

ATTRIBUTE SET BIB-1 (Z39.50-1995): SEMANTICS FOR FINMARC

Helsinki University Library

Version 1.1 2001-05-09

Juha Hakala
Arne Hedman
Marit Olander

e-mail: firstname.lastname@helsinki.fi

1. ABOUT THIS DOCUMENT

This is an extension of the document "Attribute Set BIB-1 (Z39.50-1995): Semantics for FINMARC (Version 1.0 26.2.1998 edited by Juha Hakala and Arne Hedman). More than 50 new Use Attributes have been added. All these have been approved at the ZIG meetings 1998-1999.

This document provides suggested interpretations for the semantics of the bib-1 Attribute Set. It is based on the bib-1 semantics document ([\[1\]](#)) agreed on by the members of the Z39.50 Implementors Group. The difference is that while the original ZIG document provides mapping of bib-1 attributes to the USMARC, this document provides also mapping to the FINMARC.

This document will be revised periodically by the Helsinki University Library to reflect the changes done to the original bib-1 semantics document approved by the Z39.50 Implementors Group.

This document contains references to certain definitions and behaviors that are specific to the target. These can be problem areas for interoperability. The specific definitions and behaviors are described in the Bath Profile (<http://www.nlc-bnc.ca/bath/bp-current.htm>) and in the Fin-1 Annex (<http://www.lib.helsinki.fi/z3950/finzig/Bathannex.htm>).

2. ATTRIBUTES

The attributes of Attribute Set bib-1 are used to indicate the characteristics of a search term in a Type-1 query when the query is of the form AttributeList+term (as described in section 3.7.1 of Z39.50-1995). The descriptions in this document apply when all attributes within 'AttributeList' are from the bib-1 attribute set. It does not define semantics when bib-1 is mixed with other attribute sets.

There are six types of attributes: Use, Relation, Position, Structure, Truncation, and Completeness. The Use attribute, if provided, identifies a set of access points against which the term is to be matched. The Relation, Completeness, Truncation and Position attributes, if provided, specify additional match criteria. The Structure attribute, if provided, identifies the form in which the term has been supplied.

Within an attribute list, each attribute type is optional. However, if a particular attribute type is not supplied, this document does not address target behavior -- a given target might supply a default attribute, dynamically select an appropriate attribute based on the other attributes supplied, or fail the search because it requires that the attribute type be supplied.

While Attribute Set bib-1 was originally established for use in the retrieval of records that are representable using the MARC formats for information interchange, it can also be used for the retrieval of records or documents representable in other formats.

Within an attribute list, multiple instances of a given type of attribute element are undefined and discouraged. Use of version 3 semantic actions is encouraged.

The remainder of this section describes each of the six attribute types, in order by the type number:

Attributes	Type
Use	1
Relation	2
Position	3
Structure	4
Truncation	5
Completeness	6

2.1 USE ATTRIBUTES (TYPE = 1)

A Use attribute specifies an access point (e.g., corporate name, personal name, title, subject).

The Use attributes are given below in two separate tables. Table 1 is similar to the listing in Z39.50-1995, Appendix 3, ATR: Attribute Sets, in that the attributes are in order by their values and the same names that appear in the Appendix appear in the left column of Table 1. The right column of Table 1 contains a reference to the name of the attribute that is used in Table 2. Table 2 rearranges the Use attributes alphabetically by group name in an attempt to bring similar Use attributes together. The groups are somewhat arbitrary; no rigorous classification of the attributes has been attempted.

In Table 2, all attribute names are followed by their values, a brief definition or description, and tag values of representative USMARC/FINMARC bibliographic format fields that would contain data that could be described in the search by using the attribute. Whenever possible, definitions are taken from the Anglo-American Cataloguing Rules or the FINMARC Format for Bibliographic Data as

these are the guidelines that are used by Finnish libraries for formulating data. In Table 2, the notation '\$<alpha>' following a MARC tag refers to a subfield of the named field. The notation 'i<number>' following a MARC tag refers to values of the second indicator in the named field; when the second indicator of the field has the value <number>, the data in the field is associated with that Use attribute.

TABLE 1: USE ATTRIBUTES FROM Z39.50-1995 APPENDIX 3, ATR: ATTRIBUTE SETS

Use	Value	Reference to Group Name Used in Table 2
Personal name	1	Name-personal
Corporate name	2	Name-corporate
Conference name	3	Name-conference
Title	4	Title
Title series	5	Title-series
Title uniform	6	Title-uniform
ISBN	7	Identifier-ISBN
ISSN	8	Identifier-ISSN
LC card number	9	Control number-LC
BNB card number	10	Control number-BNB
BGF (sic) card number	11	Control number-BNF
Local number	12	Control number-Local
Dewey classification	13	Classification-Dewey
UDC classification	14	Classification-UDC
Bliss classification	15	Classification-Bliss
LC call number	16	Classification-LC
NLM call number	17	Classification-NLM
NAL call number	18	Classification-NAL
MOS call number	19	Classification-MOS
Local classification	20	Classification-local
Subject heading	21	Subject
Subject Rameau	22	Subject-RAMEAU
BDI index subject	23	Subject-BDI
INSPEC subject	24	Subject-INSPEC
MESH subject	25	Subject-MESH

