



The Bath Profile: what is it and why should I care?

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Introduction

Librarians have been acquiring and implementing systems which conform to the Z39.50 communications standard for several years now. As the number of installations has increased, some difficulties have become apparent. Profiles have been developed and are increasingly being discussed as a potential solution to the problems. This document is intended for librarians and consortia managers who use Z39.50 client software packages or who have implemented a Z39.50 server but who are not experts in the details of the Z39.50 standard.

The document is also intended for first-time developers and vendors of integrated library systems or http/Z39.50 gateways.

What is Z39.50?

Z39.50¹ is a communications standard which describes the rules and procedures for communicating between two computer systems for searching and retrieving information from databases. Most library system vendors have incorporated the standard into their cataloguing and other applications. By using a compliant system, the searcher is able to search many different databases accessible through Z39.50 servers and retrieve results. The searcher uses the same search interface for all searches and does not require a detailed knowledge of the system(s) being searched.

Z39.50 is but one standard that libraries and other information providers are using in the increasingly complex realm of metasearching. In order to provide users with a single portal to access all types of information, systems must be able to interpret searches across many types of databases in the web environment. These databases use many different web-based standards and protocols, however, Z39.50 continues to be the most commonly implemented standard for library catalogues and thus has a role to play in the evolving metasearch or multiple protocol search environment.

¹ ANSI/NISO Z39.50-1995, Information Retrieval (Z39.50): Application Service Definition and Protocol Specification (<http://lcweb.loc.gov/z3950/agency/1995doce.html> or ISO23950: 1998, Information and documentation - Information retrieval (Z39.50) - Application service definition and protocol specification.

If Z39.50 is a standard, why do I need a profile?

Within any standard there are implementation options; and the meaning of some specifications may be open to interpretation. Software developers have selected different options to implement or interpreted the standard differently in their systems. This results in the user receiving many false hits or, conversely, not retrieving a record even if it is in the database. Profiles provide the mechanism for vendors and users with an interest in common functionality to specify a standard way to interpret and implement options within the standard. Using a profile that is tailored to your specific search requirements should provide more consistent search results. Specifying conformance to a profile in an RFP or RFI will ensure that libraries acquire the functionality that they require.

What is the Bath Profile?

*The Bath Profile: An international Z39.50 specification for library applications and resource discovery*² identifies those features of the Z39.50 standard that are required to support effective use of Z39.50 software for a range of library functions, such as basic searching and retrieval of bibliographic records for cataloguing, interlibrary loan, reference, and acquisitions. Release 1.1 of the profile defines both a core set of basic author, title and subject search and retrieval specifications across a variety of library databases, and a set of more complex searches. Release 2.0 adds additional functionality by including specifications for the retrieval of holdings information from a local OPAC or union catalogue and the specifications for authority record search and retrieval. The functionality and specifications identified in the profile are intended to be incorporated into more detailed national, regional, provincial/state, and local agreements.

What are the benefits of implementing the Bath Profile?

- Searching and retrieving information from multiple databases will be easier.
- Search results will be more accurate.
- Better precision (i.e., smaller result sets) will be obtained.
- Users will be able to search databases worldwide that have implemented the profile, with the same interface and better quality result sets rather than using different web interfaces for each database.
- Librarians will not have to develop detailed search specifications individually but can benefit from the expertise of the international experts who developed the profile.
- Productivity improvements will result for those functions that rely on searching multiple databases.
- By using the Bath Profile as the basis for a local or regional profile, development time for these profiles will be less.
- Customers may have more leverage when dealing with vendors by asking for support for an international profile rather than a locally developed profile requiring custom development.

² <http://www.collectionscanada.gc.ca/bath/tp-bath2-e.htm>

- Vendors will no longer need to create unique software to retrieve holdings information from other vendor opacs.

How hard is it to implement the Bath Profile?

It is anticipated that the majority of existing library Z39.50 targets and clients will be able to conform to the profile at the entry level (Level 0 Conformance) with some modifications to their legacy systems. Conformance at a higher level will be necessary, however, in order to gain greater precision in search results. This higher level of conformance may require:

- Upgrades to target and client software to support a more precise combination of search characteristics;
- Re-indexing of the database (for example the creation of an author index if the current system only has name indexes);
- Support of additional character sets to accommodate international retrieval.

Your system supplier is the only person who can provide you with a detailed list of what modifications will be required to conform to the profile plus an assessment of feasibility. Whether provision of this additional functionality will incur additional costs will depend on your contract with your system supplier and their policy on new releases of the system.

