

# NCIP

## Direct Consortial Borrowing: URSA 4.0 Application Profile

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**Abstract:** This application profile describes the functions, applications, and the operating environment in which the URSA broker application manages the circulation transactions. This profile replaces the original "DCB-3" profile and any privately circulated versions that were modified as a result of interoperability tests with specific vendors.



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## 1. Introduction

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This profile, referred to as the NCIP Direct Consortial Borrowing: URSA Application Profile (DCB-Dynix-URSA) of the NISO Circulation Interchange Protocol (NCIP) describes the functions, applications, and the operating environment in which the URSA application manages the circulation transactions.

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 four other Direct Consortial Borrowing profiles as follows:

DCB-1	Item Agency Manages the Transaction
DCB-2	User Agency Manages the Transaction
DCB-3	Broker Application Manages the Transaction Application Profile
DCB-4	User Agency Manages Transaction with Proxy Checkout Application Profile

## 2. Description of Application Area

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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

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All Direct Consortial Borrowing transactions require some knowledge of and trust in participating agencies. The profile does not assume a specific relationship level among participants nor does it require the same level of interaction among all partners. Likewise, the profile assumes a desire to share materials within a defined partner set but it neither requires nor disallows interactions with external entities.

In response to actions taken by users and staff users URSA performs all necessary communication for the completion of a transaction. URSA seeks the necessary information from both the user and item agencies and manages the entire process, optionally updating each circulation application as requests move through their lifecycle. URSA relies on local circulation systems to respond appropriately to messages for the most efficient workflow in resource sharing operations. URSA retains a full history of transactions for statistical reporting, request status checking, and troubleshooting.

Consortia, regional and statewide resource sharing projects for public, academic and mixed-type library groups may employ URSA to bridge local automation systems from multiple vendors. This profile enables libraries within a consortium or similar trusted

group to automate much of the loan process at item and user agencies.

URSA may use the services defined in this profile to instruct a local application to create items or users, place holds, check items in and out, renew items, and trigger a local application's routing and notification processes; this workflow may be described as unmediated. Alternatively, staff will use URSA for inter-library loan functions and will independently perform whatever tasks are necessary to reflect the status of loaned or borrowed items in their local circulation application; this workflow may be described as staff mediated. It is also possible for URSA to combine mediated and unmediated behavior for different steps in the same transaction.

This profile outlines the interactions between URSA, the item agency and the user agency. It does not prescribe how the item agency and user agency accomplish subsequent tasks (e.g., printing a picksheet).

This profile includes services that can enable a user to pick up requested materials at a pickup location or branch of the user agency, although support for this may be a future enhancement to initiating and/or responding systems. This profile does not provide for the communications needed when users drop off items at agencies that are neither their own nor the item's.

This profile allows but does not require the transmission of confidential personal information by the user agency to other agencies. While it provides for the 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.

## 4. References

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

## 5. Definitions

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

URSA	An application that provides a user and staff interface on behalf of a consortium, or a user and/or item agency. URSA initiates NCIP services on behalf of user or item agencies but is itself neither a user nor an item agency. URSA is an abbreviation for Universal Resource Sharing Application. This revised profile reflects messaging used in URSA 4.0.
Event	An indication to an item agency or user agency application that a user or staff user seeks to invoke an NCIP Service or, a determination by such an application to invoke an NCIP Service.

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.
Pickup Agency	An agency where a user prefers to pick up physical information resources. May include agencies other than the user or item agency.
User Agency	The agency to which a user (person) is affiliated through registration and/or membership.

## 6. Conformance

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### 6.1. Introduction to Conformance and Support

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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 four roles to which an application may claim conformance:

- URSA
- Item Agency
- User Agency
- Pickup 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.

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## **6.2 Optional Features**

This profile does not define any optional features.

# **7. Profile Specification**

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## **7.1 Scope & Profile Description**

This profile is suitable for a consortium whose members rely on a central server running the URSA application to manage the entire process and to inform both the user-managing and the item-managing agencies of activities.

An agency may participate both as an item agency and as a user agency, but for any given circulation transaction an agency must be either an item or user agency. In some situations, a lender may enter a request for their own material, but they still perform the role of item agency.

For any policy determination (e.g, due date, authorization, etc.) URSA may be configured to request that determination from the appropriate agency, or it may make the determination on behalf of the agency.

