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**Information and documentation -- Information retrieval (Z39.50)
-- Application service definition and protocol specification**

信息与文献 信息检索(Z39.50)应用服务定义和协议规范

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard is equivalent to international standard ISO 23950:1998 "Information and documentation - Information retrieval (Z39.50) application service definition and protocol specification".

The standard international standard ISO 23950:1998 in the translation made changes, technical contents were not changed.

This standard has 16 appendices.

Appendix Appendix A ~ L is a normative appendix, Appendix Appendix M ~ P is informative appendix.

This standard by the National Information and Documentation Standardization Technical Committee (SAC/TC4) and focal points.

This standard was drafted. China Defense Science and Technology Information Center, China Science and Technology Information Institute, Beijing University.

Introduction

It does not refer to the standard version. Z30.50-1992 predetermined protocol version 2; Z39.50-1995 provisions version 2 and version 3 protocol.

Z39.50-1992 replaces the outdated Z39.50-1988, however, Z39.50-1992 and the relationship between the Z39.50-1995 completely different. Z39.50-1995 is compatible with the 1992 version of the superset, implementers can get the full version 2 from the Z39.50-1995 Details, and compatibility with Z39.50-1992.

Protocol Basics

This agreement describes the format and procedures between the client and server exchange of information so that the client can (a) a request to search for a server Database and identify the records to meet the specific requirements, (b) obtain a copy of some or all of the identified record.

The client can create a request on behalf of the user. This protocol describes (may be located on different computers) between the client and the server Communication; not describe the interaction between the client and the user.

Z39.50-1992 and ISO 23950 supports the following basic functions. the client can send search requests to one or more specified number Databases, and includes a search query and for determining whether the records as part of the return parameter response. To identify the server A number of records as a response, and may return some or all of the records. Then, the client can request the selected record. Suppose the client search Cable to record the formation of a "result set" (an ordered set, the order is determined by the server), these records according to their focus on results the position reference. Optional features include.

In some cases, when the client does not wish to receive complete database records, you can specify a set of data elements, intended to indicate the requested data yuan. For example, a client can specify "If the recognized record is less than or equal to 5, the transmission 'complete' record; if more than 5, then pass Lose 'brief' records. " A client can specify the preferred response to record syntax, for example. USMARC.

The client may name a result set for later reference.

The client may delete a named result set.

Before the server can process the request in order to request verification of clients have access control.

The server can send a non-solicitation or solicitation of status reports, providing resource control; the server may suspend processing and allow the customer Client indicates whether to continue.

Query Expression

Supports ISO 23950 Type-1 queries to make detailed provisions and requirements. Type-1 query a search term with a table Shown, each search entry has a set of attributes, such as the type specified in (topic, name, etc.) the search terms, would have been cut off, and the knot of a search term Structure. The server is responsible for these properties are mapped to the logical database design. In a Type-1 query, the search term can be cloth Seoul operators combined. These search terms and operators to reverse Polish notation indicates.

Attribute Set

Attributes associated with a search term belong to a particular set of attributes, defined through registration, which is to be assigned a Unique, globally recognized, in the query object contains an identifier that property set identifier.

Appendix CATR defined and registered attribute set bib-1, which describes the various attributes for bibliographic queries. bib-1 attribute set by the book

Community development projects; if necessary, other groups can develop and register a set of attributes. Additional attributes can be set in addition to ISO 23950 registered.

Response Records

The agreement appears in the server's response message records are divided into two categories. the database records and diagnostic records.

Appendix EREC register various object identifiers MARC formats, including USMARC, UKMARC, NorwayMARC

And CANMARC; database records returned by the server with the object identifier. This annex defines several other types of recording format Style, and provides for the registration of additional recording format method.

Diagnostic record is also identified with the format of the object identifier. Appendix DERR defined and registered two diagnostic record formats (Z39.50-1992 defines one), it includes a variety of diagnostic codes for bibliographic applications. You can also register other diagnostic records format.

New Features

Following is a summary of the enhancements Z39.50-1995 (with respect to the 1992 version). "2nd edition" and "version 3" are two version of the protocol this; "Z39.50-1992" and "Z39.50-1995" is the standard two versions. With a "Z39.50-1995 new features" described Characteristics generally applicable to the two protocol versions. Such as scanning. scan the perpetrators can be added to an existing service real Z39.50-1992 Now without having to use other new features.

The following four categories of the enhancements are described. search, obtain, new services and mechanisms, as well as other enhanced features.

search for

Attributes. Set of attributes and has many new features. In the third edition, a single query (even a single search term) in the properties can be from a different set of attributes. This has two advantages. first, this feature can be used to search multiple databases (although version 2 supports multiple data Library search, but a query that contains all the properties must belong to a single set of attributes, which restricts the ability to search multiple databases, in addition to these non-database similar); second, when defining a new set of attributes that can reduce duplication.

Version 3 adds two flexibility to define a set of attributes new features. First, it defines a new data type for the property value (in the second Version, property values \u200b\u200bcan only be numeric). The second is to define the set of attributes can now list some alternative evaluation rules (for example, whether to allow the service it is considered more appropriate use of property instead of a property), and choose one of the rules of the query. Enhanced bib-1 attribute set the definition adopted this new feature.

In Z39.50-1995 (except Z39.50-1992 contains all the attributes), bib-1 definition also