NCIP

Direct Consortial Borrowing: Item Agency Manages Transaction Application Profile

An Application Profile to support ANSI/NISO Z39.83-200x

Abstract: This application profile describes the functions, applications, and the operating environment in which an item agency's policies related to privileges, circulation, renewals, fines, and all other circulation transactions manage the circulation transactions.

Release: May 24, 2002

Table of Contents

1.   Introduction

This profile, referred to as the NCIP Direct Consortial Borrowing: Item Agency Manages the Transaction Profile (DCB-1) of the NISO Circulation Interchange Protocol (NCIP) defines the functions, applications, and the operating environment in which an item agency's policies related to privileges, circulation, renewals, fines, and all other circulation activities manage the circulation transactions. It is suitable for a group of libraries whose policy is that the item-owning library manages the entire circulation process, and informs the user-managing library of the activity.

The base standard that enables this communication is NCIP. This profile is based on that protocol, as well as the supporting NCIP Implementation Profile 1.

There are three other Direct Consortial Borrowing profiles as follows:

DCB-2	User Agency Manages the Transaction
DCB-3	Broker Application Manages Transaction Application Profile
DCB-4	User Agency Manages Transaction with Proxy Checkout Application Profile

2.   Description of Application Area

This document profiles a way of performing Direct Consortial Borrowing (DCB).

Through Direct Consortial Borrowing (DCB), users of one agency can request and borrow items from another agency within a consortium. The NCIP facilitates the transfer of user and item data between disparate circulation applications, thereby allowing an agency to manage traffic for non-local patrons and/or provide local control of items belonging to another agency.

3.   Scope

This profile defines the use of the NCIP by a group of libraries to circulate Items to users where the items are not owned (more broadly, not controlled) by the library to which the user belongs. It ensures that the user's library is kept informed of the events in the circulation of items to its users. It does not provide tracking information to other libraries in the consortium. Finally, it defines an optional feature (Fees & Fines Collection at Any Agency) that enables users to pay fees & fines at any agency.

This profile does not assume that the libraries employ a common application (e.g., a brokering application), in fact it is expressly designed to require no applications other than profile-conformant circulation systems and a Public Access Catalogue or other patron empowerment applications.

This profile requires the transmission of confidential personal information by the user agency to other agencies. While it requires use of a reasonably secure transport protocol, (HTTPS), this profile is not intended for use where such sharing of confidential personal information is not acceptable.

This profile is intended for groups of libraries that desire a high level of resource sharing with a minimum of staff effort, and are willing and able to share and maintain policy and configuration information to attain that goal. This profile does not address what policy and configuration information must be shared, nor how it is maintained. It is assumed that conforming applications will have different requirements and will provide appropriate mechanisms to achieve them. For example, applications must be able to transmit NCIP initiation messages to the applications associated with other agencies. Because there is no facility in NCIP to determine a network address for an agency's NCIP application, each application must be able, outside the scope of this profile, to determine such addresses.

This profile defines the employment of NCIP services by conforming applications; other activities, while in many cases necessary to the employment of those services (e.g., database updates, display of information to the user) are out of the scope of this profile.

4. References

There are no standards or other references beyond those included in the NISO Circulation Interchange Protocol and the NCIP Implementation Profile 1.

5. Definitions

In addition to the definitions in the NCIP protocol, this profile further defines:

Dropoff Agency	An agency where a user drops off physical information resources other than the user or item agency
Event	An indication to an application that a user or staff user seeks to invoke an NCIP service in conformance with this profile, or a determination by such an application to invoke an NCIP service.
Fees & Fines Collection at Any Agency	An optional feature that enables any Agency to collect fees and fines from users on behalf of the item agency that assessed them. **Note**: This profile does not address how the various agencies reconcile the collected funds, except in so far as the profile ensures that the item agency authorizes collection of the funds in each case.
Item	In addition to the definition of Item in the NCIP, the term is restricted in this profile to Items that are not owned or controlled by the agency to

	which the user (in this particular circulation transaction) belongs.
Item Agency	The agency to which a specific physical or electronic information resource belongs.
Location	The physical location of the user or staff user when the event occurs.
Optional Event	An event identified by the text "(O)" in the Triggering Event and Event Location column of the Event Table.
Optional Service	An NCIP Service identified by the text "(O)" in the Service Initiated column of the Event Table.
Pickup Agency	An agency where a user prefers to pick up physical information resources other than the user or item agency.
Required Event	An event identified by the text "(R)" in the Triggering Event and Event Location column of the Event Table.
Required Service	An NCIP Service identified by the text "(R)" in the Service Initiated column of the Event Table.
Role	A named set of behaviors that applications may claim conformance to.
User	In addition to the definition of user in the NCIP, the term is restricted in this profile to users that are not associated with the agency that owns or controls the Item in this particular circulation transaction.
User Agency	The agency with which a user (person) is affiliated through registration and/or membership.
User Interface	An application that provides an interface to users for those events that a user can generate without intervention of staff users of any agency (e.g, Request Item).