URSA can be configured to send user notices. Alternatively, URSA may trigger appropriate communications to the user- and item-managing applications rather than

directly effecting the action itself. It is outside the scope of this profile to describe how triggered actions are handled by local automation applications.

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## 7.2 Participating Applications

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

- URSA
- User Agency
- Item Agency
- Pickup agency.

URSA is the only role that initiates NCIP services in this profile. The set of services potentially invoked at item and user agencies are not identical. Ideally, systems will support both set of services; however it is possible to implement only a single set of services, with the result of supporting either borrowing (user agency) or lending (item agency) roles. In such cases, URSA should be configured not to invoke inappropriate services at such agencies.

It is also likely that a library may be the user agency and the pickup agency for the same circulation transaction. Consequently the typical circulation system is expected to implement all three of these roles: Item Agency, User Agency and Pickup 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.

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## 7.3 Business Rules

All business rules, e.g. circulation policies, are determined and applied by URSA or URSA is configured to defer some or all of those determinations to some item and user agencies. For example, URSA may be configured to ignore the lending library's due date (that is present in a CheckOutItemResponse message) and instead use its profile to determine the due date when interacting with the borrowing library. In such situations, of course it is preferable that the item agency application be configured in a corresponding fashion (e.g. return an Indeterminate Loan Period Flag rather than a Date Due).

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## 7.4 Management of User and Staff User Interaction

URSA is used in combination with the local circulation system as the user interface for users and staff users. This user interface allows users to place requests and to view the current status of a request, cancel requests, or request renewals. URSA may be used by staff to perform all user agency and/or item agency functions.



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## 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.

Service	Required (R) or Optional (O)
Lookup Agency	O
Lookup Item	O
Lookup User	O
Lookup Version	O
Accept Item	O
Checkin Item	O
Checkout Item	O
Request Item	O
Cancel Request Item	O
Renew Item	O
Recall Item	O

### 7.5.2 Required and Conditionally Required Data Elements

Data elements that are optional in the NCIP and Implementation Profile 1 that are required or conditionally required in this profile are listed here.

Message	Profile Required Elements	Conditions	Purpose
Lookup Item	Unique Item Id	When shipping or receiving the item.	This is the only unique identifier staff will have when shipping or receiving the item, so the circulation system must be able to look up items by this key.
Lookup Item Response	Local System Number	When shipping or receiving the item.	The presence of this in the LookupUserResponse message permits URSA to associate the Visible Item Id with a Local System Number, and it is the Local System Number that URSA can relate to the request in its database.
Lookup User	Authentication Data	When authenticating a user prior to their performing all actions on URSA (such as placing a request) other than searching.	To authenticate the user. URSA requires support for the "VisibleUserId" (the patron's barcode) as the lookup key; URSA will require that and <i>may</i> also support "AuthenticationInput" as well.

Message	Profile Required Elements	Conditions	Purpose
	User Element Id with values of Name Information, User Privilege and User Address Information.	When authenticating a user prior to their performing all actions on URSA (such as placing a request) other than searching.	To determine name of user and their email address and telephone number. User Privilege Type contains local patron type/category for user agency profiling.
Lookup User Response	Name Information containing Personal Name Information	When available for that user and when permitted to be provided to URSA.	To provide name of user to URSA.
	User Address Information containing Electronic Address with Electronic Address Type with Scheme of <a href="http://www.iana.org/assignments/uri-schemes">http://www.iana.org/assignments/uri-schemes</a> and Value of "mailto"	When available for that user and when permitted to be provided to URSA.	To provide email address of user to URSA.
	User Address Information containing Electronic Address with Electronic Address Type with Scheme of <a href="http://www.iana.org/assignments/uri-schemes">http://www.iana.org/assignments/uri-schemes</a> and Value of "tel"	When available for that user and when permitted to be provided to URSA.	To provide telephone number of user to URSA.
	User Privilege containing User Privilege Type and Unique Agency Id	When available for that user and when permitted to be provided to URSA.	To allow user agency to define privileges by local patron type or category
Accept Item	Unique User ID	Always.	To associate the request with a user. URSA will always send the value input when the request originated as "UserIdentifierValue".

