

# GLOSSARY OF LIBRARY TECHNOLOGY TERMINOLOGY

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This glossary contains terms that are used in documentation related to library technology, especially in the Machine-Readable Cataloging (MARC) formats documentation for MARC-based systems. Italicized terms within definitions are terms for which definitions are also provided. The terms were taken from a variety of sources, the most important of which are listed below. Since library terminology has become highly technical, some jargon and inexact use of these terms does exist. Nuances in meaning are given in these cases.

*Format Integration and Its Effect on Cataloging, Training, and Systems* / edited by Karen Coyle. (ALCTS Papers on Library Technical Services and Collections; no. 4). (Chicago, IL: American Library Association, 1993)

*Information Retrieval (Z39.50) : Application Service Definition and Protocol Specification*. (Bethesda, MD: National Information Standards Organization, 1995)

*Understanding MARC Bibliographic* / [written by Betty Furrie in conjunction with the Data Base Development Department of the Follett Software Company]. 5th ed. (Washington, DC: Library of Congress, Cataloging Distribution Service, c1998)

*The USMARC Formats: Background and Principles* / prepared by MARBI, [the] American Library Association's RTSD/LITA/RASD Machine-Readable Bibliographic Information Committee in conjunction with [the] Network Development and MARC Standards Office, Library of Congress. (Washington, DC: Library of Congress, Cataloging Distribution Service, 1989)

*MARC Specifications for Record Structure, Character Sets, and Exchange Media*. Web version. (Washington, DC: Library of Congress, Cataloging Distribution Service, 2000)

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A-association see **Application association**

**abstract database record** - An abstract representation of the information in a database record. An abstract database record may be formed by the application of an *abstract record structure* (defined by a schema) to the database record. An element specification may be applied to an abstract database record forming another instance of the abstract database record.

**abstract record structure** - The primary component of a database schema. An abstract record structure applied to a database record results in an *abstract database record*.

**abstract syntax** - A description of a particular data type using an *abstract syntax notation*. It can be referenced by an *object identifier* (OID).

**abstract syntax notation** - A language that allows the denotation of data types in a representation-independent manner. *ASN.1* is an example.

**access point clause** - An operand of a *Type-1 query* (informal).

**access point** - Generally used to refer to MARC data elements at the field level which are indexed by computer systems. The most common access points are fields that contain names, titles, standard numbers, and terms describing the content of an item. The identification and formulation of data which is meant to provide access to a MARC records is usually governed by cataloging, indexing, and abstracting rules. In some MARC-based systems, only part of a field qualifies as an access point and thus receives indexing. In information retrieval, a unique or non-unique key that can be specified either singly or in combination with other access points in a search for records. An access point may be equivalent to an element (defined by an abstract syntax), derived from a set of one or more elements, or unrelated to any element.

**aggregate present response** - Segment requests (if any) together with the Present response, for a Present operation.

APDU see **application protocol data unit**.

**application association** - A communication session between a database user and a database provider. It may consist of one or more consecutive *Z-associations*.

**application protocol control information** - Information conveyed by an application protocol data unit.

**application protocol data unit** - A unit of information, transferred between an *origin* and *target*, whose format is specified by the information retrieval protocol, consisting of application-protocol-information and possibly application-user-data.

**application protocol** - The rules governing the format and exchange of information between an *origin* and *target*.

**applied variant** - One of three usages for a variant specification. The applied variant is the variant specification that the target applied to an element included in a retrieval record. See also *variant request* and *supported variant*.

**appropriateness** - Whether or not a data element should be used in a record for particular category (or categories) of material. (Since after implementation of Format Integration all data elements will be valid for all types of materials, appropriateness will become a more important concern for staff creating bibliographic records.)

**archival control** - Type of control used for an item (generally consisting of a variety of material types) intended to be controlled in a archival way; usually involves special preservation, storage, and access.

**ASN.1** - Abstract Syntax Notation One, as specified in ISO 8824 and ISO 8825.

**attribute** - A characteristic of a search term, or one of several characteristic components which together form a characteristic of a search term.

**attribute element** - An attribute represented by a pair of components: an *attribute type* and a value of that type.

**attribute list** - A set of attribute elements and the attribute set ID to which it belongs. An attribute list is combined with a search term to form an operand of a *Type-1 query*. Usually, one of the attribute elements from the set corresponds to a normalized access point, against which the term (as qualified by the other attribute elements) is matched.

**attribute set** - A set of *attribute types*, and for each, a list of attribute values. Each type is represented by an integer, unique within that set (as identified by its attribute set id), and each value for a given type is unique within that type.

