

NISO Circulation Interchange Protocol (Z39.83-2002)

I. Introduction

The NISO Circulation Interchange Protocol (NCIP) can be considered a “remote control circulation system”. The 90 messages that currently comprise the NCIP standard (45 initiators, 45 responders) are based on major circulation tasks. NCIP addresses three major application areas: Direct Consortial Borrowing (DCB), Circulation/Interlibrary Loan (C/ILL), and Self-Service (SSC). The NCIP protocol defines and specifies the data elements, messages, objects, and services that are transmitted to allow interoperability between different circulation systems, and between circulation systems and other software driven devices and services.

NCIP uses XML as its message transmission structure. Messages are paired – each initiating message provokes a response. Initiating messages can ask questions (Lookup Services), request activities (Update Services), or report on activities (Notification Services). Responding messages implicitly acknowledge that an initiating message was received, but also supply the data, or cause the activity, that was requested.

The NCIP standard includes an Implementation profile as part 2 of the standard. The Implementation Profile specifies details on how to properly implement the standard, including definitions, behavior examples, and a list of data types and their representations.

II. Application Areas

- a. **Direct Consortial Borrowing** application messages streamline the process of borrowing and lending to and by members of a consortium. NCIP messaging enables the parties to a circulation transaction to lookup, use, and share information about borrowers from anywhere in the consortium, saving time for both the user and the library. In addition, NCIP facilitates the exchange of information about holds, charges, returns, and fiscal transactions among consortium participants for more efficient implementation of resource sharing goals.
- b. **Circulation/Interlibrary Loan** application messages allow automated Interlibrary Loan systems to communicate directly with library circulation systems. Instead of a library maintaining two separate materials tracking systems, C/ILL messaging enables ILL software to manage only ILL-specific functionality, while enabling the library’s circulation module to handle an ILL interaction as if it were any other circulation transaction. In this way, circulation management features, such as hold pickup notification, accrual of charges, overdue notification, etc., can be used for interlibrary loan transactions because of the exchange of NCIP C/ILL messages.

- c. **Self-Service** application messages provide the ability to perform unmediated circulation, as well as support for other third party applications and services. Self-service circulation systems utilize NCIP for authentication, fiscal transactions charge, renewal, and returns. Other third party software packages such as PC reservation and scheduling systems, print and copy management systems, and web content filtering, focus on user authentication. Self-service circulation stations not only use NCIP messages for authentication, but also for creating charge and return transactions.
- d. **New application areas** are expected as the NCIP protocol is fully implemented by the library systems industry.

III. Sample RFP Language

The following are examples of language that could be included in an RFP to address NCIP compliance:

- The vendor must describe which application areas (profiles) are supported in their software (DCB, C/ILL, or SSC)
- The vendor must describe which NCIP messages are supported, and if the vendor supports both roles: initiator and responder.
- The vendor must describe successful installations of their NCIP product (a) as an initiator and (b) as a responder.
- The vendor must support NCIP Implementation Profile 1. Describe how the system implements this profile.

Assessing Compliance

Libraries should determine which of the three major application areas (application profiles) are relevant to their particular service environment. For instance, a library that does not have an automated Interlibrary Loan system may decide that requiring C/ILL compliance is superfluous.

Libraries should closely examine their needs in the context of the type of NCIP messages that each vendor supports. While all vendors are working at implementing NCIP messaging, no vendor supports all messages (both responders and initiators) because some messages may not be needed for their products.

On a more technical level, the NCIP Implementation Profiles and Application Profiles include conformance requirements, which outline specific services, messages, and data structures that must be supported for a vendor to claim compliance. Implementation Profile 1, for example, requires XML encoding, a DTD to describe the structure, Unicode UTF-8 to describe character encoding, and transport using HTTP, HTTPS, or TCP/IP.

Finally, libraries may wish to review the activities of the NCIP Implementor's Group at their website, <http://www.cde.state.co.us/ncip>. The meeting minutes will provide some background information about how active any particular vendor is with implementing NCIP, including brief progress updates provided by each vendor attending the meetings.

For More Information:

NCIP Maintenance Agency

www.cde.state.co.us/ncip

Steve Wrede

Colorado State Library

201 East Colfax Avenue

Denver, CO 80203

Phone: 303.866.6975

Fax: 303.866.6940

Email: wredes@cde.state.co.us

NISO (National Information Standards Organization)

www.niso.org

4733 Bethesda Avenue

Suite 300

Bethesda, MD 20814

Phone: 301.654.2512

Fax: 301-654-1721

Email: nisohq@niso.org