6.   Conformance and Support

6.1. Introduction to Conformance and Support

This section defines rules for determining whether an application's claim of conformance to this profile and any statement of support for optional features are valid. Throughout this section references to the Event Table are to Section 7.6 and to the Lookup Service Table are to Section 7.7 in this document.

6.1.1 Roles

This profile defines five roles to which an application may claim conformance:

- Item Agency
- User Agency
- User Interface
- Pickup Agency
- Dropoff Agency

These roles are defined in Section 5 above.

6.1.2. Statements of Conformance

A statement of conformance to this profile SHALL be made in the following form:

"X conforms to the Y role(s)."

"X" specifies the application claiming conformance and "Y" identifies one or more of the roles listed above.

6.1.3. Requirements of Conformance

An application that claims conformance to a role SHALL, while operating according to this profile:

1. Conform to the NISO Circulation Interchange Protocol and the Implementation Profile 1.
2. Be able to recognize every Required Event in those rows where its role is listed in the Initiating Application column of the Event Table.
3. Invoke each Required Service in those rows where its role is listed in the Initiating Application column of the Event Table whenever it recognizes an Event.
4. Be able to respond successfully to every Required Service in those rows where its role is listed in the Responding Application column of the Event Table.
5. Meet the Message Constraints as defined in the Event Table for all messages it transmits.
6. Include all required and conditionally required elements in all messages as defined in the Lookup Service Table.
7. Meet all restrictions on enumerated types as stated in section 7.5.3.

6.1.4 Variant Conformance Requirement for Services

In some cases applications may, for a row in the Event Table, perform the role identified in the Initiating Application column and that identified in the Responding Application column for a given circulation transaction (i.e., the To Agency and the From Agency in the Initiation Header would be identical). In such cases the application is not required to transmit the initiation and response messages associated with the Service identified in that row, so long as the effect of the specified NCIP Service as defined in the Protocol and this profile is achieved.

6.2 Optional Features

The following optional feature is defined by this profile:

Fees & Fines Collection at Any Agency

This feature is defined in Section 6 below.

6.2.1 Statement of Support

A statement of support for an optional feature in this profile SHALL be in the following form:

"X supports the Z feature(s)."

"X" specifies the application claiming support of an optional feature and "Z" identifies one or more of the optional features listed above.

6.2.2 Requirements of Support

An application that claims to support an optional feature SHALL conform to at least one of the Roles for which that feature is defined, and for every one of those roles it SHALL (replace "*Optional Feature*" with the name of the optional feature in the numbered points that follow):

1. Behave as if Optional Events are Required Events for any rows where the text "Required Event for *Optional Feature*" appears in the Message Constraints column of the Event Table.
2. Behave as if Optional Services are Required Services for any rows where the text "Required Service for *Optional Feature*" appears in the Message Constraints column of the Event Table.

The Features by Role Table in the next section identifies the roles for which an optional feature is defined.

6.2.3 Features by Role Table

Role	Features defined for this role
Item Agency	Fees & Fines Collection at Any Agency
User Agency	Fees & Fines Collection at Any Agency
Pickup Agency	Fees & Fines Collection at Any Agency
Dropoff Agency	Fees & Fines Collection at Any Agency
User Interface	Fees & Fines Collection at Any Agency

7. Profile Specification

7.1 Profile Description

This profile is intended for groups of libraries that desire a high level of resource sharing with a minimum of staff effort. It is suitable for a group of libraries whose policy is that the item-owning library manages the entire circulation process, and informs the user-managing library of the activity.

It allows users to place requests for items belonging to any library in the consortium, and it allows them to pickup and drop-off materials at any library in the consortium. It provides for circulation of items to users in a fashion that will appear nearly identical to what the user experiences when circulating items belonging to the same library as they do.

