

Product Technical Specification

URSA 4.0

URSA 4.0 is the most automated resource sharing system available. It enables seamless requesting and request management in multi-vendor consortia on a variety of local circulation systems. Individual libraries may also use URSA to place and manage their own ILL requests.

I. Highlights

Interlibrary loan is linked with local circulation processes to avoid overlap and streamline staff workflows, using the Z39.83 (NCIP) Direct Consortial Borrowing profile. Users can place their own ILL requests from anywhere at anytime via the Internet as easily as requesting materials from their own library. URSA 4.0 interoperates with a variety of automation systems to enable staff to fill requests using a combination of local holds and circulation processes and just four key interlibrary loan tasks, i.e. Fill, Receive, Return and Complete, greatly speeding up delivery to users. Libraries profile availability rules, lending policies and preferred partners so that no staff intervention is needed to approve requests before they are sent to the first lender that has the item available. Holds are placed automatically at lending libraries and items are checked out for profiled loan periods. At the borrowing library, a temporary record that is masked from OPAC display is created, a hold is placed for the borrower and the staff use local system routing, notification and checkout processes to manage the circulation of the item. For libraries whose policies require mediation of requests at various stages, there is also support for traditional interlibrary loan workflows.

II. Features and Benefits

Empowers Users

Virtual catalog searching enables users to see a de-duplicated list of available titles and choose the item that matches their needs. For libraries that offer enriched content, users can see cover art, reviews and other added information. Library staff benefit, too, because the bibliographic information captured in requests is more complete and accurate than users supply for fill-in forms.

User-initiated Requests

User-initiated requests based on searching provide immediate results and convenient "any time, anywhere" requesting, which is very popular with users in locations where it has been implemented. Users can identify their preferred pick-up location, tell when they need the item, and indicate the amount they are willing to pay. Each library can determine the maximum number of active loan

Features and Benefits

1. Multi-vendor consortia and single libraries on a variety of different circulation systems share materials transparently
2. Self-service requesting empowers users
 - a. Users place their own requests and check request status online
 - b. Authenticates users from home library files
 - c. Request forms include pickup location, fees, need-by date and other terms
 - d. Provides immediate response to cancel and renew requests
3. Horizon Information Portal searches Z39.50 virtual catalogs with one-click link to request screens
4. Local catalog is automatically checked before ILL requests are placed
5. Requests are automatically sent to preferred partners who can loan the desired item
6. Automated, streamlined workflows reduce average staff time per request by 75%
7. ASP-based service provides maintenance free ILL
8. Consortia members can request from other consortia members or send to external providers
9. Supports standards, including NCIP DCB.50)

and copy requests their users are allowed and this may be limited by user type.

View Status of Their Own Requests

Users view their own requests online to check the status, and may cancel a request that has not yet been filled if the item is no longer needed. They can also see the due date for loaned items in their possession and renew loaned materials with immediate posting of the new due date if the lender permits renewals.

Automates Staff Tasks

URSA 4.0 interacts with the library's local circulation system to save staff time for both lending and borrowing library staff. Placing holds automatically at the lending library allows the integration of ILL pick lists and local hold pull lists. Automatically adding the item to the borrowing library's catalog temporarily and placing a hold on the item for the user allows the use of the local circulation system and its processes for filling the hold, checking the item out and back in, handling overdues, notifying users and routing items to and from pickup locations. It is also possible to mix and match automation and mediation of ILL tasks.

Uses Defaults & Profiles

URSA 4.0 leverages default configurations and profiles for policies, lender strings and other local decisions that staff have previously spent time enforcing. Lending partners can be automatically assigned from tiers of preferred partners and load balancing can be applied within tiers to avoid overuse of a single lender. Requests traverse tiers transparently to users until a lender is found that has the requested item available or until they reach the "lender of last resort." Requests with no local providers can be automatically sent to OCLC's Direct Request service and other utilities to enable use of a broader lender community.

Combined with circulation system interaction to place holds, use of policies to automate or "pre-mediate" requesting means that the first time that staff at either library need handle an interlibrary loan is when it is pulled from the shelf to fill a request. At the borrowing library, ILL staff receive an item and return it to the lender. The circulation of the item is handled as if it is a local hold. Staff can, of course, intervene at any stage and override defaults for specific requests.