**attribute set ID** - An *OID* that identifies an attribute set, to which an attribute element (within an attribute list) belongs.

**attribute type** - A component of an *attribute element*. An *attribute set* defines one or more attribute types and assigns an integer to each type (it also defines values specific to each type). For example, bib-1 assigns the integer 1 for the attribute type "Use."

**attribute value** - A component of an *attribute element*. An *attribute set* defines one or more values for each attribute type that it defines. For example, bib-1 defines the Use attribute "personal name."

**authoritative form** - Generally applied to the structured *heading* for a name, title, term, etc. that is preferred over other forms of name, title, term, etc. in a record or database. Non-authoritative forms are treated as *cross references*. An *authority record* is used to identify and control authoritative and non-authoritative forms of names, etc.

**authority record** - A group of machine-readable data elements that identify or control the content and content designation of those portions of *bibliographic record* or *community information record* that may be subject to authority control.

**base address of data** - A *data element* in the *leader* which specifies the first character position of the first *variable field* in the *record* and is equal to the sum of the *lengths* of the leader and the *directory*, including the *field terminator* at the end of the directory.

**bibliographic file** - *File* on a microcomputer diskette that contains records such as authority, bibliographic, holdings, and classification records(s).

**bibliographic level** - A *data element* in the *leader* which provides additional information about the characteristics and components of the *record*, and is used in conjunction with the *type of record* data element of the leader.

**bibliographic record** - A group of machine-readable data elements that identify and help to control an item or collection of items that might be acquired and held by a library, archive, museum, etc. A bibliographic item is generally considered to possess some kind of intellectual content, even in the case of three-dimensional objects (e.g., a moon rock) that are acquired because of an innate quality or value to the collector. Bibliographic records may contain information about a wide variety of material types (e.g., printed books, maps, films, computer files, sound recordings). The data elements in a bibliographic record used to retrieve the item are called *access points*. A *holdings record* can be embedded in a bibliographic record to record copy-specific information.

**bit combination** - A sequence of consecutive bits that represents a *character*.

**blank (space)** - ASCII character 20<sub>16</sub> (represented graphically in USMARC documentation as /,b), which is used in *indicators* and data elements containing coded values. Generally, blank stands for "undefined," but in some instances it has been assigned a meaning. Also referred to as the space character.

**block** - A collection of contiguous recorded characters written or read as a unit. Blocks are separated by an *interblock gap*. A block may contain one or more complete *records*, or it may contain segments of one or more *segmented records*. A block does not contain multiple segments of the same record.

**blocked record** - A *record* contained in a *file* in which each *block* may contain more than one record or *record segment*.

**browser** - A software application (versions are available for many operating systems) that support the retrieval, display, and printing of *HTML* documents available through the Internet.

**byte** - A group of consecutive bits used to represent a graphic or control character. Bytes are usually groups of 8 bits (also called octets). Recently-developed character sets use multiple octets (i.e., 16 or 32 bits) to represent each character

**character** - A member of a set of elements used for the organization, control or representation of data.

**characters modifiers (diacritics)** - A mark, point, or sign used with alphabetic graphic characters to distinguish them in form or sound (usually intended to be displayed above or below an alphabetic graphic character).

**chronological relationship** - The relationship in time between bibliographic items (e.g., the relation of a serial to its predecessors and successors).

**classification record** - A group of machine-readable data elements that identify or control classification numbers and corresponding captions from a classification scheme (e.g., Dewey Decimal Classification). A classification record provides information about authorized and non-authorized classification numbers and captions. Databases of classification records can be used to determine the correct classification number(s) applicable to an item represented by a *bibliographic record* or event, service, etc. represented by a *community information record*.

**client** - The application that includes the *origin*; the database user.

**client system** - The system on which the *client* resides.

**code extension** - The techniques for encoding *characters* that are not included in a given *coded character set*.

**code table** - A table showing the *character* allocated to each *bit combination* in a *coded character set*.

**code table position** - That part of a *code table* identified by its column and row coordinates.

**coded character set; code** - A set of unambiguous rules that establish a character set and the one-to-one relationships between the *characters* of the set and their *bit combinations*.

**combining character** - A *diacritic* character representing a mark, point, or sign used in conjunction with alphabetic characters to distinguish them in form or sound (usually intended to be displayed above or below an alphabetic character).

**community information record** - A group of machine-readable data elements about an event, service, program, etc. Many of the data elements defined for community information records are the same as those defined for a *bibliographic record*, but the entities they represent are not tangible as most bibliographic items are. The data elements in a community information record used for retrieval are called *access points*.