What happens if I don't implement the Bath Profile?

The primary consequence of not implementing the profile is that all users will continue to experience difficulties when searching across multiple databases where different interpretations of various features of the Z39.50 standard have been implemented. They will continue to receive imprecise search results or not find records even when they are in the database. The dissatisfaction that some users have expressed with Z39.50 searching will continue.

Users of Z39.50 products have identified a number of problems that lead to dissatisfaction. Some of these difficulties are: 1) a searcher does not know which attributes and attribute combinations have been implemented and consequently does not know how to construct an effective search term, 2) databases have implemented different indexes and may search an inappropriate index such as a name index for an author search request, 3) large result sets caused by a server not permitting a precise search and treating all searches as keyword searches, and 4) the lack of information about holdings.

Vendors have also expressed frustration over the necessity to develop different conversion software in order to correctly identify and retrieve holdings information from different library databases.

Who else is implementing the Bath Profile?

At this time, the profile is being implemented by:

- The ZTexas Project (a statewide network of libraries)
- The ONE2 Project (including the national libraries and/or union catalogue agencies of Finland, Sweden, Norway, Denmark, United Kingdom, Italy, and Hungary)
- The Council of Atlantic University Librarians (17 Canadian university libraries)
- The Library and Archives of Canada

The Bath Profile was used as the foundation for ANSI/NISO Z39.89 The U.S. National Z39.50 Profile for Library Applications³.

In Australia, the Bath Profile was endorsed by the Standards Australia/Standards New Zealand IT/19 Committee. The FinZIG (Finnish Z39.50 Implementor's Group) has also endorsed the profile.

The following vendors have also indicated that they are implementing the Bath Profile in their products:

- Sirsi
- Fretwell-Downing
- SeaChange
- OCLC
- Dynix
- Innovative Interfaces

What should I do?

You should carefully assess your requirements for searching multiple databases and talk to your system supplier about these requirements and about the role of the profile in resolving crossdatabase search and retrieval difficulties. The next vendor User Group meeting would provide a good venue for discussing the profile with other users of the vendor's system. Some questions you might ask are:

- Do the vendor's Z39.50 products conform to the Bath Profile?
- At which level and within which functional areas do they conform?
- If not, when will the vendor upgrade their products to implement the Bath Profile?
- How configurable are your client and server products?
- Can you configure your client and server to conform to the search specifications in the Bath Profile locally or must the vendor do it?

If you are preparing a RFP, RFI, or RFQ, include a statement about conformance to the profile according to the desired level of conformance. Guidance on the wording of such a requirement can be found in The RFP Writer's Guide to Standards for Library Systems by Cynthia Hodgson, published by NISO Press.⁴

³ see <http://www.niso.org/standards/index.html>

⁴ http://www.niso.org/standards/resources/RFP_Writers_Guide.pdf

If you are a member of a consortium or provincial/statewide network and are developing a profile, incorporate the Bath Profile as the basis. You can then add more detailed requirements (e.g., more types of searches, etc.) to Bath Profile specifications as needed. You may also want to discuss indexing with your consortia partners in order to improve interoperability.⁵

How can I tell if a product conforms to the Bath Profile?

There is no agency that certifies conformance to the Bath Profile, however, there is a testbed⁶ that can be used to assess the degree of conformance to the profile for any specific target or client. A vendor product may conform to the profile but a specific installation at a particular site may not conform, if the institution has modified the software to meet local requirements. Libraries acquiring Z39.50 products should consider adding a requirement for the product to be tested against the testbed to their RFP.

Where can I get more information?

The Library and Archives of Canada is the Maintenance Agency for the Bath Profile. The Web site for the agency is <http://www.collectionscanada.gc.ca/bath>. There is a discussion list for users, developers and vendors of systems that implement the Bath Profile. Instructions for joining the discussion list are on the Maintenance Agency site.

All interested parties are encouraged to attend meetings of the Developer's Group that are held periodically to discuss issues and proposed changes to the Bath Profile. Upcoming meetings are announced on the Web site and the discussion list. For information on the profile or future meetings contact Carrol Lunau at carrol.lunau@lac-bac.gc.ca.

Technical information on the standard can be found at the Z39.50 Maintenance Agency site at the Library of Congress <http://lcweb.loc.gov/z3950/agency>.

⁵ Guidance on indexing can be found at:
<http://www.unt.edu/zinterop/Documents/IndexingGuidelines1Feb2002.pdf>

⁶ <http://www.unt.edu/zinterop/index.htm>