PA subject	26	Subject-PA
LC subject heading	27	Subject-LC
RVM subject heading	28	Subject-RVM
Local subject index	29	Subject-local
Date	30	Date
Date of publication	31	Date-publication
Date of acquisition	32	Date-acquisition
Title key	33	Title-key
Title collective	34	Title-collective
Title parallel	35	Title-parallel
Title cover	36	Title-cover
Title added title page	37	Title-added-title-page
Title caption	38	Title-caption
Title-running	39	Title-running
Title spine	40	Title-spine
Title other variant	41	Title-other-variant
Title former	42	Title-former
Title abbreviated	43	Title-abbreviated
Title expanded	44	Title-expanded
Subject PRECIS	45	Subject-PRECIS
Subject RSWK	46	Subject-RSWK
Subject subdivision	47	Subject-subdivision
Number natl bibliography	48	Identifier-national-bibliography
Number legal deposit	49	Identifier-legal-deposit
Number govt publication	50	Classification-government-publication
Number publisher for music	51	Identifier-publisher-for-music
Number DB	52	Control-number-DB
Number local call	53	Identifier-local-call
Code--language	54	Code-language
Code--geographic area	55	Code-geographic-area
Code--institution	56	Code-institution
Name and title	57	Name-and-title

Name geographic	58	Name-geographic
Place publication	59	Name-geographic-place-publication
CODEN	60	Identifier-CODEN
Microform generation	61	Code-microform-generation
Abstract	62	Abstract
Note	63	Note
Author-title	1000	Author-name-and-title
Record type	1001	Code-record-type
Name	1002	Name
Author	1003	Author-name
Author-name personal	1004	Author-name-personal
Author-name corporate	1005	Author-name-corporate
Author-name conference	1006	Author-name-conference
Identifier--standard	1007	Identifier-standard
Subject--LC children's	1008	Subject-LC-children's
Subject name--personal	1009	Subject-name-personal
Body of text	1010	Body-of-text
Date/time added to database	1011	Date/time-added-to-database
Date/time last modified	1012	Date/time-last-modified
Authority/format identifier	1013	Identifier-authority/format
Concept--text	1014	Concept-text
Concept--reference	1015	Concept-reference
Any	1016	Any
Server choice	1017	Server-choice
Publisher	1018	Name-publisher
Record source	1019	Record-source
Editor	1020	Name-editor
Bib-level	1021	Code-bib-level
Geographic class	1022	Code-geographic-class
Indexed by	1023	Indexed-by
Map scale	1024	Code-map-scale
Music key	1025	Music-key

Related periodical	1026	Title-related-periodical
Report number	1027	Identifier-report
Stock number	1028	Identifier-stock
Thematic number	1030	Identifier-thematic
Material type	1031	Material-type
Doc ID	1032	Identifier-document
Host item	1033	Title-host-item
Content type	1034	Content-type
Anywhere	1035	Anywhere
Author-Title-Subject	1036	Author-title-subject
SICI	1037	SICI
Abstract -language	1038	Abstract-language
Classification	1040	Classification
Possessing institution	1044	Possessing-institution
Linking record	1045	Record-linking
Record status	1046	Record-status
Treatment	1047	Treatment
Linking control number	1049	Control-number-linking
Country of Publication	1053	Country-publication
Meeting date	1054	Date-conference
Date record status	1055	Date-record-status
Dissertation information	1056	Dissertation-information
Organizer of a conference	1057	Meeting-organizer
Availability note	1058	Note-availability
Document number	1060	Number-document
Account number	1061	Number-local-accounting
Acquisition number	1062	Number-local-acquisition
Shelf number	1063	Number-local-call-copy-specific
Number of norm	1065	Number-norm
Volume number	1066	Number-volume
Meeting location	1067	Place-conference
Subject name corporate	1074	Subject-name-corporate

Geographical subject heading	1076	Subject-name-geographical
Title subject heading	1078	Subject-name-title
Topical subject heading	1079	Subject-name-topical
Uncontrolled subject term	1080	Subject-uncontrolled
Translated title	1082	Title-translated
Year-of-beginning	1083	Year-of-beginning
Year-of-ending	1084	Year-of-ending
A subject heading from the multilingual agricultural thesaurus from FAO	1085	Subject-AGROVOC
A subject heading from European Pedagogical Thesaurus	1087	Subject-EPT
Subject NAL	1088	Subject-NAL
ISRC. International standard recording code	1091	Identifier-ISRC
ISMN. International standard music number	1092	Identifier-ISMN
ISRN. International standard technical report number	1093	Identifier-ISRN
Digitl Object Identifier	1094	Identifier-DOI
Original language code	1095	Code-language-original
A later version of title	1096	Title-later
DC-Title	1097	DC-Title
DC-Creator	1098	DC-Creator
DC-Subject	1099	DC-Subject
DC-Description	1100	DC-Description
DC-Publisher	1101	DC-Publisher
DC-Date	1102	DC-Date
DC-ResourceType	1103	DC-ResourceType
DC-ResourceIdentifier	1104	DC-ResourceIdentifier
DC-Language	1105	DC-Language
DC-OtherContributor	1106	DC-OtherContributor
DC-Format	1107	DC-Format
DC-Source	1108	DC-Source

DC-Relation	1109	DC-Relation
DC-Coverage	1110	DC-Coverage
DC-RightsManagement	1111	DC-RightsManagement

Note: From 1097 thru 1111 are Dublin Core Use attributes, the semantics (as well as mappings) are whatever a server decides. For detailed semantics of the Dublin Core elements, see [Description of Dublin Core Elements](#)

Use	Value	Reference to Group Name Used in Table 2
URN	1209	Identifier-URN

TABLE 2: USE ATTRIBUTES (CLASSIFIED AND DEFINED)

Use	Value	Definition	USMARC tag(s)	FINMARC tag(s)
Abstract	62	An abbreviated, accurate representation of a work, usually without added interpretation or criticism.	520	519
Abstract-language	1038	The language code or the language name for the language of the abstract. Entries are made in accordance with ISO 639-1988 'Code for the representation of names of language'. The 2-digit letter code is used as language code, the English term is used as language name.		-
Any	1016	The record is selected if there exists a Use attribute that the target supports (and considers appropriate - see note 1) such that the record would be selected if the target were to substitute that attribute.		-

Notes:

(1) When the origin uses 'any' the intent is that the target locate records via commonly used access points. The target may define 'any' to refer to a selected set of Use attributes corresponding to its commonly used access points.