**component part** - A bibliographic item that is physically part of another bibliographic item such that the retrieval of the part is dependent on the physical identification and location of the host item (e.g., a chapter in a book, an article in a journal).

**composition specification** - A specification that may be included in a *Present request* to indicate the desired composition (elements and record syntax) of the retrieval records. It includes a *schema identifier*, *element specification*, and *record syntax identifier*.

**conditionally confirmed service** - A service that may be invoked as confirmed or non-confirmed. It is defined in terms of a *request* (from the *origin* or *target*) followed possibly by a *response* (from the peer). For example, *Resource-control* is a conditionally confirmed service, initiated by the target. See also *Non-confirmed service* and *Confirmed service*.

**confirmed service** - A service that is defined in terms of a request (from the *origin* or *target*) followed by a response (from the peer). For example, Search is a confirmed service, initiated by the *origin*; access-control is a confirmed service initiated by the *target*. See also *non-confirmed service* and *conditionally-confirmed service*.

**content** - Data contained in a record as defined by standards outside the formats, e.g., *Anglo-American Cataloguing Rules*, *Library of Congress Subject Headings*, *National Library of Medicine Classification*. The content of certain data elements, e.g., coded data, is defined in the USMARC formats.

**content designation** - The codes and conventions established to identify explicitly and characterize further the data elements within a record and to support the manipulation of those data, is defined in the USMARC formats.

**control character** - A *control function* that is coded as a single *bit combination*.

**control field** - A *variable field* containing information useful or required for the processing of the *record*. Control fields are assigned *tags* beginning with two zeroes.

**control function** - An action that affects the recording, processing, transmission or interpretation of data and that has a coded representation consisting of one or more *bit combinations*.

**control number** - An ASCII graphic character string uniquely associated with a *record* by the organization transmitting the record and located in a specific *variable field*.

**cross reference** - An *authoritative form* of name, title, term, etc. to which a user is directed from a different *authoritative form* of name, title, term, etc. Do not confuse cross references with *tracings* which direct users **from** other *non-authoritative forms*.

**curriculum information** - The reviews, target audience, learner characteristics, course-of-study objectives, and correlation of those objectives to a item represented by a *bibliographic record*. Curriculum information (e.g., a term assigned to a curriculum objective) may also serve as an *access point*.

**data element** - A defined unit of information. See also **Element**.

**data element identifier** - A one-character code used to identify individual data elements within a *variable field*.

**data field** - A *variable field* containing bibliographic or other data. Data fields are assigned *tags* beginning with characters other than two zeroes.

**database** - A collection of information units containing related information. Each unit is a database record.

**database record** - A local data structure representing an information unit in a database.

database schema see **schema**

**delimiter** - ASCII character 1F<sub>16</sub> (represented graphically in USMARC documentation as |,=), which is combined with a *data element identifier* to make up the *subfield code* which precedes each individual *data element* within a *variable field*. ASCII name for the delimiter is "unit separator" (US).

**designate** - To identify a set of *characters* that are to be represented in a prescribed manner.

**diacritic (character modifier)** - A mark, point, or sign used with an alphabet base letter to distinguish it in form or sound from an unmodified letter.

**directory** - An index to the location of the *variable fields* (control and data) within a *record*. The directory consists of *entries*.

**diskette** - A physical exchange medium usually composed of a thin disk with a magnetic surface on both sides, enclosed in a protective case. A variety of diskette sizes exist, 5.25 inches or 3.5 inches in diameter being the most common. Hardware to read from and write to such diskettes usually support various densities of encoded data.

**element** - A unit of information defined by a *schema*.

**element request** - A request, included with an *element specification*, for the retrieval of a specific element. The element request may include a *variant request*, indicating the desired variant form of the element.

**element set name** - An *element specification* in the form of a *primitive name*.

**element specification** - An instance of an element specification format, or an element set name. An element specification transforms an abstract database record into another instance of the abstract database record (this may be a *null transformation*). The element specification selects elements from the abstract database record, and possibly also specifies variant forms for those elements.

**element specification format** - A structure used to express an element specification.

**element specification identifier** - The *object identifier* of an element specification format, or an element set name.

**encoding level** - A *data element* in the *leader* of authority, bibliographic, classification, and holdings records which provides information about the fullness of the information and/or content designation in the *record*.

end-of-field see **field terminator**

end-of-record see **record terminator**

**entry** - A *field* within the *directory* which gives the *tag*, *length* and *starting character position* of a *variable field*.

**entry map** - A data element in the *leader* which specifies the structure of the *entries* in the *directory*. Always set to 4500 in USMARC records.

**escape (ESC)** - A *control character* (ASCII 1B<sub>16</sub>) which is used to provide additional *characters* by *code extension*. It alters the meaning of a limited number of contiguously following *bit combinations*.