Provides Robust Z39.50 Searching

Horizon Information Portal 4.0 is the entry point for request placement and both users and staff perform virtual catalog searches to locate materials to request. Libraries can profile any number of catalogs as targets for broadcast Z39.50 searching, depending on the library's policies. Users may be required to login before entering the portal, allowing only those resources that are appropriate to the user to be displayed, or the user may be asked to login when they select a protected resource. Search result lists are de-duplicated to make it easier for users to locate a desired item. Online citations for copy requests may be sent to URSA via OpenURL link resolvers. It is also possible to request items via web-based, Fill-in forms if no results match the user's needs.

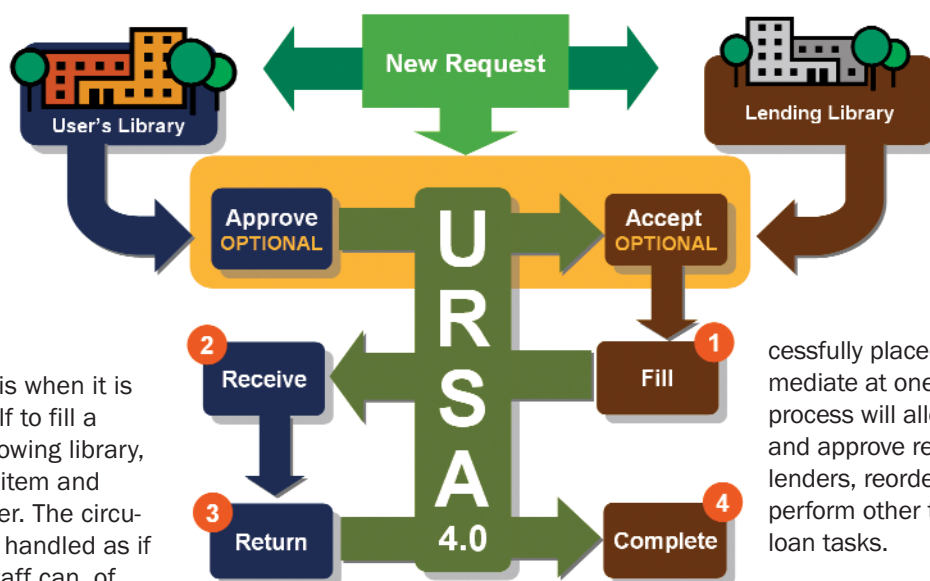
Request Placement

Request Placement begins the interlibrary loan process when a user clicks a "Request It" button on an item in the search results. Background searches are also done on the library's profiled lending partners, which may be

the same as the catalogs the user searched or not, to determine availability of the item at their locations. A request matrix is presented to the user where they select a preferred lender and optionally multiple acceptable lenders. If the preferred lender denies the request, the acceptable lenders are randomized to fulfill the request.

A unique Selection Options screen enables users to choose their preferred terms from those supported by potential lenders, including fees, time to deliver and length of loan period. The user selects their pickup location, the date the item is needed, agrees to pay fees and verifies

contact information. The new request is sent automatically to the preferred lender and a hold is placed before the user sees the next screen that indicates that the request was successfully placed. For libraries who mediate at one or more step, the process will allow staff to review and approve requests, select lenders, reorder lender strings and perform other traditional interlibrary loan tasks.



URSA Automates Request Management: 4 simple steps – compared to 12 steps in traditional processes

Request Management

Once a request is placed by the user, it moves into Request

Management, which may be done in automated or mediated (traditional) mode, depending on the library's preferences. A staff member begins by logging in and selecting either Borrowing or Lending tasks. Key Borrowing Library tasks are Receive and Return; basic Lending Library tasks are Fill and Complete; other tasks are New Loan and Copy Requests. From here a summary view of the tasks that need attention is displayed. URSA provides very flexible and robust workflow. Staff members can choose to perform each task in batch mode to complete the task for many requests at once or individual mode. Staff can also change status of requests manually and retry tasks as needed to correct errors and handle exceptions. Options to Place Requests and Search Requests are available to staff at every step so that they can easily provide assistance to users' with new requests and existing loans. Email can also be sent from within URSA to borrowing and lending partners to clarify questions or communicate issues in handling a request and Search Requests allows ILL staff to create ad hoc reports of all requests in a specific status, from their library's users and/or from specific lenders.