Message	Profile Required Elements	Conditions	Purpose
	Unique Item ID	Always.	To associate the request with an item. URSA will always send the item's barcode as the "ItemIdentifierValue". This could be either a (staff-entered) temporary barcode or the lender's barcode.
	Requested Action Type with Scheme of <a href="http://www.niso.org/ncip/v1_0/imp1/schemes/requestedactiontype/requestedactiontype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/requestedactiontype/requestedactiontype.scm</a> and Value of "Hold For Pickup" or "Hold For Pickup And Notify"	Always.	To identify the purpose of the accept item service and whether or not the responder is to send the "available notice" to the user
	Date for Return or Indeterminate Loan Period Flag	Always.	To indicate the due date (if any) that should be assigned to the item.
	Bibliographic Description with Author and Title.	When the item is not a component part (e.g., when the item is a monograph).	To provide minimal author and title information for printed materials, request status displays, etc.

Message	Profile Required Elements	Conditions	Purpose
	Bibliographic Description with Author of Component and Title and Title of Component.	When the item is a component part (e.g., when the item is a journal article).	To provide minimal author and title information for printed materials, request status displays, etc.
	Item Description with Call Number.	Always.	To provide further identification of the piece.
Accept Item Response	Unique Item Id	Required	
Checkin item	Unique Item ID	Checkin Item	
	User Element Type	Required	
	Item Element Type	Optional	
Checkin Item Response	Unique Item ID	Always	
	Routing Information	If Requested	To permit URSA to display routing information to staff.
	Unique User Id	Always	To clear link between user and item
Check Out Item	Acknowledged Item Use Restriction Type	Whenever a previous Check Out Item service has failed due to a missing Acknowledged Item Use Restriction and URSA has gotten the staff person's acknowledgement of the use restriction.	To confirm to circulation system that URSA has gotten the user or staff person's acknowledgement.
	Unique User Id	Always	Identifies the pseudo-patron representing user agency
	Desired Due Date	Optional	Indicates a desire to override the circ system's due date.
	Unique Item Id	Always	The "ItemIdentifierValue" will be the item's barcode.

<b>Message</b>	<b>Profile Required Elements</b>	<b>Conditions</b>	<b>Purpose</b>
Checkout Item Response	Indeterminate Loan Period	Alternative to Due Date	Tells URSA that the due date is indeterminate.
	Due Date	Always.	Tells URSA the due date (which may or may not match any Desired Due Date supplied on the Checkout Item message).
	Required Item Use Restriction Type	Whenever there is a relevant Item Use Restriction that was not acknowledged in the Check Out Item message.	Tells URSA that it must get the user or staff person's acknowledgement of the use restriction before retrying the Check Out Item service.
Request Item	Request Type with Scheme of <a href="http://www.niso.org/ncip/v1_0/imp1/schemes/requesttype/requesttype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/requesttype/requesttype.scm</a> and Value of "Loan". Or "Copy"	Always.	To indicate the type of request.
	Unique Bibliographic Id	Always.	Identifies the bibliographic record from which an item is requested.
	Acknowledged Item User Restriction Type	Whenever a previous Request Item service has failed due to a missing Acknowledged Item Use Restriction and URSA has gotten the staff person's acknowledgement of the use restriction.	To confirm to circulation system that URSA has gotten the user or staff person's acknowledgement.

Message	Profile Required Elements	Conditions	Purpose
	Need Before Date	When the user requires the item only before a certain date.	Supports user options.
	Shipping Information	When there is more than one physical location at a given library for materials that have been requested via URSA, this indicates to which location the item should be routed for shipment to the borrowing library.	Required to distinguish amongst physical locations handling materials requested via URSA.
	Unique User ID	Always.	Identifies the pseudo-patron as user agency
	Unique Request ID	Always.	Identifies URSA's internal identifier for the request.
Request Item Response	Date Available	Optional.	Allows URSA to identify "waylaid" materials.
	Required Item Use Restriction Type	Whenever there is a relevant Item Use Restriction that was not acknowledged in the Request Item message.	Tells URSA that it must get the user or staff person's acknowledgement of the use restriction before retrying the Request Item service.
Cancel Request Item	Unique User ID	Always.	Identifies the pseudo-patron (for pickup at borrowing lib) or local temp patron (for pickup at lender and direct delivery)