This profile employs NCIP Notification services to keep the user's library informed of the events in the circulation of items to its users (for tracking purposes). It does not provide tracking information to other libraries in the consortium. Because the item agency is managing the entire circulation process it does not require NCIP messaging for it to track that process.

7.2 Participating Applications

This profile defines behaviors for applications conforming to one or more roles. Those roles are:

- User Agency
- Item Agency
- User Interface
- Pickup Agency
- Dropoff Agency

For convenience an application serving in the role of the item agency is named the item agency application; similarly for the other four roles.

In any of these roles applications may initiate NCIP services. Applications serving in any of these roles except that of user Interface may also respond to NCIP service initiations. The NCIP services invoked by applications in any role were chosen for this profile to ensure that the item agency application manages the entire circulation transaction.

The list of NCIP services potentially invoked by an application serving in one role is not identical to that of an application serving in any other role; in other words no two application roles are identical with regard to the NCIP services they must invoke or respond to.

Any of the applications may be required to invoke NCIP Lookup Type services to enable them to conform to this profile; the item and user agency applications are required to respond to certain Lookup Type Services (see section 7.7).

It is also likely that a library may be the User Agency, the Pickup Agency and the Dropoff Agency for the same circulation transaction, and similarly a library may be the Item Agency, the Pickup Agency and the Dropoff Agency for the same circulation transaction.

Consequently the typical circulation system may implement all four of these roles: Item Agency, User Agency, Pickup Agency and Dropoff Agency.

The roles are separated in this profile to permit a precise statement of the requirements for conformance & support, and not to indicate that the roles should be divided between concrete applications.

The User Interface role is intended to describe behaviors typically performed by Public Access Catalog or Self Service applications: placing holds, reviewing items charged to the user, etc.

7.3 Business Rules

All business rules, e.g. circulation policies, are determined and applied by the item agency application.

7.4 Management of User and Staff User Interaction

The User Interface application SHALL provide an interface for the user to generate events per the Event Table in section 7.6. For example, a user may use this interface to request an item be held for pickup. This interface may be an integral part of a Public Access Catalog (PAC), it may be an integral part of some other application, or it may be a separate application providing only an interface for the User.

The Item, User, Pickup and Dropoff Agency applications SHALL provide an interface for their staff users to generate Events in the Event Table in section 7.6. For example a staff user working at the Item Agency may check in an item at the Item Agency. This interface may be an integral part of the same circulation application used for the circulation of the agency's items to their own Users, or it may be a separate application providing only the user interface for the staff user.

7.5 Required Components

7.5.1 Required and Optional Services

The following table lists the required and optional services, messages and responses for this profile. Services not listed are not employed by this profile. The following list is drawn from the Event Table in section 7.6 and the Lookup Service Table in section 7.7 below.

An "(R)" or "(O)" after the role name indicates whether a service is required or optional.

Service	Initiate	Respond
Accept Item	Item Agency (R)	Pickup Agency (R)
		User Agency (R)
Cancel Request Item	User Interface (R)	Item Agency (R)
Check Out Item	Pickup Agency (R)	Item Agency (R)
	User Agency (R)	
	User Interface (O)	

Circulation Status Change Reported	Item Agency (R)	User Agency (R)
Create User Fiscal Transaction	Dropoff Agency (O) Pickup Agency (O) User Agency (O) User Interface (O)	Item Agency (O)
Item Checked In	Item Agency (R)	User Agency (R)
Item Checked Out	Item Agency (R)	User Agency (R)
Item Recall Cancelled	Item Agency (R)	User Agency (R)
Item Recalled	Item Agency (R)	User Agency (R)
Item Received	Item Agency (R) Pickup Agency (R) User Agency (R)	Dropoff Agency (R) User Agency (R) Item Agency (R)
Item Renewed	Item Agency (R)	User Agency (R)
Item Request Cancelled	Item Agency (R)	User Agency (R)
Item Request Updated	Item Agency (R)	User Agency (R)
Item Requested	Item Agency (R)	User Agency (R)
Item Shipped	Dropoff Agency (R) Item Agency (R) User Agency (R)	Item Agency (R) Pickup Agency (R) User Agency (R)
Renew Item	Dropoff Agency (R) Pickup Agency (R) User Agency (R) User Interface (R)	Item Agency (R)
Report Circulation Status Change	Dropoff Agency (R) Pickup Agency (R) User Agency (R) User Interface (R)	Item Agency (R)
Request Item	User Interface (R)	Item Agency (R)
Update Request Item	User Interface (R)	Item Agency (R)
User Fiscal Transaction Created	Item Agency (O)	User Agency (O)
User Notice Sent	Item Agency (R)	User Agency (R)

7.5.2   Required and Conditionally Required Data Elements

For convenience the required and conditionally required data elements are summarized here by message. The following list is drawn from the Event Table in section 7.6 and the Lookup Service Table in section 7.7 below.