(2) In set terminology: when Any is the Use attribute, the set of records selected is the union of the sets of records selected by each of the (appropriate) Use attributes that the target supports.

Use	Value	Definition	USMARC tag(s)	FINMARC tag(s)
Anywhere	1035	The record is selected if the term value (as qualified by the other attributes) occurs anywhere in the record.		-

Note:

A target might choose to support 'Anywhere' only in combination with specific (non-Use) attributes. For example, a target might support 'Anywhere' only in combination with the Relation attribute 'AlwaysMatches' (see below), to locate all records in a database.

Notes on relationship of Any and Anywhere:

(1) A target may support Any but not Anywhere, or vice versa, or both. However, if a target supports both, then it should exclude 'Anywhere' from the list of Use attributes corresponding to 'Any' (if it does not do so, then the set of records located by 'Any' will be a superset of those located by 'Anywhere').

(2) A distinction between the two attributes may be informally expressed as follows: 'anywhere' might result in more expensive searching than 'any'; if the target (and origin) support both 'any' and 'anywhere', if the origin uses 'Any' (rather than 'Anywhere') it is asking the target to locate the term only if it can do so relatively inexpensively.

Use	Value	Definition	USMARC tag(s)	FINMARC tag(s)
Application-kind	1039	Information (code or full text) about the patent application.		-
Author-name	1003	A personal or corporate author, or a conference or meeting name. (No subject name headings are included).	100, 110, 111, 400, 410, 411, 700, 710, 711, 800, 810, 811	100, 110, 111, 700, 710, 711, 900, 910, 911
Author-name-and-title	1000	A personal or corporate author, or a conference or meeting name, and the title of the item. (No subject name headings are included.) The syntax of the name-title combination is up to the target, unless used with the Structure attribute Key (see below).	100/24X, 110/24X, 111/24X, subfields \$a & \$t in following: 400,410, 411, 700, 710, 711, 800, 810, 811	100/24X, 110/24X, 111/24X, subfields \$a & \$t in following: 700, 710, 711, 900, 910, 910
Author-	1005	An organization or a group of persons that	110, 410, 710,	110, 710,

name-corporate		is identified by a particular name. (Differs from attribute "name-corporate (2)" in that corporate name subject headings are not included.)	810	910
Author-name-conference	1006	A meeting of individuals or representatives of various bodies for the purpose of discussing topics of common interest. (Differs from attribute "name-conference (3)" in that conference name subject headings are not included.)	111, 411, 711, 811	111, 711, 911
Author-name-personal	1004	A person's real name, pseudonym, title of nobility nickname, or initials. (Differs from attribute "name-personal (1)" in that personal name subject headings are not included.)	100, 400, 700, 800	100, 700, 900
Author-Title-Subject	1036	An author or a title or a subject	1XX, 24X, 4XX, 6XX, 7XX, 8XX	1XX, 24X, 6XX, 7XX, 9XX

Note:

When the Use attribute is Author-name-and-title (1000) the term contains both an author name and a title. When the Use attribute is Author-Title-Subject (1036), the term contains an author name or a title or a subject.

Use	Value	Definition	USMARC tag(s)	FINMARC tag(s)
Body of text	1010	Used in full-text searching to indicate that the term is to be searched only in that portion of the record that the target considers the body of the text, as opposed to some other discriminated part such as a headline, title, or abstract.		
Classification	1040	The code or the section heading of a classification system. The attribute is a general (broad) attribute for codes which are not existing as a search key.		
Classification-Bliss	15	A classification number from the Bliss Classification, developed by Henry Evelyn Bliss.		
Classification-Dewey	13	A classification number from the Dewey Decimal Classification, developed by Melvyl Dewey.	082	082

Classification-government-publication	50	A classification number assigned to a government document by a government agency at any level (e.g., state, national, international).	086	-
Classification-LC	16	A classification number from the US Library of Congress Classification.	050	083
Classification-local	20	A local classification number from a system not specified elsewhere in this list of attributes.		
Classification-NAL	18	A classification number from the US National Agriculture Library Classification.	070	-
Classification-NLM	17	A classification number from the US National Library of Medicine Classification.	060	090
Classification-MOS	19	A classification number from Mathematics Subject Classification, compiled in the Editorial Offices of Mathematical Reviews and Zentralblatt für Mathematik.		-
Classification-UDC	14	A classification number from Universal Decimal Classification	080	080
Code-bib-level	1021	A one-character alphabetic code indicating the bibliographic level such as monograph, serial or collection of the record.	Leader/07	Leader/07
Code-geographic-area	55	A code that indicates the geographic area(s) that appear or are implied in the headings assigned to the item during cataloging.	043	-
Code-geographic-class	1022	A code that represents the geographic area and if applicable the geographic subarea covered by an item. The codes are derived from the LC Classification-Class G and the expanded Cutter number list.	052	-
Code-institution	56	An authoritative-agency symbol for an institution that is the source of the record or the holding location. The code space is defined by the target.	040, 852\$a	040, 852\$a, 996, 997, 998
Code-language	54	A code that indicates the language of the item. The codes are defined by the target.	008/35-37, 041	041\$a

