

INN-REACH DCB Application Profile:

Lending and Borrowing

Abstract: This application profile describes the method in which the INN-Reach DCB broker application manages circulation transactions using the NCIP protocol.

Winter 2008

1. Introduction

This profile, referred to as the INN-REACH DCB Application Profile (INN-REACH DCB) of the NISO Circulation Interchange Protocol (NCIP) describes the functions, applications, and the operating environment in which the INN-REACH DCB application manages circulation transactions for libraries participating in an INN-REACH system via a DCB.

The base standard that enables this communication is NCIP. This profile is based on that protocol, as well as the supporting NCIP Implementation Profile 1.0.

2. Description of Application Area

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

The INN-REACH DCB applies all business rules, e.g. circulation policies, as defined by the consortium. For any policy determination (e.g., due date, authorization, etc.) INN-REACH DCB makes the determination on behalf of the agency.

INN-REACH DCB 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. INN-REACH DCB may be used by staff to perform all user agency and/or item agency functions.

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.

INN-REACH DCB serves as the NCIP message initiator 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. It is also likely that a responding application may be the user agency and the item agency for the same circulation transaction. Consequently the typical circulation system is expected to implement both the Item Agency and the User Agency roles.

3. Use Case

Libraries that do not use a Millennium ILS but participate in an INN-Reach resource sharing system via Innovative's Direct Consortial Borrowing (DCB) system can employ the Innovative INN-Reach DCB Application profile to send NCIP messages from the INN-Reach system to their local ILS. Support is provided for patron authentication and communication of all circulation activities that occur on the DCB.

4. Roles

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

- INN-REACH DCB
- Item Agency
- User Agency

INN-REACH DCB

An application that provides a user and staff interface on behalf of a consortium, a user and/or an item agency. INN-REACH DCB initiates NCIP services on behalf of user or item agencies but is itself neither a user nor an item agency.

Item Agency

The agency to which a specific physical information resource belongs.

User Agency

The agency to which a user (person) is affiliated through registration and/or membership.

5. Transport Protocol

INN-REACH DCB employs HTTPS as the transport protocol.

The responder shall respond using the same connection, and therefore the same transport protocol, that was used to send the message.

6. Messages and Data Elements

The following table defines the Messages and Data Elements that are included in the NCIP messages sent by the INN-REACH DCB and those that are Required in the responses expected by the DCB.

Message	Profile Required Elements	Comments
Authenticate User	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	Authentication input	
Authenticate User Response	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId	
LookupUser	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	

Message	Profile Required Elements	Comments
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	User Element Type- -Name Information - User Address Information (Electronic Address) -User Privilege, including -Valid To Date -User Privilege Status, -Agency User Privilege Type -User Privilege Description - Visible User ID -Block or Trap	
LookUpUserResponse	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId	
	User Optional Fields - Visible User ID -Name Information UnstructuredPersonalUserName - User Address Information Electronic Address -User Privilege, including -Valid To Date -User Privilege Status, -Agency User Privilege Type -User Privilege Description -Block or Trap	
AcceptItem	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	MandatedAction DateEventOccurred	
	UniqueRequestId	
	RequestedActionType	Value always 'circulate'
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	

Message	Profile Required Elements	Comments
	ItemOptionalFields Bibliographic Description Author Title Medium Type	
	ItemDescription VisibleItemID VisibleItemIdentifier Type VisibleItemIdentifier Call Number	
	UserOptionalFields VisibleUserId VisibleUserIdentifierType VisibleUserIdentifier User Privilege UniqueAgencyId AgencyUserPrivilegeType	
CheckInItem	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	MandatedAction DateEventOccurred	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
CheckOutItem	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	MandatedAction DateEventOccurred	
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
ItemCheckedIn	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	

Message	Profile Required Elements	Comments
	ItemOptionalFields Bibliographic Description Author Title MediumType	
	ItemDescription VisibleItemID VisibleItemIdentifier Type VisibleItemIdentifier Call Number	
ItemCheckedOut	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	DateDue	
	ItemOptionalFields Bibliographic Description Author Title MediumType VisibleItemID VisibleItemIdentifier Type VisibleItemIdentifier Call Number	
	UserOptionalFields VisibleUserId VisibleUserIdIdentifierType VisibleUserIdIdentifier User Privilege UniqueAgencyId AgencyUserPrivilegeType	
ItemRecalled	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId UniqueAgencyId UserIdentifierValue	

