We have established that:

- patrons have educational, informational, and recreational needs;
- libraries provide patrons with bibliographic information about our materials—in the form of a catalog—so that they (the patrons) can determine whether or not our materials meet their needs;
- we must follow certain rules and standards when we provide this bibliographic information so that there will be consistency in the information provided in all library catalogs.

Now it is time to learn a bit more about how we came to put the bibliographic information into MARC records.

**Background**

The **Library of Congress** (LC) developed the MARC format. Very early on, in the beginning days of computers (the late 1960s), certain people at LC recognized the benefits that computerization could offer to the library catalog. LC brought together a broad segment of the library community under the leadership of Henriette Avram (the mother of MARC) to design the elements that should be present in a machine-readable catalog record.

LC and the National Library of Canada (NLC) keep MARC going. Currently, the Network Development and MARC Standards Office at LC and the Standards and Support Office at NLC maintain the MARC21 standards—the specific standards used by the United States, Canada, and other countries (*MARC Development 2001*). All MARC21 users, including **bibliographic utilities, library networks**,
automation system vendors, and libraries from around the world, provide input about these standards. LC maintains the MARC Forum, an electronic discussion list to facilitate discussion among all interested parties (MARC Forum 2001). The archives of this list can be found at the MARC website maintained by the Library of Congress (MARC Standards 2001).

Open sessions are held at the semiannual meetings of two special MARC committees, called “MARBI” (Machine-Readable Bibliographic Information Committee) in the United States and “CCM” (Canadian Committee on MARC) in Canada. These meetings are very well attended by many interested parties, and the views expressed at these meetings, along with others contributed via e-mail and the MARC Forum list, are used by LC and NLC to make final decisions about any needed changes to MARC.

That is another important thing about MARC: it constantly changes! In fact, it is quite possible that by the time you read this book, some element of MARC that we mention may have been changed and may now be obsolete coding. Catalogers and systems staff, therefore, need a way to keep up with those changes. The MARC Forum is a good way to do this, and it is particularly useful for informing us about upcoming proposed changes and for giving us access to the experts to ask for clarification about tricky coding.

Now let’s get down to the nitty-gritty of MARC.

What Are MARC Records?

The term MARC stands for: MAchine Readable Cataloging, but you should be aware that not all machine-readable cataloging records are MARC records.

Many records are still out there in library catalogs that are not in the MARC format. If the data has not been entered using the MARC coding standards that we will be looking at soon, then the records are not MARC records.

So, what are MARC records? The most important thing to remember about them is that they are computer records, created according to a very specific set of standards, designed for “identifying, storing, and communicating cataloging information” (Crawford 1989).

Because the concept of “communicating” cataloging records was central to the design of the MARC format, it is sometimes called the MARC communications format.

Also bear in mind that not all MARC formats are the same, and the names used to designate particular MARC formats change with time:

- LCMARC (1960s) = USMARC (1980s) = MARC21 (2000)

CANMARC (the Canadian version of MARC) started out as different from LCMARC (the American version of MARC), but after years of having to translate between records created using the slightly different standards, the two groups in charge of setting those standards finally decided to harmonize their MARCs, creating MARC21. A similar decision has been made regarding UKMARC (the British version of MARC) to make it, too, the same as MARC21. Before too much longer, therefore, UKMARC will also equal MARC21.

On the other hand, UNIMARC, IberMARC, NORMARC, and many other national MARCs are still not quite the same as MARC21. Records created using these for-
MARC21 records still have to be translated into MARC21 in order for them to be used by software that is expecting to see MARC21 codes. Unless you live in a country that uses one of those other MARCs, however, you will probably never see a record in one of those other formats unless you specifically go looking for them, so concentrate on MARC21.

However, there is another format about which you should be aware, called MicroLIF. The designers of the PC-based library automation systems, such as Follett and Winnebago, decided that the complicated underlying structure of MARC was inappropriate for their platform. They came up with their own MARC-like standard that they called MicroLIF. The problem was that the records created using the MicroLIF standard were just different enough that systems built on LCMARC choked on the MicroLIF records. Eventually, the MicroLIF people gave up saying MicroLIF was just like MARC and joined the MARC community. The resulting version of MicroLIF is called MicroLIF91. If you are ever asked in which flavor you would prefer your records to be provided to you, MicroLIF or MicroLIF91, make sure you say MicroLIF91. All you need to remember is that Old MicroLIF is not MARC, but MicroLIF91 = MARC21.