Message	Profile Required Elements	Conditions
All initiation messages in this profile	ApplicationProfileType with value "NCIP Profile #xyz"	Must be included in ALL initiation messages.

Message	Profile Required Elements	Conditions
Item Requested	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Request Item service from other than the user agency.
Item Request Updated	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Update Request Item service from other than the user agency.
Item Request Cancelled	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Cancel Request Item service from other than the user agency.
Item Received	OnBehalfOfAgency	Whenever the item agency has responded successfully to an Item Received service from other than the user agency.
Item Checked Out	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Check Out Item service from other than the user agency.
User Fiscal Transaction Created	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Create User Fiscal Transaction service from other than the user agency.
Item Renewed	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Renew Item service from other than the user agency.
Circulation Status Change Reported	OnBehalfOfAgency	Whenever the item agency has responded successfully to a Report Circulation Status Change service from other than the user agency.
Accept Item	Item User Restriction Type, Physical Condition, Security Marker, and Sensitization Flag	Must be included in all Accept Item messages.
Accept Item	Block Or Trap, Date Of Birth, User Language & User Privilege	Must be included in all Accept Item messages sent to a pickup agency that is not the user agency.

7.5.3 Enumerated Types

There are no additional schemes for open enumerated types and no enumerated types or undefined types that are closed by this profile.

7.6 Event Table

Locations for Events are only stated in the few cases where the Service Initiated, Responding Application or Message Constraints differ depending on the Location.

Required events are indicated by the text "(R)" in the "Triggering Event and Event Location" column. Optional events are indicated by the text "(O)" in the "Triggering Event and Event Location" column. Required services are indicated by the text "(R)" in the "Service Initiated" column. Optional services are indicated by the text "(O)" in the "Service Initiated" column.

There are some rows that are split in the Service Initiated and Responding Application columns. This denotes a sequence of services. Wherever the rows are split such that a single application sends an Update and a Notification method, this Profile requires that the Notification message SHALL be sent only if the Update Service was successful (and only if it would otherwise be sent).

The "Message Constraints" column contains references to specific Guidelines for Implementers in Section 11.

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application	Message Constraints
Describe the event that triggers the application to initiate a service and the location of the event in the application architecture.	Specify which application initiates the service that results from the triggering event.	List the service initiated	Specify which application responds to the service.	Specify requirements for the initiation and response messages such as optional elements that must be included or are not permitted.
Triggering Events				
Below is a list of events that trigger a message in this profile.				
Triggering Event and Event Location	**Initiating Application**	**Service Initiated**	**Responding Application**	**Message Constraints**
User requests an item (R)	User Interface	Request Item (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application	Message Constraints
Item agency responds successfully to a Request Item service from other than the user agency (R)	Item Agency	Item Requested (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original RequestItem. See Guideline 24.
User changes request for an item (R)	User Interface	Update Request Item (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".
Item agency responds successfully to an Update Request Item service from other than the user agency (R)	Item Agency	Item Request Updated (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Update Request Item.
User cancels a request for an item (R)	User Interface	Cancel Request Item (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".
Item agency responds successfully to a Cancel Request Item service from other than the user agency (R)	Item Agency	Item Request Cancelled (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Cancel Request Item.
Item agency requests permission to send an item to user agency for pickup (R)	Item Agency	Accept Item (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". Requested Action Type SHALL be "Pickup" from NCIP Requested Action Type Scheme. Item User Restriction Type, Physical Condition, Security Marker & Sensitization Flag SHALL be present in the Accept Item message. See Guideline 1 for justification. See Guidelines 23, 27 & 28.
Item agency requests permission to send an item to pickup agency (R)	Item Agency	Accept Item (R)	Pickup Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". Requested Action Type SHALL be "Pickup" from NCIP Requested Action Type Scheme. Block Or Trap, Date Of Birth, User Language & User Privilege SHALL be present in the Accept Item message. See Guideline item 1 for justification. Item User Restriction Type, Physical Condition, Security Marker & Sensitization Flag SHALL be present in the Accept Item message. See Implementation Guideline 1 for justification. See Guidelines 23, 27 and 28.