Message	Profile Required Elements	Comments
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	DateDue	
	ItemOptionalFields Bibliographic Description Author Title MediumType VisibleItemId VisibleItemIdentifier Type VisibleItemIdentifier Call Number	
	UserOptionalFields VisibleUserId VisibleUserIdIdentifierType VisibleUserIdIdentifier User Privilege UniqueAgencyId AgencyUserPrivilegeType	
ItemReceived	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	UniqueUserId UniqueAgencyId UserIdIdentifierValue	
	DateReceived	
	ItemOptionalFields Bibliographic Description Author Title MediumType VisibleItemId VisibleItemIdentifier Type VisibleItemIdentifier Call Number	
	UserOptionalFields VisibleUserId VisibleUserIdIdentifierType VisibleUserIdIdentifier User Privilege UniqueAgencyId AgencyUserPrivilegeType	

Message	Profile Required Elements	Comments
ItemRenewed	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	DateDue	
	Item Optional Fields Bibliographic Description Author Title MediumType VisibleItemID VisibleItemIdentifier Type VisibleItemIdentifier Call Number	
	UserOptionalFields VisibleUserId VisibleUserIdentifierType VisibleUserIdentifier User Privilege UniqueAgencyId AgencyUserPrivilegeType	
ItemRequestCancelled	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	RequestType	Value always 'hold'
ItemRequested	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	UniqueUserId UniqueAgencyId UserIdentifierValue	

Message	Profile Required Elements	Comments
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	RequestType	Value always 'hold'
	RequestScopeType	Value always 'item'
	DateOfUserRequest	
	ItemOptionalFields Bibliographic Description Author Title Medium Type	
	UserOptionalFields VisibleUserId VisibleUserIdentifierType VisibleUserIdentifier User Privilege UniqueAgencyId AgencyUserPrivilegeType	
	ItemShipped	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId
	UniqueRequestId	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	DateShipped	
	ShippingInformation ElectronicAddress	Contains pickup address information
	ItemOptionalFields BibliographicDescription Author Title Medium Type ItemDescription VisibleItemId VisibleItemIdentifierType VisibleItemIdentifier Call Number	
RenewItem	InitiationHeader FromAgencyId UniqueAgencyId ToAgencyId UniqueAgencyId	
	MandatedAction DateEventOccurred	

Message	Profile Required Elements	Comments
	UniqueUserId UniqueAgencyId UserIdentifierValue	
	UniqueItemId UniqueAgencyId ItemIdentifierValue	
	DesiredDateDue	

Appendix A

Event Table

Triggering Event and Event Location	Initiating Application	Service Initiated	Responding Application
User begins request session	INN-Reach DCB	AuthenticateUser	User Agency's Circulation Application responds with AuthenticateUser Response
AuthenticateUserResponse Received	INN-Reach DCB	LookupUser	User Agency's Circulation Application responds with LookupUser Response
LookupUser Response Received	INN-Reach DCB	ItemRequested (sent to User Agency's Circulation Application and Item Agency's Circulation Application)	None
Item agency ships item	INN-Reach DCB	ItemShipped (sent to User Agency's Circulation Application) CheckOutItem (sent to Item Agency's Circulation Application)	None
Item is received by user agency	INN-Reach DCB	AcceptItem (sent to User Agency's Circulation Application)	None
User cancels a request for an Item	INN-Reach DCB	ItemRequestCancelled (sent to User Agency's Circulation Application and Item Agency's Circulation Application)	None
User agency checks out Item to User	INN-Reach DCB	ItemCheckedOut (sent to User Agency's Circulation Application)	None
User agency checks in Item	INN-Reach DCB	ItemCheckedIn (sent to User Agency's Circulation Application)	None
Item agency receives item	INN-Reach DCB	ItemReceived (sent to User Agency's Circulation Application) CheckInItem (sent to Item Agency's Circulation Application)	None
User renews Item	INN-Reach DCB	ItemRenewed (sent to User Agency's Circulation Application) RenewItem (sent to Item Agency's Circulation Application)	None
Item is recalled	INN-Reach DCB	ItemRecalled (sent to User Agency's Circulation Application and Item Agency's Circulation Application)	None