### Why Do We Need MARC Records?

Now that you know that not all MARCs are the same, you also need to know that not all MARC21 records are the same. We currently have five different types of MARC21 records. We will begin with the three most commonly used.

1. **MARC21 bibliographic records** provide descriptions of the materials that we collect and give access to those descriptions; that is, they contain bibliographic information.

2. **MARC21 authority records** provide established headings and cross-references; that is, they are used for **authority control**.

3. **MARC21 holdings records** provide **holdings information** about individual items; that is, they contain barcode numbers, call numbers, volume/part/year information, notes, etc.

We need these three different MARC21 records to keep track of each book, video, etc. that we collect in our libraries. For each item that we have, we need:

- One **bibliographic record** to *describe* the item and give headings for *access*.
- One **authority record** for each heading in the bibliographic record.
- One **holdings record** for each copy or volume of the item that we have.

Not every library provides authority records at this time, so you may not have encountered them yet. Authority records register our decision when we establish a heading. In an authority record for a personal name, for example, we enter the name that we have established as the heading for the person; we also enter (as cross-references) any other names that have been used (or may be likely to be used) for that person, along with notes about our decisions that we think may be important.

Establishing headings and providing cross-references (*see references* and *see also references*) make it easier for patrons to find our materials, so we hope that more libraries will venture into this new realm of service as time goes on.
You may also never have seen a holdings record, because most library automation systems currently import and export holdings information using special fields in the bibliographic records, rather than using MARC holdings records. This lack of standards in holdings records is a problem when libraries switch systems, as anyone involved in a system migration can tell you. For this reason, libraries are beginning to require that their automation systems be able to create holdings records in the MARC21 holdings format.

Two other MARC21 formats are also available, although they are not as common as the previous three:

1. **MARC21 community information records** contain information about community events and organizations. You would use this format if you wanted to put local community information into your catalog along with the books, videos, sound recordings, etc.

2. **MARC21 classification records** contain information about classification numbers, so that classification schemes like LCC and DDC can be made available online as well as in print. This is not where you put call numbers; call numbers go in special fields in bibliographic records or holdings records. It is possible that these records may be used to check the validity of call numbers in a type of authority control. You may never have to deal directly with this format.

The coding in these different types of MARC21 records is similar in many ways, but there are sufficient differences to make the records very distinct. This means that you can never assume that a code in a MARC21 bibliographic record will have the same meaning in a MARC21 authority record. Unfortunately, we are not going to be able to get into coding for authority records at all in this book. We are going to have to concentrate on coding for bibliographic records because they are the ones that most people are concerned about.

We realize that this is starting to sound more and more complicated, so you may be asking once again why we need MARC records. Here are the two reasons we mentioned earlier:

1. **MARC allows sharing of records.** There are tens of millions of MARC records available for copying, so if you use MARC, you won’t have to make your own original records for every item in your collection.

2. **MARC allows sharing of resources.** Because MARC records from all sorts of libraries can be put into the same union catalog (e.g., OCLC) or linked in a virtual catalog, it has become relatively easy to do ILL (interlibrary loaning). If you use MARC, you can participate in this resource sharing bonanza.

And now we add two new reasons for pursuing MARC records:

3. **MARC is a standard.** Most library automation systems are designed around the MARC standards. If you use MARC, you will be able to move your database—your most important investment after your collection—from one library system to another without having to convert every record into a new format every time you change systems. This is very important, given that most libraries will switch library systems every five or so years.

4. **MARC is easy to learn,** if you are taught it and not left to learn it on your own. (We admit that this is hard for some people to believe.)
How Do We Get MARC Records?

So how do we get MARC bibliographic records? We can get them either by making them from scratch ourselves (using the cataloging software in our library system) or by copy cataloging—and in the cataloging world, copying is perfectly acceptable and no one will accuse you of cheating!

In the “old days,” copy cataloging was by no means a simple process. The primary union catalog available was something called the NUC (National Union Catalog), which was a catalog of the combined collections of the major research libraries in the United States and Canada. The NUC was composed of hundreds of huge green volumes that contained tiny copies of the shelflist cards of the major libraries. This meant that if your library was so lucky as to have the space to shelve the NUC, your catalogers could use it to find records that they could copy, and your ILL people could use it to find materials that they could borrow. This saved considerable intellectual effort, but the information on the tiny card facsimiles still had to be retyped at each library.