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application	Message Constraints
Pickup agency declines to permit pickup (R)	Item Agency	Item Request Cancelled (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 4 and 5.
		User Notice Sent (R)	User Agency	
Item is shipped from item agency to user agency for pickup (R)	Item Agency	Item Shipped (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 2 and 3.
Item is shipped from item agency to pickup agency for pickup (R)	Item Agency	Item Shipped (R)	Pickup Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 2 and 3.
		Item Shipped (R)	User Agency	
Item is received at user agency (R)	User Agency	Item Received (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".
Item is received at pickup agency (R)	Pickup Agency	Item Received (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".
Item agency responds to Item Received Notification from any Agency other than the user agency (R)	Item Agency	Item Received (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Item Received. See Guideline 19.
User checks out item at item agency (R)	Item Agency	Item Checked Out (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 6, 11, and 24.
User checks out item at item agency (O)	User Interface	Check Out Item (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 12 and 24.
User checks out item at pickup or user agency (R)	Pickup Agency or User Agency	Check Out Item (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 14 and 24.
Item agency responds successfully to a Check Out Item Service from any agency other than the user agency (R)	Item Agency	Item Checked Out (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Check Out Item. See Guideline 20.
Item agency assesses or corrects or accepts payment of a fee or fine against a user (O)	Item Agency	User Fiscal Transaction Created (R)	User Agency	Required Event for Fees & Fines Collection At Any Agency. BehavioralProfileType SHALL be "NCIP Profile #xyz". See Guidelines 7 and 13.

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application	Message Constraints
Any agency other than item agency accepts payment of a fee or fine (O)	User Interface, User Agency, Pickup Agency, or Dropoff Agency	Create User Fiscal Transaction (R)	Item Agency	Required Event for Fees & Fines Collection At Any Agency. BehavioralProfileType SHALL be "NCIP Profile #xyz". See Guidelines 13 and 18.
Item agency responds successfully to Create User Fiscal Transaction from any agency other than the user agency (O)	Item Agency	User Fiscal Transaction Created (R)	User Agency	Required Event for Fees & Fines Collection At Any Agency. BehavioralProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Create User Fiscal Transaction. See Guideline 13.
Staff at item agency recall the Item (R)	Item Agency	Item Recalled (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guideline item 8.
		User Notice Sent (R)	User Agency	
Staff at item agency cancel the recall (R)	Item Agency	Item Recall Cancelled (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guideline 8.
		User Notice Sent (R)	User Agency	
Item agency sends a notice to the user (R)	Item Agency	User Notice Sent (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guideline 25.
User renews item (R)	User Interface, User Agency, Pickup Agency or Dropoff Agency	Renew Item (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".
Item Agency responds successfully to a Renew Item from any agency other than the user agency (R)	Item Agency	Item Renewed (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Report Circulation Status Change.
User reports an item lost or claims an item was returned (R)	User Interface, User Agency, Pickup Agency or Dropoff Agency	Report Circulation Status Change (R)	Item Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".
Item Agency responds successfully to a Report Circulation Status Change from any agency other than the user agency (R)	Item Agency	Circulation Status Change Reported (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". OnBehalfOfAgency SHALL be the UniqueAgencyId of the Agency that sent the original Report Circulation Status Change.

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application	Message Constraints
Item agency receives an item that is checked out to a user (R)	Item Agency	Item Checked In (R)	User Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz". See Guidelines 9 and 24.
Dropoff or user agency receives an item (R)	Dropoff Agency or User Agency	Item Shipped (R)	Item Agency	See Guidelines 10 and 26.
Item agency receives an Item shipped to it by the dropoff Agency (R)	Item Agency	Item Received (R)	Dropoff Agency	ApplicationProfileType SHALL be "NCIP Profile #xyz".

7.7 Lookup Service Table

In order to initiate some NCIP services, one application may need to obtain information from another application. The table below lists services that can be initiated in order to obtain such information. The first column lists the application that provides the information. The second column lists the service executed. The third column lists the identifiers that are optional within the NCIP, but are required for this profile. The fourth column lists the data returned.

The "Lookup Service" and "Required Unique Ids" columns contain references to specific Guidelines for Implementors in Section 11.

