

In 2007, JSC representatives met at the British Library with key representatives from Dublin Core, IEEE/LOM, and Semantic Web communities and agreed to examine the fit between RDA and other metadata models. We agreed to work together to develop a data dictionary and create a registry for the RDA elements sets and controlled terms.

This year the JSC is participating in a joint effort to determine what revisions are necessary to accommodate the encoding of RDA in MARC 21 for the initial release of RDA. This RDA/MARC Working Group presented proposals to MARBI at their meeting this June and will have proposals we hope will be approved at the MARBI meeting in January 2009.

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Whether you are working with a card catalog, an Integrated library system with an OPAC, or a system that makes internal links and expresses relationships between entities, RDA can be used. This picture shows a scenario that links clusters of data describing each of the FRBR entities, making the relationships explicit. All of this data can be mined and displayed in different ways depending on the user task. The JSC has kept this "scenario 1" in mind as our view of the future as we develop RDA.

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We hope future systems will be developed to take full advantage of mining the metadata catalogers provide. It should be easier to fulfill the functions of a catalog to display all the <click> works associated with a person, all the <click> expressions of the same work, all the <click> manifestations of the same expression, and all the <click> items and their special characteristics, plus all related works – all of this to guide a user through our rich collections.

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For now most of us are in an environment like this Scenario 2, using the MARC format in an integrated library system of self-contained records. These records may or may not have any connection to each other, but I personally hope that RDA will inspire systems designers to develop much better systems for the future.
I think we're at an exciting time for the development of new information systems, more global in nature, that can make cataloging easier and make the results of cataloging much more flexible and useful to our users.

There is also a Scenario 3 for the past forms of card or book catalogs, where all the bibliographic and holdings information is packaged together and there is a separate card file for authority data. RDA will work for that scenario as well.

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The publishers of RDA have a demonstration prototype of *RDA Online* to show you during this IFLA conference. We hope in a few months to have a version of RDA Online that can be made more widely available to use for the review of the full draft of RDA. During the review period for the full draft later this year, people will be asked to comment to the Joint Steering Committee regarding the content of RDA, specifically on the element set, the values for those elements that are prescribed, and on the core set of elements.

RDA is being designed as a Web tool – that is it will be viewed on your computer and have keyword access in addition to an index. Chris Oliver will be showing you how it works this afternoon.

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In summary, RDA is a content standard intended for the digital environment. It continues some of the traditions from its Anglo-American cataloging roots and IFLA's international descriptive standards. It focuses on the user-oriented conceptual models of FRBR and FRAD and their user tasks, elements, relationships, attributes, and the new vocabulary from those models.
Throughout all of this is the increased awareness of how small the world has become with Internet capabilities and how important it is to share bibliographic information globally and also help reduce global costs. Our bibliographic and authority information is being used worldwide and also across different information communities.

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IFLA is updating the underlying principles that support the organization of information and doing it in a way to help build cataloger's judgment.

Our new standard for resource description and access will enable us to more easily harvest descriptive metadata from many sources in a less rigid, more flexible way than we now do with AACR2 and the LC Rule Interpretations. Unlike AACR2, RDA will be based on the elements needed to describe the things in our bibliographic universe and to provide access to information about those things. It will have more controlled vocabularies that we will register on the internet for everyone to share, increasing the opportunities for more consistent data on the Web and increasing the precision of future searches.

All of these things are interconnected and leading us into the future of bibliographic control. They are providing us with updated standards for today's Web environment while still supporting the traditional collections of our libraries, archives, and museums. RDA will be a tool to help us move into the future.

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The JSC provides updates on our progress with RDA and other information on our Web site. Here's the Web address, and I encourage you to check that site and stay involved in the upcoming final review of the full draft.

If you haven't already looked at the Frequently Asked Questions on the JSC Web site, I recommend that you read them to help answer many of the questions you may have.

And speaking of questions, we may now have time now to address some questions you may have today, but first I'd like to say

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Thank you for your attention.

Any questions?