Code-language-original	1095	A code that indicates the original language of the item.		041\$c
Code-map-scale	1024	Coded form of cartographic mathematical data, including scale, projection and/or coordinates related to the item.	034	034
Code-microform-generation	61	The code specifying the generation of a microform	007/11	008/35 (audiovisual materials)
Code-record-type	1001	A code that specifies the characteristics and defines the components of the record. The codes are target-specific.	Leader/006	Leader/006
Concept-reference	1015	Used within Z39.50-1988; included here for historical reasons but its use is deprecated.		-
Concept-text	1014	Used within Z39.50-1988; included here for historical reasons but its use is deprecated.		-
Content-type	1034	The type of materials contained in the item or publication. For example: review, catalog, encyclopedia, directory.	derived value from 008/24-27	derived value from 008/24-27 (type: a,l)
Control-number-BNB	10	Character string that uniquely identifies a record in the British National Bibliography.	015	-
Control-number-BNF	11	Character string that uniquely identifies a record in the Bibliotheque Nationale Francais.	015	-
Control-number-DB	52	Character string that uniquely identifies a record in the Deutsche Bibliothek.	015	-
Control-number-LC	9	Character string that uniquely identifies a record in the Library of Congress database.	010, 011	-
Control-number-local	12	Character string that uniquely identifies a record in a local system (i.e., any system that is not one of the four listed above).	001, 035	001, 012, 014, 015, 035

Note:

The Finnish National Bibliography Number will get it's own use attribute value in the future from the ZIG. Until then it will be searchable with Control-number-local only. After the new attribute

value has been granted, the Finnish NBN must be searchable both with the old and new attribute value.

Use	Value	Value Definition	USMARC tag(s)	FINMARC tag(s)
Control-number-linking	1049	The unique identification number of the linked record. Attribute 'code-record-type' contains a code for the type of record which contains the 'control-number-linking' (b - bibliographical record, e - record for copy-specific data, n - authority record, l - holding record, p - record for cross references, v - full text). Attribute 'code-record-linking' contains a code which determines the type of linking.		
Country-publication (country of Publication)	1053	The country code or the country name of the country where the document has been published. Entries are made according to ISO 3166 'Codes for the Representation of Names of Countries'. As country code a 2-digit letter code is used, as country name the English country name.		
	-			
Date	30	The point of time at which a transaction or event takes place.	005, 008/00-05, 008/07-10, 260\$c, 008/11-14, 033, etc.	008/00-05, 008/07-10, 008/11-14, 260\$c, 033, etc.
Date-publication	31	The date (usually year) in which a document is published.	008/07-10, 260\$c, 046, 533\$d	008/07-10, 260\$c
Date-acquisition	32	The date when a document was acquired	541 \$d	541\$d
Date-conference (meeting date)	1054	The date of the conference or of another meeting.		111\$k, 711\$k
Date-record-status	1055	The date on which the record status was assigned.		008/00-05
Date/time-added-to-database	1011	The date and time that a record was added to the database	008/00-05	008/00-05

Date/time-last-modified	1012	The date and time a record was last updated	005	- Note: this data can be included in e.g. the VTLS-94 system in form YYMMDD.
DC-Title	1097			
DC-Creator	1098			
DC-Subject	1099			
DC-Description	1100			
DC-Publisher	1101			
DC-Date	1102			
DC-ResourceType	1103			
DC-ResourceIdentifier	1104			
DC-Language	1105			
DC-OtherContributor	1106			
DC-Format	1107			
DC-Source	1108			
DC-Relation	1109			
DC-Coverage	1110			
DC-RightsManagement	1111			

Note:

From 1097 thru 1111 are Dublin Core Use attributes, the semantics (as well as mappings) are whatever a server decides. For detailed semantics of the Dublin Core elements, see [Description of Dublin Core Elements](#)

Use	Value	Value Definition	USMARC tag(s)	FINMARC tag(s)
Dissertation-information	1056	Information about a dissertation thesis, or another publication connected with an academic degree.		
Identifier--authority/format	1013	Used in full-text searching to indicate to the target system the format of the document that should be returned to the originating system. The attribute carries not only the format code, but also the authority (e.g., system) that assigned that code.		-
Identifier-CODEN	60	A six-character, unique, alphanumeric code assigned to serial and monographic publications by the CODEN section of the Chemical Abstracts Service	030	-
Identifier-document	1032	A persistent identifier, or Doc-ID, assigned by a server, that uniquely identifies a document on that server.		
Identifier-DOI	1094	Digital Object Identifier.		-
Identifier-ISMN	1092	International standard music number (ISO 10957). ISMN		025
Identifier-ISRC	1091	ISRC. International standard recording code (ISO 3901).		024
Identifier-ISRN	1093	ISRN. International standard technical report number (ISO 10444).		027
Identifier-ISBN	7	International Standard Book Number -- internationally agreed upon number that identifies a book uniquely.Cf. ANSI/NISO Z39.21 and ISO 2108.	020	021
Identifier-ISSN	8	International Standard Serial Number -- internationally agreed	022, 4XX4x, 7XX\$x	022, 4XX\$w, 540w,759-769\$w,