**escape sequence** - A bit string that is used for control purposes in *code extension* procedures and that consists of two or more *bit combinations*, of which the first is the bit combination corresponding to the *Escape* character.

**exceptional record size** - The maximum size of the record that may be included in a *present response*, in the special case when a single, exceptionally large record (i.e. larger than preferred-message-size) is requested.

**facility** - A logical group of information retrieval services; in some cases, a single service. For example, the *retrieval facility* consists of the *present service* and the *segment service*; the search facility consists of the *search service*. Alternatively, a facility might not consist of services, but instead might use services of other facilities. For example, the explain facility does not define any services, but uses the Search and Present services.

**field** - A defined character string that may contain one or more *data elements*.

**field orientation code** - A code that indicates the direction in which the displayed or printed *graphic characters* are intended to be written.

**field orientation** - Refers to the direction that displayed or printed *graphic characters* in a field are intended to be written (e.g., either from left to right, or from right to left). The characters are always recorded in their logical order, from the first character to the last character, irrespective of the direction they are intended to be read.

**field terminator (FT)** - ASCII character 1E<sub>16</sub>, which is used to terminate the *directory* and each *variable field* within a *record*. ASCII name for the field terminator is "record separator" (RS).

**file** - A set of related *records* treated as a unit. A file may be recorded on all or part of a *volume*, or on more than one volume.

**file section** - That part of a *file* that is recorded on any one *volume*. The sections of a file do not have sections of other files interspersed.

**file transfer protocol (FTP)**. A standard technique and syntax for communicating machine-readable data electronically in separate files without losing data or file integrity.

**fill character** - ASCII character 7C<sub>16</sub> (represented graphically in USMARC documentation as |), which has the meaning "information not provided."

**final character** - The *character* whose *bit combination* terminates an *escape sequence*.

**final fragment** - A fragment that ends at the end of a record. See *fragment*.

**fixed-length field** - A *field* whose length is invariant. The term is occasionally used to refer to variable *control fields*, especially those that contain coded data such as fields 007 or 008.

**format** - A list of data elements. *Format* must not be confused with *type of material* or *category of material* which have a different meaning in USMARC.

**format integration** - Refers to a process undertaken to validate data elements defined in the *USMARC Format for Bibliographic Data* for all forms of material for which they were not already valid and to eliminate redundant data elements resulting from the expanded validation of elements. Format integration of the USMARC bibliographic format was done in phases between 1988 and 1995. The definition of several new data elements was included in Format Integration to better accommodate seriality, archival control, and bibliographic items possessing characteristics of more than one type of material (e.g., a serial atlas that includes a CD-ROM).

**fragment** - A proper substring of a record. (This definition is meaningful only in the context of level-2 segmentation when a record is considered to be a string of bytes.)

FRANAR see **Functional Requirements for Authority Records**

FRAR see **Functional Requirements for Authority Records**

FRBR see **Functional Requirements for Bibliographic Records**

ftp see **file transfer protocol**

**Functional Requirements for Authority Records** - A conceptual model for authority records that establishes the relationships between the attribute elements in authority records and the functions performed by catalog users; it also defines certain entities and their attributes. The earlier draft of this model was called FRANAR (Functional Requirements and Numbering of Authority Records).

**Functional Requirements for Bibliographic Records** - A conceptual model for bibliographic records that establishes the relationships between the attribute elements in bibliographic records and the functions performed by catalog users; it also defines certain entities and their attributes.

**graphic character** - A *character*, other than a *control character*, that has a visual representation normally handwritten, printed, or displayed.

**GRS** -- Generic record syntax.

**heading** - A controlled name, title, term, etc. that has been formulated in a special way (e.g., surname and forename inversion) to provide for better sorting and access either by machine or humans. Many USMARC records include at least one heading that serves as an *access point*. Uncontrolled names, titles, terms, etc., when used for access, are considered keywords.

**holdings** - Those bibliographic items (e.g., printed books, maps, films, sound recordings) held by a library, archive, museum, etc. Itemized holdings information is particularly important for serially-issued materials that are acquired piece at a time. Holdings information can be recorded in a separate *holdings record* or using holdings fields embedded within a *bibliographic record*.

**holdings record** - A group of machine-readable data elements that identify and control a specific copy of a bibliographic item. A holdings record is particularly useful for recording the copy-specific details of an item consisting of many pieces (e.g., a printed periodical). Holdings information can be recorded in a separate *holdings record* or using holdings fields embedded within a *bibliographic record*.