Responding Application	Lookup Service	Required Unique Ids	Required Response Data Elements
User Agency	Lookup Agency	Unique Agency Id	Authentication Prompt if employing optional NCIP Authentication mechanism **Note**: See Guideline 15. Agency Address Information where Scheme is the NCIP Agency Address Role Type Scheme and Value = "Ship To"
Pickup Agency	Lookup Agency	Unique Agency Id	Agency Address Information where Scheme is the NCIP Agency Address Role Type Scheme and Value = "Ship To"
Item Agency	Lookup Agency	Unique Agency Id	Agency Address Information where Scheme is the NCIP Agency Address Role Type Scheme and Value = "Ship To"

Responding Application	Lookup Service	Required Unique Ids	Required Response Data Elements
User Agency	Lookup User (see Guideline item 16.)	Authentication Data (See Guideline 17) or Unique User Id (See Guideline 22)	Unique User Id with Unique Agency Id of the User Agency. Note: the Unique User Id that is returned in this service must remain valid for subsequent services from that same Initiating Agency for the duration of the circulation transaction. Block or Trap if requested in User Element Type. Date Of Birth if requested in User Element Type. User Language if requested in User Element Type. User Privilege if requested in User Element Type. User Address Information with Address Role Type citing the NCIP User Address Role Type Scheme and the Value = "Ship To", and User Address Information with Address Role Type citing the same Scheme and the Value = "Notice", if requested in User Element Type.
Item Agency	Lookup Item	Unique Item Id	See Guideline 21.

8.   Transport Protocol

All applications SHALL employ HTTPS for transmission of all NCIP messages while operating according to this profile.

9.   Security and Privacy

As noted in the Scope:

> This profile requires the transmission of confidential personal information by the user agency to other agencies. While it requires use of a reasonably secure transport protocol (HTTPS), this profile is not intended for use where such sharing of confidential personal information is not acceptable.

The implication of this is that a user agency participating in activity according to this profile is assumed to trust the other agencies with which it shares this confidential user information.

Authentication of the user is assumed to occur prior to invoking further NCIP services at the direction of the user. This profile requires conforming applications to support the use of the Lookup User service to perform this; it is possible for applications to employ alternatives beyond those defined in this profile.

An agency that recognizes events indicated by staff users should authenticate those staff users, however whether it does so and how it does so is outside the scope of this profile.

Responding applications may require From Agency Authentication and/or From System Authentication elements in the initiation header of some or all messages. Whether they do, and if so what the value should be is outside the scope of this profile, as are the implications for the consortium if some applications are not able to provide this in initiation messages.

10. Registration of Schemes Used in the Profile

For information about maintenance and registration activities see Appendix G, Designation of Maintenance and Registration Agency in the NCIP standard.

11. Guidelines for Implementors (Non-normative)

The Guidelines listed below are intended to assist vendors in implementing the Item Agency Manages Transaction Application Profile. As guidelines, they are non-normative and represent non-protocol assumptions or options that might be employed by a well-designed application that is conformant to this profile.

The success of inter-system interoperability depends on many factors beyond proper coding and decoding of standards-based messages. These guidelines list some of the additional considerations libraries and systems should address as part of their NCIP implementation.

The following guidelines are referenced in the Event Table at Section 7.6.

1.   A pickup agency should identify the information it may need to make a decision about accepting an item for pickup. For example, whether a pickup agency will abide by the ItemUseRestrictions might depend upon the age of the user. The rest of the user information (e.g., name) that it might need to provide the pickup facility it can obtain through a Lookup User service. This applies to both Item & User objects.

2.   There is no direct tracking and statistics event for the acceptance of an item by a pickup location. However, it will typically be followed by an Item Shipped message, which is the event that will normally be tracked and recorded for statistical reporting.

3.   When an item agency ships an item to a pickup location (or the user agency serving as the pickup location), it should update the location of the item in its system to reflect that the item is no longer in its shelving location.

4.   In general, this application profile doesn't require applications to send an initiation message at the instant the event is recognized. Notifications might, for performance reasons, be queued until a time of day when the network (or the initiating application's computer) is less busy. It may also make sense to application designers to queue a Lookup message. For example when responding to an Accept Item the pickup location may want to collect title and other information about the item. The pickup location can do so at a later time, perhaps even after it receives the Item Shipped message. Conversely, an application may want to send the Accept Item message before it returns the RequestItemResponse message so that it can confirm that the user's choice of pickup agency will be acceptable.