		upon number that identifies a serial uniquely. Cf. ANSI/NISO z39.9 and ISO 3297.		773\$x, 776-789\$w,840w,850w
Identifier-legal-deposit	49	The copyright registration number that is assigned to an item when the item is deposited for copyright.	017	-
Identifier-local-call	53	Call number (e.g., shelf location) assigned by a local system (not a classification number).		950-969
Identifier-national-bibliography	48	Character string that uniquely identifies a record in a national bibliography.	015	012, 015
Identifier-publisher-for-music	51	A formatted number assigned for music by a publisher to a sound recording or to printed music.	028	028
Identifier-report	1027	A report number assigned to the item. This number could be the STRN (Standard Technical Report Number) or another report number. Cf. ANSI/NISO Z39.23 and ISO 10444.	027, 088	027
Identifier-standard	1007	Standard numbers such as ISBN, ISSN, music publishers numbers, CODEN, etc., that are indexed together in many online public-access catalogs.	010, 011, 015, 017, 018, 020, 022, 023, 024, 025, 027, 028, 030, 035, 037	012, 014, 015, 021, 022, 023, 024, 025, 027, 028, 029, 035, 856\$g
Identifier-stock	1028	A stock number that could be used for ordering the item	037	-
Identifier-thematic	1030	The numeric designation for a part/section of a work such as the serial, opus or thematic index number.	\$n in the following: 130, 240, 243, 630, 700, 730	248\$g, 410-490 \$v
Identifier-URN	1209	Uniform Resource Name		-
Indexed-by	1023	For serials, a publication in which the serial has been indexed and/or abstracted	510	-
Material-type	1031	A free-form string, more specific than the one-letter code in	derived value from	Leader/06-07, 008, 300\$z

		Leader/06, that describes the material type of the item, e.g., cassette, kit, computer database, computer file.	Leader/06-07, 007, 008, and 502	
Meeting-organizer	1057	The name of the organizer or the sponsor of a conference.		-
Music-key	1025	A statement of the key in which the music is written	\$r in the following: 130, 240, 243, 630, 700, 730	240\$m, 640\$m
Name	1002	The name of a person, corporate body, conference, or meeting. (Subject name headings are included.)	100, 110, 111, 400, 410, 411, 600, 610, 611, 700, 710, 711, 800, 810, 811	100, 110, 111, 600, 610, 611, 700, 710, 711, 810, 900, 910, 911
Name-and-title	57	The name of a person, corporate body, conference, or meeting, and the title of an item. (Subject name headings are included.) The syntax of the name-title combination is up to the target, unless used with the Structure attribute Key (see below).	100/24X, 110/24X, 111/24X, subfields \$a & \$t in following: 400,410, 411, 600, 610, 611, 700, 710, 711, 800, 810, 811	100/24X, 110/24X, 111/24X, subfields \$a and h & \$t in following: 600, 610, 611, 700, 710, 711, 900, 910, 911
Name-corporate	2	An organization or a group of persons that is identified by a particular name. (Subject name headings are included.)	110, 410, 610, 710, 810	110, 610, 710, 910
Name-conference	3	A meeting of individuals or representatives of various bodies for the purpose of discussing topics of common interest. (Subject name headings are included.)	111, 411, 611, 711, 811	111, 711, 911
Name-editor	1020	A person who prepared for publication an item that is not his or her own.	100 \$a or 700 \$a when the corresponding \$e contains value 'ed.'	-

Name-geographic	58	Name of a country, jurisdiction, region, or geographic feature	651	655
Name-geographic-place-publication	59	City or town where an item was published	008/15-17, 260\$a	260\$a
Name-personal	1	A person's real name, pseudonym, title of nobility nickname, or initials.	100, 400, 600, 700, 800	100, 600, 700, 900
Name-publisher	1018	The organization responsible for the publication of the item.	260\$b	260\$b
Note	63	A concise statement in which such information as extended physical description, relationship to other works, or contents may be recorded	5XX	5XX
Note-availability	1058	Information about the availability of a document (delivery information).	-	
Number-document (document number)	1060	The publication number of the document (e.g. the number of the abstract in a secondary publication, or the number of the manuscript in a primary journal) provided that this number is not used as 'internal key' in the database. A publication number used as 'internal key' is entered in Attribute 12.		
Number-local-accounting	1061	The account number of the document assigned by the accounting system.		
Number-local-acquisition	1062	Document acquisition number assigned by the system.		
Number-local-call-copy-specific	1063	The document's shelf number.		
Number-of-reference (reference count)	1064	The number of literature references cited in a document.		
Number-norm	1065	The number of a norm or standard.		

Number-volume	1066	The number of single volumes of a multivolume publication, (year's) issues of serials, parts of multivolume publications, serials journals etc.		
Place-conference (meeting location)	1067	The place where the conference or meeting was held.		111\$j, 711\$j
Possessing-institution	1044	A code (library symbol or other code) of the institution which possesses the document. The codes are agreed upon between the partners.		-
Record-linking	1045	An alphabetical code which determines the type of linking.		-
Record-source	1019	The USMARC/FINMARC code or name of the organization(s) that created the original record, assigned the USMARC content designation and transcribed the record into machine-readable form, or modified the existing USMARC/FINMARC record; the cataloging source.	008/39, 040	040
Record-status	1046	Information about the status of the record, e.g. new, corrected, deleted, revised.		000/05
Server choice	1017	The target substitutes one or more access points. The origin leaves the choice to the target.		

Notes on relationship of Any and Server-choice:

(1) When the origin uses 'Server-choice' it is asking the target to select one or more access points, and to use its best judgment in making that selection. When 'Any' is used, there is no selection process involved; the target is to apply all of the (appropriate) supported Use attributes. The origin is asking the target to make a choice of access points.

(2) The target might support 'Any' and not 'Server-choice', or vice versa, or both. If the target supports both, when the origin uses 'Server-choice', the target might choose 'Any'; however, it might choose any other Use attribute.