**horizontal relationship** - The relationship between versions of a bibliographic item in different languages, format, media, etc.

**host item** - A bibliographic item that physically contains the *component part* described by the target item record (e.g., the book containing the described chapter, the journal in which the article appears).

**HTML** - The acronym for *HyperText Markup Language*, a World Wide Web Consortium (W3C) recommendation for applying SGML tags in Web-compatible documents. HTML documents are limited to a specific HTML tag set which generally follows SGML syntactical rules. Most Web *browsers* are designed to interpret HTML tags for retrieval, display, and printing.

identifier length see **subfield code count**

**indicator** - A *data element* associated with a *data field* that supplies additional information about the *field*. USMARC has two indicators in each data field. Each indicator consists of one character; the two indicators appear as the first data elements in a data field. Indicators are not used in *control fields*.

**indicator count** - A *data element* in the *leader* which contains the number of *indicators* occurring in each variable *data field*. Always set to 2 in USMARC records.

**initiating request** - A request that initiates an operation.

**interblock gap** - A dc-erased section of tape separating *blocks* of information.

**intermediate character** - A *character* whose *bit combination* occurs between the *Escape character* and the *final character* in a *escape sequence* consisting of more than two *bit combinations*.

**intermediate fragment** - A fragment that neither starts at the beginning nor ends at the end of a record. See *fragment*.

**invoke** - To cause a *designated* set of *characters* to be represented by the prescribed *bit combinations* whenever those bit combinations occur.

**IR** -- Information retrieval; the process of requesting and obtaining information (using in the form of records) from a *target* system. In earlier parlance, IR was called SR (search and retrieval).

**item** - Refers to either a result set item or a bibliographic item.

**label** - A *record* at the beginning of a *volume*, and at the beginning and end of a *file section*, that identifies and characterizes that *volume* and *file section*. A label is not considered to be part of a *file section*. A label is identified by a three letter Label Identifier followed by a single character, the Label Number. Each label is recorded in a separate *block*.

**label file** - *File* on a microcomputer diskette that identifies and characterizes the content of the *volume(s)*.

**label group** - One or more contiguous *label sets*.

**label set** - One or more contiguous *labels* with the same three initial characters (Label Identifier).

**LCMARC** - Generally a misnomer used to refer to the early USMARC bibliographic format. LCMARC existed as a *MARC-like* internal format used by the Library of Congress (LC) from 1969 to 1989 for internal transfer of records. LCMARC was completely replaced by *USMARC* as the internal transfer format within LC by 1989, and superseded by *MARC 21* in 1999. It was never used outside LC. The use of the term LCMARC is discouraged in most contexts.

**leader** - A *fixed field* that occurs at the beginning of each *record* and provides information for the processing of the record.

**length** - A measure of the size of a data element, field, or record and is expressed in number of characters.

**logical record length** - A *data element* in the *leader* which contains the length of the entire *record*, including itself and the *record terminator*.

**manuscript language material** - A bibliographic item which consists of hand-written text, etc. This type of material covers the physical aspects of the early USMARC type of material *archival and manuscripts control*, but not the archival control aspects

**MARC** - The acronym for *Machine Readable Cataloging*, coined in the early 1960's during the development of a standard record format for use with bibliographic data. MARC is now used to refer to the standard record structure specified by ANSI/NISO Z39.2 and ISO 2709. It is no longer used to identify any specific implementation of that record structure. Initially "MARC", "MARC II", or "LCMARC" was used to refer to the MARC format implementation developed by the Library of Congress in cooperation with other libraries. The first MARC bibliographic format was first published in 1968. At that time the format was referred to as MARC II or simply MARC. "US" was added to the name in the United States to differentiate it from other national implementations of the MARC record structure that developed between 1970 and 1980 (for example, CANMARC).

**MARC 21** - Refers to five related implementations of the MARC (ISO 2709 or ANSI/NISO Z39.2) record structure developed and maintained by the Library of Congress (LC) in cooperation with many other users. *MARC 21* superseded *USMARC* and *CANMARC* in 1998 and was eventually adopted by *SAMARC* users (in South Africa), *UKMARC* users (in the UK), and other MARC user communities. The five MARC 21 formats include a format for bibliographic data, authority data, holdings data, classification data, and community information.

**MARC-like** - Used to refer to machine-readable data that includes three-digit field tags and alphanumeric subfield coding, but lacks the standard MARC (i.e., ANSI/NISO Z39.2 or ISO 2709) record structure. MARC-like data often lack the correct MARC record separators prescribed by ANSI/NISO Z39.2 and ISO 2709, specifically the *record terminator*, *field terminator*, and subfield *delimiter* control characters.