III. Technical Design

URSA 4.0 Package Components

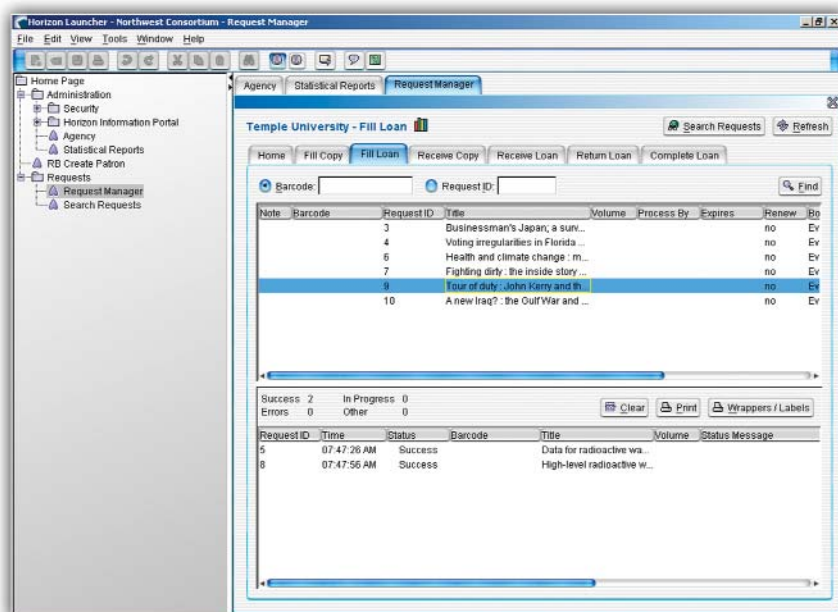
URSA is delivered on the Dynix ASP, allowing for convenient use without any need for libraries to purchase and maintain their own servers for resource sharing. This ASP solution provides several components, including the URSA application and database, an NCIP Gateway to communicate with non-NCIP library systems, an optional ISO ILL Gateway, and links to local circulation systems. Horizon Remote Patron Authentication may be added for customers that require additional user authentication services.

The borrower user interface is fully web-based and uses stylesheets that can be easily localized and customized. The administration user interface is a robust and efficient thin client application, written in Java Swing and designed for high productivity. Each library and consortium profiles its own policies regarding borrowing and lending.

All of the URSA data elements, error messages and help files are translatable into non-English languages and scripts. URSA 4.0 supports NISO Z39.83, the recently adopted NCIP standard, yet also works with many systems that have not yet added support for NCIP through the use of proprietary services.

Horizon Information Portal

The powerful search engine of the Horizon Information Portal is used for virtual catalog searching and user authentication. Each library can profile the addresses of library catalogs that are available to their users. It is also



Fill Request Screen

possible to subscribe to Enriched Content and to offer Consolidated Searching of online databases to users through this portal, thus combining resources for users into a single interface. Refer to the Horizon Information Portal brochure for more technical information about the portal.

NCIP Initiator

Working entirely behind the scenes, the NCIP Initiator facilitates the authentication and creation of users at partner libraries, requests items from lenders, and employs NCIP services to communicate between libraries during the entire lifecycle of a request.

NCIP Gateway

NCIP services are converted to scripts for character-based systems that do not yet support the NCIP standard. This proprietary technology enables URSA to interoperate with a variety of existing library automation systems.