Message	Profile Required Elements	Conditions	Purpose
	Unique Request Id	If there was no Unique Item Id in the Request Item Response	To identify the request that should be cancelled. The value of the "RequestIdentifierValue" will be the same as that returned in the Request Item Response.
	Unique Item Id	If there was a Unique Item Id in the Request Item Response	To identify the request that should be cancelled. The "ItemIdentifierValue" will be the item's barcode.
	Request Type with Scheme of <a href="http://www.niso.org/ncip/v1_0/imp1/schemes/requesttype/requesttype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/requesttype/requesttype.scm</a> and Value of "Loan" or "Copy".	Always.	To indicate the type of request.
Cancel Request Item Response	Unique User ID	Always.	The Unique User Id used in the Request Item message.
	Unique Request Id	Optional, but either the Unique Request Id or the Unique Item Id or both must be present	Confirms the identity of the request that was cancelled. The value of the "RequestIdentifierValue" will be the same as that returned in the Request Item Response.
	Unique Item Id	Optional, but either the Unique Request Id or the Unique Item Id or both must be present	Confirms the identity of the request that was cancelled. The "ItemIdentifierValue" will be the item's barcode.
Renew Item	Unique User Id	Always	The Unique User Id used in the Check Out Item message.



Message	Profile Required Elements	Conditions	Purpose
	Unique Item Id	Always	The Unique Item Id used in the Check Out Item message. The "ItemIdentifierValue" will be the item's barcode (or will this be the item #?).
	Desired Due Date	When invoking the service at the user's home agency (the borrowing agency).	This will be the lender's renew due date, minus any adjustment for return shipment transit time (from the home agency's profile). The borrower's circ system will assign the earliest of the Desired Due Date or the renewal due date it calculates, just like in Checkout.
Renew Item Response	Unique Item Id	Always	The Unique Item Id used in the Renew Item message.
	Date For Return [include Indefinite Due Date]	When the responding application is in the role of lending agency.	Tells URSA the date for return (which may or may not match any Desired Date For Return supplied on the Renew Item message).
	Pending	Never	This is not supported by URSA
Recall Item	Unique Item ID	Always	
	Desired Due Date	Optional	
	User element Type		
Recall Item Response	Problem or Unique Item ID		
	Date Due		

Message	Profile Required Elements	Conditions	Purpose
	Unique User ID		

### 7.5.3 Enumerated Types

This profile makes use of the following defined and undefined enumerated types.

Data Type	Values
Authentication Input Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/authenticationinputtype/authenticationinputtype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/authenticationinputtype/authenticationinputtype.scm</a>
Authentication Prompt Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/authenticationprompttype/authenticationprompttype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/authenticationprompttype/authenticationprompttype.scm</a>
Bibliographic Item Identifier Code	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/bibliographicitemidentifiercode/bibliographicitemidentifiercode.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/bibliographicitemidentifiercode/bibliographicitemidentifiercode.scm</a>
Bibliographic Level	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/bibliographiclevel/bibliographiclevel.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/bibliographiclevel/bibliographiclevel.scm</a>
Block or Trap Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/blockortraptype/blockortraptype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/blockortraptype/blockortraptype.scm</a>
Circulation Status	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/circulationstatus/circulationstatus.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/circulationstatus/circulationstatus.scm</a>
Item Use Restriction Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/itemuserrestrictiontype/itemuserrestrictiontype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/itemuserrestrictiontype/itemuserrestrictiontype.scm</a>
Request Status Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/requeststatustype/requeststatustype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/requeststatustype/requeststatustype.scm</a>
Request Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/requesttype/requesttype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/requesttype/requesttype.scm</a>

<b>Data Type</b>	<b>Values</b>
Requested Action Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/requestedactiontype/requestedactiontype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/requestedactiontype/requestedactiontype.scm</a>
User Privilege Status Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/userprivilegestatustype/userprivilegestatustype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/userprivilegestatustype/userprivilegestatustype.scm</a>
Visible Item Identifier Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/visibleitemidentifiertype/visibleitemidentifiertype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/visibleitemidentifiertype/visibleitemidentifiertype.scm</a>
Visible User Identifier Type	<a href="http://www.niso.org/ncip/v1_0/imp1/schemes/visibleuseridentifiertype/visibleuseridentifiertype.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/visibleuseridentifiertype/visibleuseridentifiertype.scm</a>
Unique Agency Id	<UniqueAgencyId><Scheme>http://www.dynix.com/ncip/schemes/agency.scm</Scheme>