**maximum segment size** - The largest allowable segment of an aggregate *present response* (when segmentation is in effect).

**mixed material** - In the new edition of the bibliographic format, any bibliographic item which consists of more than one type of material and for which no one type predominates (usually true of archival collections).

**name** - A linguistic construct, expressed in some language, that corresponds to an object. A name identifies the object to which it is bound.

**non-authoritative form** - A form of a name, title, term, etc. that is rejected as the *authoritative form*. Non-authoritative forms are generally treated as *tracings* in authority records for the *authoritative form*.

**non-confirmed service** - A service that is defined in terms of a request from the *origin* or *target*, with no corresponding response. For example, *segment* is a non-confirmed service initiated by the target. See also *confirmed service*.

**nonspacing graphic character** - A graphic character whose use is not followed by the forward movement of the output device. For the purpose of this standard, the term includes character modifiers.

**object identifier** - An unambiguous, globally-recognized, registered identifier for a data object, assigned by a registration authority.

**OCLC** - An acronym referring to OCLC, Inc. (the Online Computer Library Center), one of the largest bibliographic utilities in the world that provides bibliographic records and services to thousands of MARC users. The acronym is often used in reference to the OCLC databases, system, and/or services, many of which are more accurately called by other names (e.g., Prism).

**octet** - A group of 8 consecutive (binary) bits, also referred to as an 8-bit *byte*.

OID see **object identifier**

**operation** - An initiating request and the corresponding terminating response, along with intervening related messages. For example, a search operation always includes a *search request* and *search response*, and may also include access control and resource control messages. Multiple concurrent operations may occur within a *Z-association*.

**operation type** - The name of an initiating request. For example a *search request* initiates an operation whose type is "search."

**origin service-user** - That portion of a *client* that makes *requests* upon the *origin*. See *service-user*.

**origin** - The entity that initiates a *Z-association* and initiates operations during the Z-association.

**originating system** - An information processing system that can read *files* on a microcomputer diskette for the purpose of data interchange with another system.

**OSI** - Open Systems Interconnection.

**P-context** - See *presentation context*.

**preferred message size** - The maximum size of a *search response* or *present response* when no segmentation is in effect. It is expressed in terms of the sum of the sizes (in bytes) of the response records, not including protocol control information.

**presentation context** - The pairing of an *abstract syntax* with a *transfer syntax*, negotiated by the presentation layer, in order for that abstract syntax to be used during the application association.

primitive see **service primitive**.

**primitive name** - A name whose internal structure is not required to be understood or have significance to users of the name. Note: primitive name is not related to primitive.

**punctuation mark** - A mark that indicates the structure of sentence or phrase for clearness (e.g., ;).

**receiving system** - An information processing system that can read *files* on a microcomputer diskette that has been recorded by another system for the purpose of data interchange.

**record** - A collection of data elements describing or identifying one or more units treated as one logical entity.

record length see **logical record length**

**record segment** - That part of a *segmented record* that is contained in any one *block*. The segments of a record do not have segments of other records interspersed.

**record status** - A *data element* in the *leader* which indicates the relation of the *record* to a file (e.g., new, updated, etc.).

**record syntax** - An *abstract syntax* requested by the *origin* or used by the *target* to represent retrieval records.

**record terminator (RT)** - ASCII character 1D<sub>16</sub>, which is used as the final character of a *record*, following the *field terminator* of the last *data field*. ASCII name for the record terminator is "group separator" (GS).

reference see **cross reference**

**related item** - A bibliographic item that has either a *chronological, horizontal, or vertical relationship* with a target item, and for which the linking entry field is formulated.

**response record** - A retrieval record or a surrogate diagnostic record, representing a database record, in a *search response* or (aggregate) *present response*.

**result set** - A local data structure used as a selection mechanism for the transfer of records, identified by a query. Its logical structure is a named, ordered list of result set items, and possibly, unspecified information which may be used as a surrogate for the search that created the result set.

**result set item** - A database name, a pointer to a record within the database, and possibly, additional, unspecified information associated with the record.

**result set record** - An idiomatic expression referring to the database record represented by a *result set item*. See *result set*.

**retrieval record** - The exportable structure defined by the application of a *record syntax* to an *abstract database record*.

**RPN query** - A search query represented in reverse polish notation (RPN) format.

**schema** - A common understanding shared by the *origin* and *target* of the information contained in the records of the database, which allows the subsequent selection of portions of that information via an element specification. A schema defines an *abstract record structure*, which, when applied to a database record, results in an abstract database record.

SCW see **segment control word**

**segment** - A message that is sent (or is in preparation for transmission) by the *target* as part of an aggregate *present response*, i.e. a *segment request* or *present response*.