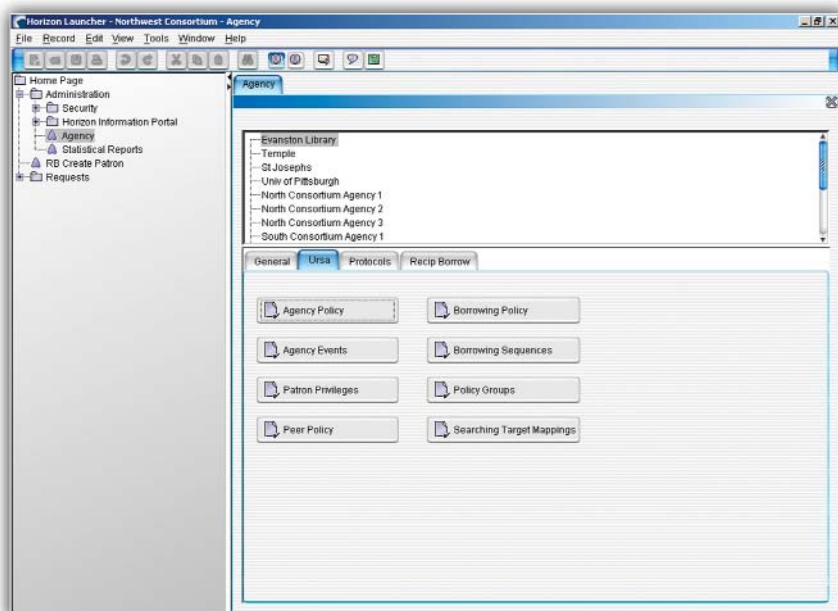
IV. Administration and Configuration

Flexible Administration

The Administration Menu is used to perform all profiling, staff login and password entry and statistical reporting. Only staff with Administrative privileges can access these screens.

Consortium

Many decisions about Direct Consortial Borrowing, such as charges, delivery methods and levels of service, may be made at the consortium level and can apply to all members of a consortium in their dealings with other mem-



Admin Menu for URSA

bers. Conversely, libraries may be a member of no consortia without losing any functionality.

Agency Administration

Agencies may represent a library system or a subunit within a system. Profiles are "inherited" from the consortium and/or parent agency to allow quick and easy implementation. At each level, profiling can be done to allow maximum flexibility in applying local policies and procedures.

Statistical Reporting

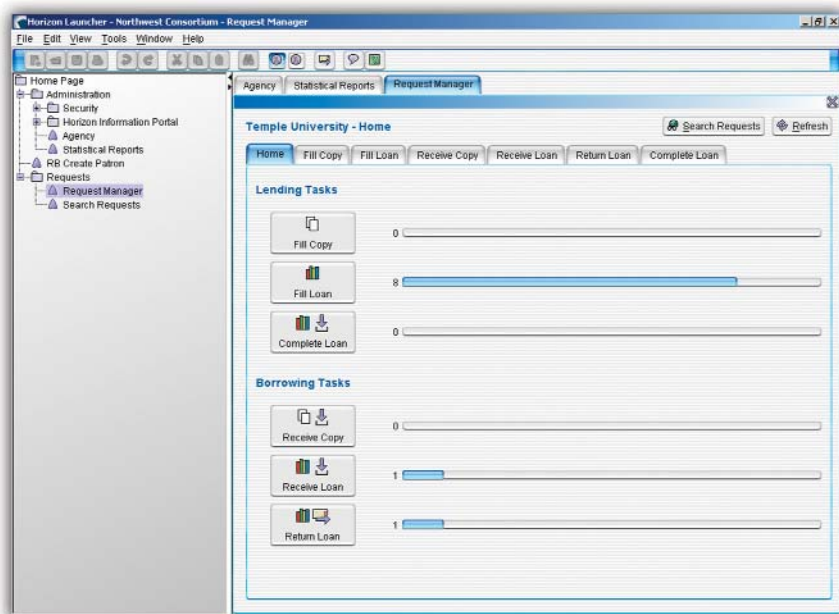
Statistical reporting is an important aspect of interlibrary loan and new statistical reports provide a complete picture of an institution's borrowing and lending activity, fill rates and turnaround times for lenders, plus copyright and lender fee reports. Cross-tabulated statistical activity reports can be run for a consortium, a system, and/or an individual agency or branch. Reports can be generated for flexible date ranges and may be output in a variety of formats, including Adobe Acrobat (pdf), Microsoft Excel (xls), Web browser (html) and a delimited format for export

and Lending Tasks. Administrators may also create administrators who are able to do profiling for sub-agencies and their branches, which is useful in large library systems or consortia with distributed interlibrary loan offices.

One of the unique features of URSA 4.0 is that the profile of the main agency is "inherited" by its branches and sub-agencies unless they perform their own profiling. Some of the options included in inheritable profiles are user privileges, availability rules, borrowing sequences, policy groups, carriers, delivery methods, terms and fees.

Notices & Printing Templates

All notifications and printed materials, such as wrappers and mailing labels, are delivered with default wording. The templates can be modified by each library or agency's administrator. Original templates for each document are retained and can be restored if necessary. Each library can profile the events at which mailing labels, wrappers, e-mails and printed notices are generated.