Use	Value	Definition	USMARC tag(s)	FINMARC tag(s)
SICI	1037	The Serial Item and Contribution Identifier; based on NISO Z39.56, which provides an extensible mechanism for the creation of a code which uniquely identifies either an issue of a serial title or a contribution (e.g., article) within a serial regardless of distribution medium (paper, electronic, microform, etc.).		024
Subject	21	The primary topic on which a work is focused	600, 610, 611, 630, 650, 651, 653, 654, 655, 656, 657, 69X	600, 610, 640, 650-698
Subject-AGROVOC	1085	A subject heading from the multilingual agricultural thesaurus from FAO.		-
Subject-BDI	23	Subject headings from Bibliotek Dokumentasjon Informasjon -- a controlled subject vocabulary used and maintained by the five Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden).		-
Subject-EPT	1087	A subject heading from European Pedagogical Thesaurus.		-
Subject-INSPEC	24	Subject headings from Information Services for the Physics and Engineering Communities -- the Information Services Division of the Institution of Electrical Engineers.	600i2, 610i2, 611i2, 630i2, 650i2, 651i2	-
Subject-LC	27	Subject headings from US Library of Congress Subject Headings	600i0, 610i0, 611i0, 630i0, 650i0, 651i0	650
Subject-LC-Children's	1008	Subject headings, for use with children's literature, that conform to the formulation guidelines in the "AC Subject Headings" section of the Library of Congress Subject Headings.	600i1, 610i1, 611i1, 630i1, 650i1, 651i1	-
Subject-local	29	Subject headings defined locally		652, 653, 654, 656, 658, 66X, 670-686, 692-698

Subject-MESH	25	Subject headings from Medical Subject Headings --maintained by the US National Library of Medicine	600i2, 610i2, 611i2, 630i2, 650i2, 651i2	690
Subject-NAL	1088	A subject heading from National Agricultural Library.		-
Subject-name-conference	1073	A conference name used as subject heading.		-
Subject-name-corporate	1074	A corporate body name used as a subject heading.		610
Subject-name-form	1075	A formal topical subject heading, e.g. collection of articles, handbook, source.		-
Subject-name-geographical	1076	A geographical/ethnographical subject heading.		655
Subject-name-title	1078	A title proper used as subject heading.		640
Subject-name-topical	1079	A topical subject heading.		652-686
Subject-PA	26	Subject headings from Thesaurus of Psychological Index Terms -- maintained by the Retrieval Services Unit of the American Psychological Association.	600i2, 610i2, 611i2, 630i2, 650i2, 651i2	-
Subject-PRECIS	45	Subject headings from PREserved Context Index System -- a string of indexing terms set down in a prescribed order, each term being preceded by a manipulation code which governs the production of pre-coordinated subject index entries under selected terms -- maintained by the British Library.		-
Subject-RAMEAU	22	Subject headings from Repertoire d'autorite de matieres encyclopedique unifie -- maintained by the Bibliotheque Nationale (France).		-
Subject-RSWK	46	Subject headings from Regeln fur den Schlagwortkatalog -- maintained by the Deutsches Bibliotheksinstitut.		-

Subject-RVM	28	Subject headings from Repertoire des vedettes- matiere -- maintained by the Bibliotheque de l'Universite de Laval.	600i6, 610i6, 611i6, 630i6, 650i6, 651i6	-
Subject-subdivision	47	An extension to a subject heading indicating the form, place, period of time treated, or aspect of the subject treated.	6XX\$x, 6XX\$y, 6XX\$z	6XX\$x, 6XX\$y, 6XX\$z
Subject-uncontrolled	1080	An uncontrolled subject term. General (broad) attribute for subject terms not specified any further, existing as a search key.		692-698
Title	4	A word, phrase, character, or group of characters, normally appearing in an item, that names the item or the work contained in it.	21X-24X, 440, 490, 730, 740, 830, 840, subfield \$t in the following: 400, 410, 410, 600, 610, 611, 700, 710, 711, 800, 810, 811	21X-24X, 410, 440, 490, 540, 640, 810, 840, subfield \$t in the following: 600, 610, 700, 710, 711, 730, 900, 910, 911
Title-abbreviated	43	Shortened form of the title; either assigned by national centers under the auspices of the International Serials Data System, or a title (such as an acronym) that is popularly associated with the item.	210, 211, 246	210, 246
Title-added-title-page	37	A title on a title page preceding or following the title page chosen as the basis for the description of the item. It may be more general (e.g., a series title page), or equally general (e.g., a title page in another language).	246i5	-
Title-caption	38	A title given at the beginning of the first page of the text	246i6	-
Title-collective	34	A title proper that is an inclusive title for an item containing several works	243	245
Title-cover	36	The title printed on the cover of an item as issued	246i4	246i4
Title-expanded	44	An expanded (or augmented) title has been enlarged with descriptive words by the cataloger to provide additional indexing	214 (obs.), 246	

		and searching capabilities.		
Title-former	42	A former title or title variation when one bibliographic record represents all issues of a serial that has changed title.	247, 780	780
Title-host-item	1033	The title of the item containing the part described in the record, for example, a journal title when the record describes an article in the journal.	773\$t	773\$t
Title-key	33	The unique name assigned to a serial by the International Serials Data System (ISDS).	222	222
Title-later	1096	A later version of title.		-
Title-other-variant	41	A variation from the title page title appearing elsewhere in the item (e.g., a variant cover title, caption title, running title, or title from another volume) or in another issue.	212 (obs.), 246i3, 247, 740	246i3,745
Title-parallel	35	The title proper in another language and/or script	246i1	245\$r, 246i1
Title-related-periodical	1026	Serial titles related to this item, either the immediate predecessor or the immediate successor.	247, 780, 785	780, 785
Title-running	39	A title, or abbreviated title, that is repeated at the head or foot of each page or leaf	246i7	-
Title-series	5	Collective title applying to a group of separate, but related, items.	440, 490, 830, 840, subfield \$t in the following: 400,410, 411, 800, 810, 811	410, 440, 490, 810, 840, subfield \$t in the following: 700,710, 711, 900, 910, 911
Title-spine	40	A title appearing on the spine of an item	246i8	-
Title-translated	1082	The translation of a title.		242
Title-uniform	6	The particular title by which a work is to be identified for cataloging purposes.	130, 240, 730, subfield \$t in the following: 700,710,711	240, subfield \$t in the following:

				700,710, 711
Treatment	1047	A statement (code or full text) describing subject aspects of the content.	246i8	-
Year-of-beginning	1083	The publication year of the first issue/volume of serial publications (journals, newspapers, etc.).		008/7-10
Year-of-ending	1084	The publication year of the last issue/volume of serial publications (journals, newspapers, etc.).		008/11-14

Fin-1 Use Attributes: OID values if used in Bib-1

Use	Value	Definition	USMARC tag(s)	FINMARC tag(s)
YSA Finnish general thesaurus	6101	YSA Finnish general thesaurus		652
ALLÄRS Swedish general thesaurus	6102	ALLÄRS Swedish general thesaurus		656
Finnish music thesaurus	6103	Finnish music thesaurus		653
CILLA Swedish music thesaurus	6104	CILLA Swedish music thesaurus		657
KAUNOKKI Finnish fiction thesaurus	6105	KAUNOKKI Finnish fiction thesaurus		654
BELLA Swedish fiction thesaurus	6106	BELLA Swedish fiction thesaurus		658
Geographical subject headings	6107	Geographical subject headings		655

Index terms for education and psychology	6108	Index terms for education and psychology		660
Legal subject headings	6109	Legal subject headings		665
Thesaurus of the social sciences	6110	Theasaurus of the social sciences		670
Religion Indexes subject headings	6111	Religion Indexes subject headings		680
Forestry subject headings	6112	Forestry subject headings		685
Agricultural subject headings	6113	Agricultural subject headings		686
YKL Public library classification	6114	YKL Public library classification		098
Local item-number	6115	Local item-number		-
Local patron-number	6116	Local patron-number		-

2.2 RELATION ATTRIBUTES (TYPE = 2)

Relation attributes describe the relationship of the access point (left side of the relation) to the search term as qualified by the attributes (right side of the relation), e.g., Date-publication <= 1975.

The Relation attributes are the following:

Relation	Value
Less than	1
Less than or equal	2
Equal	3
Greater or equal	4
Greater than	5
Not equal	6
Phonetic	100
Stem	101
Relevance	102
AlwaysMatches	103

Relation attribute Equal -- specifies an exact match (subject to possible qualification by the truncation or structure attributes).

Relation attributes Less than, Less than or equal, Greater than or equal, and Greater than -- meaningful only when both the term value as qualified by the attributes and the access point can be realized as elements of a set that has an inherent implied order.

Relation attributes Stem and Phonetic -- Stem refers to a lexical or linguistic match; the term is to be compared with words in a record to find those with the same stem. Phonetic refers to a match based on aural similarity such as Soundex. In both cases, the match algorithms are defined by the target.

Relation attribute Relevance -- used to select records that are relevant to the term. When used, the Use attribute determines what portion of a record is to be evaluated for relevance. The relevance algorithm is defined by the target.

Relation attribute AlwaysMatches -- when the Relation attribute AlwaysMatches occurs:

- The target ignores the supplied term.
- If the Use attribute is Any or Anywhere, then all records are to be selected.
- If a Use attribute other than Any or Anywhere is supplied, all records are selected for which the access point corresponding to the supplied Use attribute is meaningful. For example: if the Use attribute is Title, all records that have a title field are selected.

2.3 POSITION ATTRIBUTES (TYPE = 3)

The Position attribute specifies the location of the search term within the field or subfield in which it appears.

For the purpose of describing the Position attributes, when the expressions "field" or "subfield" do not have another understood meaning (as prescribed, for example, by the schema in use), these two expressions are used as follows:

- "subfield" has no meaning, and the Position attribute "first in any subfield" is not to be used.
- "field" refers to the portion of the record to which the access point refers.

The Position attributes are the following:

Position	Value	Definition
First in field	1	Search term must be the first data in the field
First in subfield	2	Search term may appear in any subfield but must be the first data in the subfield in which it appears.
Any position in field	3	Search term may appear any place in the field.

2.4 STRUCTURE ATTRIBUTES (TYPE = 4)

The Structure attribute specifies the type of search term (e.g., a single word, a phrase, several words to be treated as multiple single terms, etc.).

The Structure attributes are the following:

Structure	Value	Definition
Phrase	1	A phrase consists of one or more groups of characters separated by blanks (for example, ASCII hex "20"). The value to be searched is exactly as it appears in the search term with respect to order and adjacency. Word(s) in the phrase may be explicitly truncated. (See "Truncation" -- section 2.5 below.) To indicate that additional words may appear in the access point, use the completeness attribute.
Word	2	A word consists of a group of non-blank characters. It specifies the exact text of the value to be searched, unless the word is explicitly truncated. (See "Truncation" -- section 2.5 below.) A word search term contains no blanks.
Key	3	A key specifies a sequence of characters extracted from those characters contained in an indexed word but not necessarily representing complete words. In the term, key segments should be separated by a blank (ASCII hex "20"). Each key segment should be