**segment control word (SCW)**. A fixed-length string used to indicate the type and content of a segment in a *file of segmented records*.

**segmented record** - A *record* contained in a *file* in which each record consists of a sequence of one or more *record segments*. Records are contained in one or more consecutive *blocks*, such that only one segment of each record can appear in any one block.

**serial control** - Type of control used for an item issued in parts, whose pieces are intended to be controlled in a serial way; usually involves special shelving and binding.

**server system** - The system on which the server resides.

**server** - The application that includes the *target*; the database provider.

**service** - An information retrieval service, as in the "search" service; an extended service, as in the "persistent result set extended service"; or the *service-provider*.

**service primitive** - An abstract, implementation-independent representation of an interaction between the *service-user* and the *service-provider*. The four types of service primitives are: *request, indication, response, and confirmation*.

**service-provider** - An abstraction of the totality of those entities (the *origin* and *target*) that provide a service to peer *service-users*. The concept of service-provider is employed to facilitate the specification of protocol procedures. Note: the service-provider is not related to the *database provider* nor to the provider of telecommunication services.

**service-user** - An *origin* service-user or a *target* service-user. That portion of a *client* or *server* that makes requests upon the origin or target respectively. The concept of service-user is employed to facilitate the specification of protocol procedures. Note: The service-user is not related to the database user.

**SGML** - The acronym for *Standard Generalized Markup Language*, a standard technique (ISO 8879), involving predefined text markup tags and associated syntax rules use to identify structures within full text in a non-proprietary way. SGML can be used as an alternative encoding syntax for MARC bibliographic data, although most library systems expect the MARC (ISO 2709) structure.

**simple present response** - An aggregate *present response* consisting of a single segment, i.e., consisting of a present response only, and no *segment requests*.

space see **blank**

**spacing graphic character** - A graphic character whose use is followed by the forward movement of the out device to the next character position. For the purpose of this standard, the term includes special characters, special symbols, and punctuation marks.

**special character** - An alphabetic character or other spacing graphic character (e.g., Æ).

**special symbol** - A conventional sign used in place of words or word groups (e.g., &).

**specifications** - In a USMARC context, those material-specific requirements, usually required data elements, as determined by USMARC Type of record code.

**starting character position** - The character position, relative to the *base address of data*, of the first character in the *variable field* referenced by the entry. The first character of the first *field* following the *directory* is numbered 0.

**starting fragment** - A fragment that starts at the beginning of a record. See *fragment*.

status see **record status**

**structure** - The way pieces of data are assembled in a record; for USMARC records the structure is an implementation of national and international standards, e.g., *Bibliographic Information Interchange* (ANSI Z39.2) and *Format for Bibliographic Information Interchange on Magnetic Tape* (ISO 2709).

**subfield code count** - A *data element* in the *leader* which contains the sum of the lengths of the *delimiter* and the *data element identifier* used in the *record*. Always set to 2 in USMARC records.

**subfield code** - The two-character combination of a *delimiter* followed by a *data element identifier*. Subfield codes are not used in *control fields*.

**supported variant** - One of three usages for a *variant specification*. A supported variant is a variant specification that the *target* lists as supported for a particular element. See also *applied variant* and *variant request*.

**surrogate diagnostic record** - A diagnostic record supplied in place of a retrieval record, representing a database record.

**tag** - The identifier of an element (or of a node of the *tag path* representing an element). It consists of a *tag type* and a *tag value*. In MARC, the three-character string used to identify or label an associated *variable field*. In MARC records, the tag may consist of ASCII numeric characters (decimal integers 0-9) and/or ASCII alphabetic characters (uppercase or lowercase, but not both).

**tag path** - A sequence of nodes from the root of a tree to the node that the tag path represents (when the elements of a record are represented hierarchically, as a tree). Each node of a tag path is represented by a tag. The end-node might be a leaf-node, in which case the tag path represents an element; otherwise the tag path represents the subtree whose root is that node.

**tag set ID** - an object identifier serving as a persistent identifier for a *tag set*.

**tag set** - The *tag values* (and recommended data types) for a set of elements.

**tag type** - A short-hand (integer) identifier for a *tag set*. A schema definition may assign a tag type to a *tag set Id*, to identify a particular *tag set* (within the context of the schema definition).

**tag value** - The identifier of an element (or of a node of the *tag path* representing an element). It may be either integer or string, and it is qualified by a *tag type*.

**tape mark** - A special control block recorded on magnetic tape to serve as a separator between *file sections* and *label groups* and also between certain label groups.