Then LC discovered computers and developed MARC and the next thing they knew, they could run off multiple sets of cards from the same computer record, instead of having to typeset those cards. Before we all got on the MARC bandwagon, therefore, libraries were already benefiting from MARC because they could do copy cataloging by ordering card sets from LC, saving not only intellectual labor, but also typing.

It wasn’t long before the big libraries, which have always sought ways of making the cataloging process faster, cheaper, and better, decided that they needed to replace the National Union Catalog (paper or microfiche) with a MARC-based, computerized union catalog. From this initiative, OCLC and RLG (in the United States), and the now defunct WLN (in the United States), and Utlas (in Canada) were born. The intent behind these bibliographic utilities was to coordinate cooperative cataloging. The first cataloger to make a MARC record for an item would follow standard cataloging rules and coding in an effort to make the best record possible. Then that record would be added to the union catalog so that other catalogers could download a copy of that record and import it into their own library automation system.

Copy cataloging, therefore, is now considered to be the process of searching an outside source of MARC records; finding records that exactly match items in hand; possibly doing some editing to improve records; adding holdings information to records; downloading records from the source system; and importing records to one’s library automation system. This may sound complicated, but it is a great deal easier than doing original cataloging.

For awhile, only large libraries that could afford to join the utilities could get access to MARC records from LC or other libraries for copy cataloging. Then a company called The Library Corporation got into the business of supplying MARC records from LC to everyone at a low cost, first on microfiche and then on CD-ROM. Now MARC records from LC and other libraries are available from a wide variety of sources.

Certainly you may still have to do original cataloging for some items, especially if you have local materials that no one else has. But always keep in mind that the only really cost-effective way to catalog nowadays is to first try to find records that you can copy.
Sources for Copying MARC Records: Free

Shared Systems

Sometimes a group of libraries will band together to share a library automation system. For example, ten separate public libraries might form a library consortium to purchase and maintain a library automation system, with a single shared database of MARC records. If you are part of a shared system, and another library in that system has already imported or created a MARC record that matches your item in hand, then you can simply attach the holdings information (barcode, call number, item cost, etc.) for your item to that MARC record, without having to copy or create a new record yourself. This is sometimes called add item or linking, but it is, in effect, copy cataloging just the same.

The Library of Congress

The reluctant de facto national library of the United States, the Library of Congress is still our largest single producer of MARC records. We can now go directly to the LC online catalog (http://catalog.loc.gov), search for records that match our titles, and copy (or “import”) the records that we find there into the cataloging module of our own library automation system, free, gratis, at no charge.

What’s the drawback, you ask? The online connection to LC is often overwhelmed by the number of libraries taking advantage of this boon. To cope with this, LC has a cap on the number of connections available at any given time. This means that you often may not be able to get through during U.S. business hours, and even when you do get through, you may find the connection is somewhat slow.

Direct access to the LC database of MARC records, therefore, may not be the most efficient way to get MARC records. It is, however, sometimes the only way a small library can afford to do copy cataloging.

Sources for Copying MARC Records: Not Free

Bibliographic Utilities

You must be a member of a bibliographic utility (for example, RLIN at http://www.rlg.org or OCLC at http://www.oclc.org) in order to get full access to all the cataloging functions of that utility. These utilities are, however, beginning to provide restricted copy cataloging access to their records for nonmembers, and this avenue may be worth investigating for smaller libraries.

Membership in a bibliographic utility is by no means inexpensive, but the utilities have gathered some impressive collections of records. For example, OCLC currently has over 50 million unique MARC records, compared to LC’s 12 million. For many libraries, it is more cost-effective to pay a utility’s fees in order to get prompt access to a large number of records and thus speed up the cataloging process.

In addition, the bibliographic utilities do more than just provide MARC records. Because so many libraries use them for copy cataloging, the utilities have found that if their member libraries add their library codes to each record that they copy, the resulting databases of shared records can also act as a union catalog for interlibrary loan. This means that your patrons can find and borrow not only the materials that you have in your own library collection, but also materials from the collections of other libraries participating in the union catalog.
MARC Record Vendors

As mentioned earlier, The Library Corporation was one of the first companies to make Library of Congress MARC records available to libraries for copying. The company began doing so using microfiche (just think of the eyestrain!) and then moved on to providing the actual MARC records from LC on CD-ROM. Their DOS-based cataloging software, Bibliofile, made it easy and efficient to search the entire LC database. Long before there was direct access to the LC database via the Internet, many smaller libraries were using Bibliofile to copy and edit matching LC records and download them into their automated systems. Many other vendors now also offer CD-ROM and/or Internet access to their copies of the LC database, sometimes along with MARC records that they have collected from various other sources.