		the length of a key segment in the origin system or the length of the word, to a maximum of 6 characters. (For example, an name/title derived key search term for "Copland, Aaron, 1900- Rodeo" could be "coplan rodeo".) A segment may be adjusted by the target to the length required for the target's indexes.
Year	4	A year search term is numeric and contains four digits
Date (normalized)	5	The day, month, year and time when a transaction or event takes place. The date search term structure is as defined for Generalized Time in ASN.1 (ISO 8824) except that the only mandatory portion of the string is the four-digit representation of the year.
Word list	6	A word list consists of one or more words separated by blanks (for example, ASCII hex "20"). No order of the words is implied. The attributes (other than structure) that are associated with the search term apply to each word in the word list. Any words in a word list may be explicitly truncated. (See "Truncation" -- section 2.5 below.) The relationship between the words in a word list is target-specific.
Date (un-normalized)	100	The day, month, and year when a transaction or event takes place. The un-normalized search term is unstructured.
Name (normalized)	101	A name search term that is structured in a particular order (e.g., last_name, first_name). The resulting term is subject to special matching rules on the target system that differ from those applied to names structured as phrases or unstructured names.
Name (un-normalized)	102	A name search term that is unstructured (e.g., first_name last_name), however, the resulting term is subject to matching rules on the target system that differ from those applied to phrases or structured names (e.g., the term "john smith" might be searched by the target as "smith, j#").
Structure	103	The term has a structure that is either implied by the Use attribute or defined by the target.
Urx	104	The term is a document identifier, for example, an identifier extracted from a Z39.50 URL.
Free-form-text	105	The term is text, input by the end user. May be used, for example, for relevance feedback.
Document-text	106	The term is text, extracted from a document. May be used, for example, for relevance feedback.
Local-number	107	A number significant to the target
String	108	The entire term is to be treated as a string, rather than a sequence or set of individual words.
Numeric string	109	The term is a character string that represents a number.

2.5 TRUNCATION ATTRIBUTES (TYPE = 5)

The Truncation attribute specifies whether one or more characters may be omitted in matching the search term in the target system at the position specified by the Truncation attribute. For example, a word in a search term may be 1) right truncated, in which case the word is treated both as a complete word and as the beginning of a longer word; 2) left truncated in which case the word is treated both as a complete word and the ending of a longer word; 3) left and right truncated, in which case the word is treated as a complete word and the beginning or ending of a longer word; 4) and embedded truncation, in which case the word is treated as a complete word and as a longer word with additional characters at the point where the truncation symbol, "#", appears in the search term.

For Right truncation, left truncation, and Left and right truncation, the characters affected by the truncation are determined by the value of the structure attribute.

The Truncation attributes are the following:

Truncation	Value	Structure attribute	Definition
Right truncation	1	Word or phrase	Last word of term is right truncated
		String	Entire term is right truncated.
		Word list	Each word is right truncated.
Left truncation	2	Word or phrase	First word of term is left truncated
		String	Entire term is left truncated.
		Word list	Each word is left truncated.
Left and right truncation	3	Word or phrase	First word of term is left truncated and last word of term is right truncated
		String	Entire term is left and right truncated.
		Word list	Each word is left and right truncated.
Do not truncate	100		No truncation is to be applied
Process # in search term	101		The search term contains the symbol "#" (ASCII hex "23") to show where truncation will take place (e.g., "National H# Institute", or "d#on").
RegExpr-1	102		The term is in the form of a regular expression as prescribed by IEEE 1003.2 Volume 1, Section 2.8 "Regular Expression Notation".
RegExpr-2	103		The term is in the form of a regular expression whose format is target-defined.

2.6 COMPLETENESS ATTRIBUTES (TYPE = 6)

The Completeness attribute specifies that the contents of the search term represent a complete or incomplete subfield or a complete field. Completeness indicates whether additional words should appear in a field or subfield with the search term. Note the difference from Truncation (Section 2.5 above), which handles characters added to words, phrases, or strings.

For the purpose of describing the Completeness attributes, when the expressions "field" or "subfield" do not have another understood meaning (as prescribed, for example, by the schema in use) these two expressions are used as follows:

- "subfield" has no meaning, and the Completeness attribute incomplete subfield is used to mean "incomplete field".
- "field" refers to the portion of the record to which the access point refers.

The Completeness attributes are the following:

Completeness	Value	Definition
Incomplete subfield	1	Words other than those in the search term may appear in the subfield or field in which the term appears.
Complete subfield	2	No words other than those in the search term should appear in the entire subfield in which the term appears, but additional words may appear in other subfields in the field.
Complete field	3	No words other than those in the search term should appear in the entire field in which the term appears.

Rules pertaining to Bib-1 Attribute Combinations

If a target does not support a given attribute list, it should fail the search and supply an appropriate diagnostic.

A given attribute type may appear zero times, one time, or more than one time, in an attribute list.

If an attribute type does not occur in an attribute list, then (in the absence of any prior understanding, either outside of the standard or via the Explain facility) the origin should not expect any particular default target behavior.

If an attribute type occurs exactly once in an attribute list, then the attribute value specifies the preferred target behavior with respect to that attribute type.

It is recommended that an attribute type not occur more than once in an attribute list, unless an associated "semantic action" is included (i.e. attributeValue selects 'complex').

When attributeValue selects 'complex', 'semanticAction' may be included. SemanticAction is a sequence of integers; for bib-1, it is either a single integer or a sequence of two integers. For the first integer in the sequence, values are:

1. May not substitute another attribute. If none in the list is supported, fail the search.
2. May substitute another attribute, but only if none in the list is supported.
3. May substitute another attribute at target discretion (even if one or more in the list is supported).

The second integer in the sequence is to be supplied if and only if there are multiple attributes in the list. Values are:

1. Select the first supported attribute in the list.
2. Select the best attribute in the list.

3. NEW ATTRIBUTES

The Z39.50 Maintenance Agency manages the addition of attributes to the bib-1 attribute set. Generally, suggestions for new attributes are posted to the Z39.50 Implementors Group list and discussed at a subsequent ZIG meeting before being included in the attribute set.

4. REFERENCES

- [1] <ftp://ftp.loc.gov/pub/z3950/defs/bib1.txt>: Bib-1 Attribute Set Semantics
- [2] <http://lcweb.loc.gov/z3950/agency/defns/bib1.html>: Bib-1 Attribute Set