**tape**. A physical exchange medium usually composed of a thin acetate film in a variety of widths (2-inch (5.08cm), 1-inch (2.54cm), and 2-inch (1.27cm) tape are the most common). The acetate film can be housed on reels or in cartridges.

**target** - The entity that accepts a *Z-association*.

**target item** - A bibliographic item that is the principal or primary unit for the description of which the record was constructed. The target item is the item to which the data in character positions 06 (Type of record) and 07 (Bibliographic level) of the Leader apply.

**target service-user** - That portion of a server that makes requests upon the *target*. See *service-user*.

**terminating response** - A response that ends an operation.

**tracing** - A *non-authoritative form* of name, title, term, or identifier from which a user is directed to an *authoritative form*. Do not confuse tracings with *cross references* which direct users from one authoritative form **to** other *authoritative forms*.

**transaction** - A single operation in which a *volume* or set of volumes of bibliographic and non-bibliographic *file(s)* is transferred via microcomputer diskette(s) from an originating system to a receiving system.

**transfer syntax** - A syntax that when paired with an abstract syntax forms a *record syntax*.

**triple** - A 3-tuple (that is, an n-tuple, where n=3).

type-1 query see **RPN Query**.

**type of control** - The special control aspects, e.g., serial, archival control.

**type of material** - The physical category of an item.

**type of record** - A *data element* in the *leader* which, in conjunction with *bibliographic level*, specifies the characteristics and defines the components of the *record*.

**UNIMARC** - Refers to two related implementations of the MARC (ANSI/NISO Z39.2 or ISO 2709) record structure developed and maintained by the International Federation of Library Associations and Institutions (IFLA). The UNIMARC bibliographic format was first published in 1977. The UNIMARC authority format was published in 1991. A UNIMARC holdings format is under development. UNIMARC was intended to serve as a international MARC exchange format. It incorporates many of the features of various national MARC implementations.

**USMARC** - Refers to five related implementations of the MARC (ISO 2709 or ANSI/NISO Z39.2) record structure developed and maintained by the Library of Congress (LC) in cooperation with many other users which were replaced by *MARC 21* in 1998. The USMARC bibliographic format was first published in 1968. At that time the format was referred to as MARC II or simply MARC. "US" was added to the name to differentiate it from other national implementations of the MARC record structure that developed between 1970 and 1980. The are now five MARC 21 formats; a format for bibliographic data, authority data, holdings data, classification data, and community information.

variable control field see **control field**

variable data field see **data field**

**variable field** - A *field* whose *length* is determined for each occurrence by the length of data comprising that occurrence. There are two types of variable fields: *control fields* and *data fields*.

**variant** - One of possibly several forms in which an element is available for retrieval. The *origin* may request, or the *target* present, an element according to a specific variant. The target may indicate what variants are available for an element.

**variant list** - A list provided by the *target* of the *supported variants* for a particular element.

**variant request** - One of three usages for a *variant specification*. A variant request is a *variant specification* occurring within an element request. See also *applied variant* and *supported variant*.

**variant set** - A definition of a set of classes; for each class, a set of types; and for each type, a set of values. A *variant specification* consists of a set of *variant specifiers* from a particular variant set.

**variant set identifier** - An *OID* identifying a variant set.

**variant specification** - A *variant request*, *applied variant*, or *supported variant*. A variant specification is a sequence of triples, each of which is a *variant specifier*.

**variant specifier** - A component of a *variant specification*. It consists of a class, a type defined for that class, and a value defined for that type.

**vertical relationship** - The *hierarchical relationship* of the whole to its parts and the parts to the whole (e.g., a journal article to the journal, subseries to main entry series).

**volume** - A dismountable physical unit of storage media (e.g., the microcomputer diskette). A volume contains *label file(s)* and *bibliographic file(s)*. A volume may contain part of a *file*, a complete file, or more than one file. A volume may contain sections of one or more files. A volume does not contain multiple sections of the same file.

**working set** - The *coded character set* currently *invoked*.

Z-association see **Z39.50-association**.

**Z39.50** - Designation assigned to the American National Standards Institute (ANSI) standard protocol for information retrieval. Z39.50 was the fiftieth standard developed by NISO (the National Information Standards Organization, formerly ANSI's subcommittee "Z39"), thus its name. When Z39.50 was submitted to ISO for consideration as an international standard it was assigned the number ISO 23950.

**Z39.50-association** - A standard information retrieval session, explicitly established by the *origin* and either explicitly terminated by the *origin* or *target*, or implicitly terminated by termination of the *application association*. Communication between origin and target is via a Z39.50-association within an A-association. There may be multiple, consecutive Z-associations within an A-association.