**7.6 Event Table**

<b>Triggering Event and Event Location</b>	<b>Initiating Application</b>	<b>Service Initiated</b>	<b>Responding Application</b>	<b>Message Constraints</b>
Describes the event that triggers the application to initiate a service and the location of the event in the application architecture.	Specifies which application initiates the service that results from the triggering event.	Lists the service initiated.	Specifies which application responds to the service.	Specifies requirements for the initiation and response messages such as optional elements that must be included or are not permitted.
<b>Triggering Events</b>				
Below is a list of events that trigger a message in this profile.				
<b>Triggering Event and Event Location</b>	<b>Initiating Application</b>	<b>Service Initiated</b>	<b>Responding Application</b>	<b>Message Constraints</b>
User attempts to request an item or otherwise requires authentication	URSA	Lookup User (O)	User Agency	URSA will employ Authentication Prompt values that are statically profiled in it for the User Agency (i.e., it will not initiate a Lookup Agency service). Alternatively, user may be authenticated before accessing URSA.
User requests an item be loaned from item agency	URSA	Request Item (O)	Item Agency	
User cancels a request for an item	URSA	Cancel Request Item (O)	Item Agency	
Staff ship item to user agency	URSA	Lookup Item (O)	Item Agency	
		Check Out Item (O)	Item Agency	
Staff receive item at user agency	URSA	Accept Item (O)	User Agency	

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application	Message Constraints
Staff return item to item agency	URSA	Checkin Item	Item Agency	
Staff complete transaction at item agency	URSA	Checkin Item	Item Agency	
User attempts to renew item	URSA	Renew Item (0)		If a Renew Item service is invoked on an item that was checked out for an indefinite due date, the responder should return a Renew Item Response with whatever due date it calculates (which presumably will still be indefinite). If a Responder receives a Renew Item message and the item isn't checked out, it can either respond with <b>"Item Not Checked Out"</b> or replace the due date (supplied in the Accept Item message) with the one supplied in that Renew Item message.
Staff at item agency issue recall of loaned item	URSA	Recall Item (0)	User Agency	Message sent to user regarding recall is generated by user agency (not item agency)

## 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.

Responding Application	Lookup Service	Required Identifiers	Required Response Data Elements
User Agency	Lookup User	Authentication Data	Name Information containing Personal Name Information
			User Address Information containing Electronic Address with Electronic Address Type with Scheme of <a href="http://www.iana.org/assignments/uri-schemes">http://www.iana.org/assignments/uri-schemes</a> and Value of "mailto"
			User Address Information containing Electronic Address with Electronic Address Type with Scheme of <a href="http://www.iana.org/assignments/uri-schemes">http://www.iana.org/assignments/uri-schemes</a> and Value of "tel"
			User Address Information containing Physical Address with Physical Address Type with Scheme of <a href="http://www.niso.org/ncip/v1_0/imp1/schemes/physicaladdressstyle/physicaladdressstyle.scm">http://www.niso.org/ncip/v1_0/imp1/schemes/physicaladdressstyle/physicaladdressstyle.scm</a> and Value of "Postal Address"

Responding Application	Lookup Service	Required Identifiers	Required Response Data Elements
			User Privilege containing User Privilege Type and Unique Agency Id
Item Agency	Lookup Item	Visible Item ID	Local System Number or ISBN or OCLC # or LCCN.

## 8. Transport Protocol

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URSA shall employ HTTPS or TCP/IP as the transport protocol.

The selection of the transport protocol by the initiator of a message will govern the transport protocol used by the responder. It shall respond using the same connection, and therefore the same transport protocol, that was used to send the message.

## 9. Security and Privacy

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As noted in the Scope:

This profile requires the transmission of confidential personal information by the user agency to other agencies. While it provides for the 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 user agency applications to support the use of the Lookup User service for this purpose; it is possible for URSA and user agency applications to employ alternatives beyond what is 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

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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)

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The guidelines listed below are intended to assist vendors in implementing the URSA 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.

