2. Objectives, Scope, and Methodology

2.1 Objectives of the Study
The study has two primary objectives. The first is to provide a clearly defined, structured framework for relating the data that are recorded in bibliographic records to the needs of the users of those records. The second objective is to recommend a basic level of functionality for records created by national bibliographic agencies.

2.2 Scope
For the purposes of this study a bibliographic record is defined as the aggregate of data that are associated with entities described in library catalogues and national bibliographies. Included in that aggregate of data are descriptive data elements such as those defined in the International Standard Bibliographic Descriptions (ISBDs); data elements used in headings for persons, corporate bodies, titles, and subjects that function as filing devices or index entries; other data elements used to organize a file of records, such as classification numbers; annotations such as abstracts or summaries; and data specific to the copies in library collections, such as accession numbers and call numbers. Data associated with persons, corporate bodies, titles, and subjects are analysed only to the extent that they function as headings or index entries for the records describing bibliographic entities. The present study does not analyse those additional data associated with persons, corporate bodies, works, and subjects that are typically recorded only in authority records.

The study endeavours to be comprehensive in terms of the variety of materials that are covered. The data included in the study pertain to textual, music, cartographic, audio-visual, graphic and three-dimensional materials; they cover the full range of physical media described in bibliographic records (paper, film, magnetic tape, optical storage media, etc.); they cover all formats (books, sheets, discs, cassettes, cartridges, etc.); and they reflect all modes of recording information (analogue, acoustic, electric, digital, optical, etc.).

The study assumes that the data included in bibliographic records produced for national bibliographies and library catalogues are used by a wide range of users: readers, students, researchers, library staff, publishers, distribution agents, retailers, information brokers, administrators of intellectual property rights, etc. The study takes into account the wide variety of applications, both within and outside a library setting, in which the data in bibliographic records are used: collections development, acquisitions, cataloguing, the production of finding aids and bibliographies, inventory management, preservation, circulation, interlibrary loan, reference, and information retrieval.

Within the context of such applications users may make use of bibliographic records for a variety of purposes, for example: to determine what information resources exist, perhaps on a particular subject or by a particular person, within a given “universe” (e.g., within the totality of available information resources, within the published output of a particular country, within the holdings of a particular library or group of libraries, etc.); to verify the existence and/or availability of a particular document for purposes of
acquiring, borrowing or lending; to identify a source or sources from which a document can be obtained and the terms under which it is available; to determine whether a record already exists for an item being added to a collection or whether a new record needs to be created; to track an item as it moves through a process such as binding or conservation treatment; to determine whether an item can be circulated or sent out on interlibrary loan; to select a document or group of documents that will serve the information needs of the user; or to determine the physical requirements for use of an item as they relate either to the abilities of the user or to special requirements for playback equipment, computing capabilities, etc.

For the purposes of this study the functional requirements for bibliographic records are defined in relation to the following generic tasks that are performed by users when searching and making use of national bibliographies and library catalogues:

- using the data to find materials that correspond to the user’s stated search criteria (e.g., in the context of a search for all documents on a given subject, or a search for a recording issued under a particular title);
- using the data retrieved to identify an entity (e.g., to confirm that the document described in a record corresponds to the document sought by the user, or to distinguish between two texts or recordings that have the same title);
- using the data to select an entity that is appropriate to the user’s needs (e.g., to select a text in a language the user understands, or to choose a version of a computer program that is compatible with the hardware and operating system available to the user);
- using the data in order to acquire or obtain access to the entity described (e.g., to place a purchase order for a publication, to submit a request for the loan of a copy of a book in a library’s collection, or to access online an electronic document stored on a remote computer).

6. USER TASKS

6.1 Mapping Attributes and Relationships to User Tasks

The entity-relationship model that has been developed in Chapters 3, 4, and 5 provides a structure within which data requirements can be analysed in a systematic way. The structure provided by the model serves as a framework for analyzing the uses that are made of bibliographic data with specific reference to the entity that is the object of the user’s interest, and to the attributes and relationships that are relevant to the task being performed by the user. Each attribute and relationship can be mapped directly to the user tasks they support.

As noted in Chapter 2, four generic user tasks have been defined for the purposes of this study. The tasks are defined in relation to the elementary uses that are made of the data by the user:

- to find entities that correspond to the user’s stated search criteria (i.e., to locate either a single entity or a set of entities in a file or database as the result of a search using an attribute or relationship of the entity);
- to identify an entity (i.e., to confirm that the entity described corresponds to the entity sought, or to distinguish between two or more entities with similar characteristics);
- to select an entity that is appropriate to the user’s needs (i.e., to choose an entity that meets the user’s requirements with respect to content, physical format, etc., or to reject an entity as being inappropriate to the user’s needs);
- to acquire or obtain access to the entity described (i.e., to acquire an entity through purchase, loan, etc., or to access an entity electronically through an online connection to a remote computer).

6.2 Assessing Value Relative to User Tasks

6.2.1 Find an Entity

For the user tasks find work, find expression, find manifestation, and find item, the highest value was assigned to attributes and relationships that meet one or more of the following criteria:

1. the attribute by definition serves to identify the entity (e.g., manifestation identifier, item identifier);
2. the attribute or relationship is typically used as a primary search term for locating the entity (e.g., the title of a manifestation, the relationship between a work and the person or corporate body principally responsible for the work).