Why do these vendors continue to do good business if we can get MARC records free from the same source that they do (LC)? Remember the limitations of going directly to LC that we mentioned earlier. Using a vendor’s copy of the LC database online or on a CD-ROM guarantees a consistent response time, plus the vendor’s software adds the ability to edit the records before they are imported to your system, something you cannot do if you go directly to LC.

Z39.50 Software

Z39.50 is another important standard for libraries. The Z39.50 protocol makes it possible for a library system that is designed by one vendor to execute a search on a completely different library system and retrieve MARC records for the search results. Don’t worry, you don’t have to learn Z39.50. You just need to know that if the cataloging module of your automation system implements the Z39.50 standard—and many do these days—then you can probably use that interface to search the databases of hundreds of library systems that also have Z39.50 interfaces and download MARC records from those databases. And if your library system does not have this Z39.50 capability (or if you do not have a library system), then you can buy stand-alone software that will run on your PC and perform the same search and retrieval functions.

Outsourcing

Finally, if your organization does not have the resources to do any cataloging at all, even copy cataloging, or if you cannot find MARC records to copy for some of the materials that you collect, then you might turn to outsourcing some or all of your cataloging. In this context, outsourcing simply means that you pay someone else to create your MARC records for you.

One type of outsourcing is to get your MARC records from your materials supplier. Many smaller libraries receive a MARC record for every item that they purchase; this service was provided initially by book jobbers, such as Baker & Taylor, Follett, and Brodart, but now even some publishers provide it. This situation is very similar to that in the “old days,” when libraries would get card sets with the materials they purchased. And, as in the old days, the same issues of quality and accuracy must be faced. This means that someone in the library must still know enough about cataloging and MARC to know when the records being supplied are correct and when they are most decidedly not.

Another type of outsourcing is to send your library materials to a special cataloging vendor to have MARC records created for them. Some libraries simply do
not have the staff to handle any cataloging at all; others do not have the resources to cope with the cataloging of a certain type of material, or of materials in a certain language, and so on. Even when you opt for this not inexpensive option, however, someone in the library must still know enough about cataloging and MARC to monitor the work done by the outsourcing vendor.

Quality Control

Wherever your MARC records come from, we cannot emphasize too much the need for quality control of those records. No matter from whence they originate (even from LC), you must ensure that your records are as complete and as accurate as possible, and that they are coded correctly. If your records aren’t in very good shape (e.g., if they are riddled with invalid coding), then your system will not work very well. It’s that simple.

We have heard it said over and over again by staff from many different libraries that they have neither the time nor, often, the inclination to learn MARC—much less the cataloging rules. This is unfortunate, because although they may be doing “the best they can,” they probably are making catalog records that will not properly fulfill the functions of a catalog (which we are going to cover in more detail in the next chapter).

In order to be useful, catalog records must provide “the library patrons with sufficient information so that they can find, identify, select, and obtain access” to a library’s materials (IFLA 2000). Records with inadequate or inaccurate bibliographic information and improper MARC coding will limit the ability of patrons, whether local or via ILL, to “find, identify, select, and obtain access” to materials.

When libraries come out of their isolation to join the resource-sharing community, they often find that their original records are unsuitable for sharing purposes. This means that they will only be able to share records that they have copied from other libraries, and their homemade records—for their most valuable materials, the unique items that only they hold—will not be suitable for union catalogs like OCLC, and also will not work well in a virtual union catalog. In today’s record-sharing environment, therefore, it is becoming more obvious than ever that there is hardly any point in doing cataloging at all, unless it is done according to the rules and standards.

QUIZ 3

1. Where was MARC first developed?

2. Are all machine-readable cataloging records MARC records?
   [ ] Yes    [ ] No
3. Is UNIMARC the same as MARC21?
   [ ] Yes   [ ] No

4. Has MARC21 changed since it was first set up in the 1960s?
   [ ] Yes   [ ] No

5. Do all the codes in a MARC21 bibliographic record have the same meaning in a MARC21 authority record?
   [ ] Yes   [ ] No

6. How do we get MARC21 bibliographic records?

________________________________________________________________________

**Note**

1. Library automation systems also need a way to store information about patrons (barcode ID number, name, items checked out, etc.). Currently, no MARC format exists for **patron records**, and they are not really standardized in any way, so the format of these records varies from system to system.