5. Some services don't have to be invoked immediately. For example, an application could send a Pickup Location Unavailable notice to the user and allow them two days to contact the item agency with a new pickup agency. If the user doesn't contact the item agency then it would invoke these services.

6. A user can check out a returnable or non-returnable item at the item agency. Returnable items have either DateDue or UnlimitedLoanFlag present. Non-returnable items have the NonReturnableFlag present. Using the Item Checked Out service for non-returnable items permits the user agency to record that its user has received the item.

7. A user agency cannot assess, correct or accept payment of a fee because item agency manages everything, including fees.

8. Only the item agency can recall or cancel the recall of its items.

9. An item agency can receive an item that is checked out to a user when the user brings the book to the item agency's circulation desk or drop box. An item agency can also receive an item checked out to a user when a library that does not participate in the consortium ships the book back without sending the Item Shipped message.

10. The dropoff agency determines item agency identity by visual inspection of item and/or the use of Z39.50, NCIP, or other services. The user agency may do the same or it may be able to retrieve that information from its own record of the circulation transaction.

11. The event, User checks out Item at item agency, may occur when a staff user checks the item out to a user, or when the item agency responds successfully to a Check Out Item from a user interface (e.g., Self Service station) and the user is not one of their agency's users. This event may occur during a Reciprocal Borrowing scenario. Reciprocal Borrowing denotes a user in a foreign library taking a book from the shelf and checking it out (in this case at a Self-Service station).

12. A Reciprocal Borrowing scenario may include allowing a user to employ a self-service application to check out an item within a DCB environment (see No. 11). It should be possible for such a unit to perform that service, however it should be optional.

13. When an Item agency assesses, corrects, or accepts payment of a fee or fine against a user, what happens to the transferred funds themselves during this event is out-of-scope, but significant. It seems the funds come into the possession of the agency at which the transfer takes place (or in the case of electronic funds, they come into the possession of whatever account the initiating application chooses).

14. It is not logical (See No. 12) to allow a user employ a self-check unit to check out an item from a pickup agency or the user's own agency since presumably those agencies don't place the item in an area accessible to the public (since its not their item).

15. When requesting a user to identify their agency, the user interface is assumed to present a list of agencies known to the user interface.

16. Lookup User is employed rather than Authenticate User because Lookup User not only performs the authentication, but can return information about the User (e.g., name).

17. Authentication Data is employed if the Initiating Application doesn't have the Unique User Id.

18. Allowing any agency other than item agency accepts payment of a fee or fine is especially optional for the user interface because the ability to collect funds at a user interface seems to be beyond common capability of PACs even in an

entirely local context.

19. The OnBehalfOfAgency will be the pickup agency's Unique Agency Id, and thus won't match the Unique Agency Id in the From Agency field of the initiation header.

20. An item agency may respond successfully to a Check Out Item Service from any agency other than the user agency when a user is checking out an item they've requested for pickup, or it may be an instance of Reciprocal Borrowing (see No. 11).

21. Use of the Lookup Item service permits the pickup agency to retrieve bibliographic & item information to use to print hold wrappers.

22. Use of the Unique User Id permits the pickup agency to retrieve user information to use to print hold wrappers.

23. When an item agency requests permission to send an item to user agency or pickup agency for pickup, a good practice would be to get acceptance as soon after the request is placed as possible because if the acceptance isn't given the application can cancel the request before any unnecessary processing is performed. It may be advisable to get acceptance before responding to the Request Item message.

24. Unique Item Id and Unique User Id SHALL remain valid for the duration of the circulation transaction. This may begin with the Request Item or the Check Out Item, and ends with Check In Item.

25. The User Notice Sent message is meant to cover any other causes of notices being sent to a user beyond cancellation of a request, recall of an item, and cancellation of a recall.

26. When the dropoff or user agency receives an item, is the ONE case when the Application Profile Type is not required in an Update or Notification initiation message.

27. When an item agency requests permission to send an item to user or pickup agency for pickup, rather than have conditions that the pickup agency can ask acceptance of, it is presumed that the item and pickup agencies share knowledge of an outside-of-NCIP agreement that governs the terms (e.g., pickup agency can collect $1.00 nuisance fee that is not explicitly tracked in the NCIP communications).

28. If an application serving a pickup agency that requires user or item information cannot establish an HTTPS connection to the relevant user or item agencies cited in an Accept Item initiation message, the application should not respond successfully to that initiation. Similarly for an application serving a User Agency that requires Item information.