### General Performance Issues

- Users can be expected to search and request materials at any time of day. Applications may run aging processes in a batch mode. In order to ensure that messages are not lost the listening port should be open as close to 24\*7\*365 as possible. Because NCIP services are assumed to occur in “real time”, messages should not be queued but rather processed immediately; if the responding application is unable to do so it should refuse the connection attempt.

### Messages

- In order to support the widest range of functionality, while not required by the protocol or the profile, applications should send the most complete version of any message or message response including optional data.
- Applications should provide means of sending repeat messages in the event where the first message was not received or the response indicates the message could not be understood. Detection of unintentional duplication of messages is the responsibility of the application and not within the scope of the profile.
- It is the responsibility of the item-managing application to determine whether the request requires placing a hold or retrieval from stacks. In either case, the appropriate action occurs at the item agency without staff intervention at either the item or user agency. How the item is delivered is beyond the scope of the profile, as is the way in which non-NCIP errors are detected and handled by URSA and/or some local system at the user or item agency.

### Interface and use considerations

- The system itself and/or the staff interface must provide some means of negotiating transactions. For example if a Pickup Agency refuses Accept Item based on one or more of the conditions the user agency must have some means of both seeing the problem conditions and choosing to resolve them.
- When asking the user to authenticate themselves, URSA should allow libraries to profile a list of partner libraries appropriate to the user and location.
- Item Agencies should provide means of authentication input that preserves the privacy of the user. URSA may also be required during certain events to provide



specific user information to Item and pickup agencies, and there is an implied if not legal obligation on the part of the user agency to inform users of these possible privacy concerns. Shared user information may include:

- Contact information: email, phone, address for print notification
- Shipping information: home or office address
- URSA may send user id, name and contact information, just user id or may avoid sharing any patron information in situations where it is prohibited; if no user information is present, use a “pseudo-patron” representing a DCB Library Partner.

### **Overview of NCIP Interactions During Typical Workflow**

- When a Request Item message is received by the Item Agency, optimal behavior is to place a bibliographic record level hold on this item in the local circulation system. If holds are not permitted for on-shelf items, staff at the item agency will need to print loan requests separately to pull them from shelves.
- When staff at the item agency ship or fill loans and a Checkout Item message is sent so that the item may be automatically checked out to the borrowing library on the local circulation system and given a due date appropriate for that item type and borrower type.
- When staff at the user agency receive the loaned item, an Accept Item message is sent that may include a temporary barcode and URSA expects this to result in the creation of a temporary bibliographic and item record of a type that may be masked from the local OPAC and automatically deleted on return if desired. This item should then be placed on hold for the requesting user and the local circulation system’s holds and checkout procedures are used to manage the item while at the user agency.
- After the user returns the item, staff at the user agency return the item. A Checkin Item message is sent to the user agency circulation system to check in the item and delete it if that behavior is supported.
- When staff at the item agency receive the returned item, they perform a Complete task that sends a Checkin Item message to the item agency circulation system.

### **Optional Services**

- URSA is not limited to using NCIP for all services with every agency.
- In addition to NCIP services, URSA may use non-NCIP mechanisms for some or all of the NCIP services described in this document. The profile is specifically designed to allow the use of some but not all services in a single circulation transaction. i.e., the user authentication may be non-NCIP, the request item may be NCIP, and the checkout item may be non-NCIP, dependent on the capabilities of the targeted agency.
- Circulation systems may wish to suppress the temporary bib and item records from display in public access.
- URSA does not trigger the deletion of bib and item records in the local circulation system when the item is returned or at any other point in the request cycle. It is up to the local circulation system to determine how and when such actions occur.
- User interactions with URSA do not fall within profile since it is not necessary to generate services for communications between a user and a broker. URSA then acts for a user by forwarding those requests to item agency or user agency. To facilitate understanding, the Event Table describes the profile-related services URSA requests

on behalf of the user or staff user.

- URSA must employ NCIP Lookup type services in order to invoke other NCIP services (e.g, LookupItem may precede CheckOutItem).

#### **Policy Level Decisions**

- Because three entities are involved, policy setting may be complex and interoperation between applications may fail if policy setting is not clearly defined.
- In the absence of either policy being set by the item agency or the user agency, certain policies may be set by the user agency, such as due dates for returnable materials.

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