Moderate value was assigned to attributes and relationships falling within one or more of the following categories:
1. the attribute or relationship serves to provide a useful means of subdivision within a predictably lengthy file of entities that match the user's primary search term (e.g., the medium of performance for musical works with non-distinctive titles);
2. the attribute or relationship is typically used as a secondary search term to qualify a search under a primary term that yields a large results set (e.g., language of expression);
3. the attribute or relationship is one that will serve to direct the user from an entity found to another entity that is closely related (e.g., the relationship between a supplement and the work it supplements).

Low value was assigned to attributes and relationships that under more limited circumstances might be used to subdivide further a file or to qualify a search.

6.2.2 Identify an entity
For the user tasks identify work, identify expression, identify manifestation, and identify item, the highest value was assigned to attributes and relationships that meet one or more of the following criteria:
1. the attribute by definition serves to identify the entity (e.g., manifestation identifier, item identifier);
2. the attribute or relationship forms part of the minimal set of attributes and relationships that for the majority of cases will serve, in the absence of a unique identifier, to differentiate entities that have a number of common characteristics (e.g., the minimal set of attributes sufficient to differentiate one manifestation from another in the majority of cases comprises title, statement of responsibility, edition/issue designation, publisher/distributor, date of publication/distribution, series statement, and form of carrier).

Moderate value was assigned to attributes and relationships that fall within one or the other of the following categories:
1. the attribute or relationship is one which under specified circumstances will often serve to differentiate entities for which the minimal set of attributes and relationships that normally serves to identify an entity is insufficient (e.g., the extent or physical medium of the carrier in certain circumstances may serve to signal differences between two manifestations that have the same title, statement of responsibility, edition/issue designation, etc.);
2. the attribute is specifically associated with a sub-type of an entity (e.g., handprinted books, sound recordings, etc.), and for that sub-category the attribute will often serve to differentiate between otherwise identical entities (e.g., polarity for microforms, presentation format for visual projections, etc.).

Low value was assigned to attributes and relationships that in more limited cases might be used to differentiate between entities with otherwise identical characteristics.

6.2.3 Select an Entity
For the user tasks select work, select expression, select manifestation, and select item, the highest value was assigned to attributes and relationships that meet one or the other of the following criteria:
1. the attribute or relationship serves in most cases as a significant indicator of intellectual or artistic content (e.g., the subject of a work, language of expression, etc.);
2. the attribute is one that normally signals a specific technical requirement for viewing, playback, operating, etc. (e.g., systems requirements for electronic resources, etc.), or other conditions restricting access or use.

Moderate value was assigned to attributes and relationships falling within one or the other of the following categories:
1. the attribute or relationship is a significant indicator of intellectual or artistic content only in limited cases (e.g., intended audience for a work);
2. the attribute or relationship is one that under specified circumstances may signal a specific technical requirement for viewing, playback, operating, etc., (e.g., dimensions of the carrier).

Low value was assigned to attributes and relationships that are only marginally significant indicators of intellectual or artistic content or signals of special technical requirements.

6.2.4 Obtain an Entity
For the user tasks obtain *manifestation*, and obtain *item*, the highest value was assigned to attributes and relationships that meet one or more of the following criteria:
1. the attribute by definition serves to identify the entity (e.g., *manifestation* identifier, *item* identifier);
2. the attribute or relationship forms part of the minimal set of attributes and relationships that for the majority of cases will serve, in the absence of a unique identifier, to differentiate entities that have a number of common characteristics (e.g., the minimal set of attributes sufficient to differentiate one *manifestation* from another in the majority of cases comprises title, statement of responsibility, edition/issue designation, publisher/distributor, date of publication/distribution, series statement, and form of carrier);
3. the attribute or relationship is in the majority of cases significant for locating the source from which the entity may be obtained (e.g., place of publication/distribution, access address for a remote access electronic resource, etc.);
4. the attribute or relationship is significant as an indicator of restrictions on access to the entity (e.g., access restrictions on the *manifestation*, access restrictions on the *item*).

Moderate value was assigned to attributes and relationships falling within one or the other of the following categories:
1. the attribute or relationship is one which under specified circumstances will often serve to differentiate entities for which the minimal set of attributes and relationships that normally serves to identify an entity is insufficient (e.g., the extent or physical medium of the carrier in certain circumstances may serve to signal differences between two *manifestations* that have the same title, statement of responsibility, edition/issue designation, etc.);
2. the attribute is specifically associated with a sub-type of an entity (e.g., handprinted books, sound recordings, etc.), and for that sub-category the attribute will often serve to differentiate between otherwise identical entities (e.g., polarity for microforms, presentation format for visual projections, etc.).

Low value was assigned to attributes and relationships that in more limited cases might be used to differentiate between entities with otherwise identical characteristics. Low value was also assigned to attributes and relationships that may be significant for locating the source from which the entity may be obtained, but only if the data is kept current (e.g., source for acquisition/access authorization). Note that the obtain task is not applicable to works and expressions. Note also that the structural relationships that link work to expression (“realized through”), expression to *manifestation* (“embodied in”), and *manifestation* to *item* (“exemplified by”) are assumed to be always reflected in the bibliographic record and are not shown in the tables.