Request Management Menu

to other programs for custom usage. An optional adapter will also allow you to use Horizon Web Reporter to view, customize, and distribute reports if desired.

Configuration

URSA delivers a simple and logical workflow for administration. An administrator can easily login and create members, add staff logins and modify defaults to reflect library policies and specifications. This includes completing the contact information for the main agency, adding sub-agencies or branches, defining lending and borrowing policies, selecting partners and mapping local user privileges. Staff logins are also created to allow staff access to Borrowing

V. User Privacy

Unlike older ILL systems that store user records, URSA 4.0 protects user privacy by utilizing the user's record at his or her home library. Each library profiles the data elements that lending library staff can see when filling a request. In automated requests, holds are placed at the lending library in the name of the borrowing library and not for a specific user. No user-specific data is retained on the URSA 4.0 server once a request is completed.

Data Encryption Options

The HTTP and HTTPS transport protocols are used by URSA 4.0, in addition to TCP/IP, to send information across the Internet. Libraries that choose to use HTTPS have their data passed in encrypted form, which adds an additional level of privacy for users.

VI. Standards Supported: ISO ILL and NCIP DCB

URSA 4.0 uses NCIP Direct Consortial Borrowing (DCB) as its primary communication method and libraries can profile requests to be communicated through NCIP Gateway's ISO ILL when no local lender is found through DCB. This two-tier approach is ideal for libraries who want to offer fully automated interlibrary loan services to their users without requiring them to learn different methods for plac-

ing requests. It also enables staff to use a single workflow for all interlibrary loan tasks.

NISO Circulation Interchange Protocol (NCIP)

Direct Consortial Borrowing (DCB) is one of three application areas of the NISO Z39.83 (NCIP) standard and is intended to allow consortia, states, regions and other groups of cooperating libraries to provide seamless interactions for users of disparate automation systems. This standard is based on XML.

ISO 10160/10161

ISO 10160/10161, commonly known as ISO ILL, is an essential element in traditional interlibrary loan processes. It is primarily used to allow a borrowing library and a lending library to communicate in a "peer-to-peer" relationship and for staff to manage the transactions between the libraries. Support for ISO ILL is also essential for independent libraries that send requests to a central resource or a national library. To that end, Dynix has not changed its support for ISO ILL with this release. Generic Script Messaging (GSM), used primarily in Canadian interlibrary loan transmission, is also supported.

VIII. Dynix ASP Environment

URSA is an application that is delivered as part of Dynix ASP Solutions. URSA is installed at the Dynix Data Center where the application is managed and the application data is securely stored. Dynix personnel administer the servers and database and library personnel administer and manage their own setup and configuration of the URSA application.

URSA runs on Red Hat Enterprise Linux, Sun Solaris, and Windows servers and supports Oracle, DB2, Sybase and MS SQL databases.

Network Connections

10/100MB Ethernet switch between URSA and local ILS/searching system.

It passes the connection based on the information entered in URSA profiles regarding the location (ip address) of the library's Horizon Information Portal.

10 Kbps of bandwidth for each Horizon Information Portal user accessing the Horizon Information Portal server.

Staff Workstation Requirements

- Windows 2000, XP
- Mac
- Linux workstation (Red Hat, Suse)

Public Access Workstation Requirements

- Workstation with Internet access (PC or Macintosh)
- Standard web browser with support for printing of multi-page documents
- Microsoft Internet Explorer 6.X or higher
- Netscape 7.1 or higher
- Mozilla

IX. Supported ILS

URSA uses industry standard communication protocols described in this document to interoperate with many library systems, including: Horizon 7.4 (and above), Dynix ILS, TLC CARL, DRA Classic, Ex Libris ALEPH, Geac Vubis, Innovative Millenium, Sirsi Unicorn, Gaylord Polaris, Endeavor Voyager, and VTLIS Virtua. Dynix is actively promoting the implementation of NCIP messaging and has implemented NCIP communications with several vendors. Testing is under way or will be shortly with other major vendors.

Horizon NCIP Responder

Horizon uses the Horizon NCIP Responder to enable the circulation system to receive messages from the URSA server and to respond appropriately by transferring requested data, managing holds and hold requests, creating new users and temporary bibliographic and item records and complete other tasks that have traditionally been performed manually.

Note: These system recommendations are given as guidelines only. For the exact requirements needed for your configuration, please contact Dynix.

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