
Software Requirements Specification

for the

Web Services

of an

Integrated Library System

Version 3.0 final

Prepared by Lori Ayre and Lucien Kress
Galecia Group
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Revision History

Name	Date	Reason For Changes	Version
Lucien Kress	11/25/08	Initial Draft	1.0 draft
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1. Introduction

1.1 Purpose and Perspective

This Software Requirements Specification (SRS) describes the functional and nonfunctional requirements for the Web Services of an Integrated Library System (ILS), including staff and patron catalog interfaces, patron account management, and web-based or web-related programs and services. The requirements were developed specifically for King County Library System, but are believed to be suitable for many large, urban, multiple-branch, centralized library systems.

The requirements in this SRS presuppose the general data structures and functionality of a full-fledged ILS. The Web Services will replace and enhance the current capabilities of commercially available ILSes, as well as add new functionality.

1.2 Product Scope and Features

The Web Services of the ILS facilitate the management and presentation of staff and public interfaces, patron account management, and web-based or web-related programs and services. Specifically, the Web Services support the following activities, among others:

- Designing, creating, and publishing web interfaces to the catalog, for staff and patron use.
- Designing, creating, and publishing an interface for managing patron account information, preferences, content sharing, etc.
- Designing, creating, and publishing patron programs and services, such as book alerts, RSS feeds, etc.
- Providing a platform for patrons to create and share content, including book ratings, book reviews, book lists, book discussion groups, etc.
- Generating and publishing statistics and reports in support of web service management.

The current specification presupposes the general functionality of an ILS and specifies only those requirements that directly or indirectly relate to management activities. King County Library has previously published specifications for Acquisitions and Serials Management, Circulation, and Cataloging modules, among others.

Moreover, the current specification is focused on functional characteristics of Web Services. Data structures and user interfaces will require further specification and development using an iterative, prototype-oriented software development methodology.

1.3 Intended Audience

This SRS is intended both for library managers and staff who may contribute additional requirements or commentary, and for software project managers and developers who will implement the requirements. As such, it aims for a high level of readability for a non-technical audience, while providing enough specificity to be useful to a software developer.

It is assumed that when software development occurs, it will be in a highly collaborative and iterative environment in which end-users have multiple opportunities to review prototypes and refine the user interface and software functionality.

It is also assumed that the reader has a general understanding of Library services and processes and does not require definition of common Library terminology.

1.4 Document Conventions

The SRS includes requirements. Requirements are separated into sections, including General, Administrative, Search and Browse, Patron Services, and Patron Account Management. In addition, there are requirements that are not primarily related to Web Services but that are included for reference and/or because they describe a function for which a web interface is necessary. These requirements are grouped in a section called Information Only.

Requirements include a reference to a process flowchart where appropriate. Flowcharts generally indicate the current approach to services at King County Library System, and should be considered to give contextual information rather than to prescribe or constrain new software development.

1.5 User Classes and Characteristics

Patron	A Patron is a customer of King County Library System, either possessing a library card or not, either on site of a community library or not, using print materials, media materials, or electronic resources.
Staff	Staff includes managers, librarians, library technicians, library assistants, and library pages who are involved in designing and providing services for the Library.
Web Services Staff	Web Services Staff includes web developers, web designers, programmers, and others who are involved in designing and publishing Library web pages, web applications, and web sites.
Managers	Managers include management staff who oversee Library processes.
Library Managers	Library Managers include Cluster and Site Managers who provide input to the design and implementation of Library services.
Library Directors	Library Directors include members of the Library Executive Team who plan and direct Library services and priorities.

1.6 Operating Environment

- OE-1: Web services support the needs of a large, multiple-branch library system with an advanced, complex website. Specifically, the system must support a library system with over 1.25 million patrons, 50 locations, 20 million circulations, purchasing and processing over 500,000 items per year. It is highly desirable that searches and reports can be processed during open hours without disrupting other system functions.
- OE-2: The King County Library System website receives over 2,000,000 visits per month.
- OE-3: Web Services operate on a Linux or Solaris server.
- OE-4: Web Services shall be accessible through a web-browser or a Windows-compatible client.
- OE-5: Web Services shall be accessible through Microsoft Internet Explorer (v.6.0 and later) and Mozilla Firefox (v.2.0 and later).
- OE-6: Web Services shall be accessible with screen-reading software, screen-magnification software, and other software programs designed to increase accessibility.

1.7 Design and Implementation Constraints

- CO-1: Web Services shall use a fully relational database back-end.
- CO-2: Web Services shall produce standards-compliant HTML.
- CO-3: Web Services shall provide a development and training environment with the ability to migrate configurations to a production environment.
- CO-4: User rights and privileges will be controlled through security groups and/or “roles” that allow access control for individuals, workgroups, and arbitrary staff groups.

1.8 User Documentation

- UD-1: The software developer shall provide complete data specifications for authority records, bibliographic records, order records, item records, hold/request records, and other records maintained or accessed by Web Services.
- UD-2: The software developer shall provide a thorough high-level description of major processes, including bibliographic record import and export, validation of bibliographic records against internal and external authority sources, and standard reports.
- UD-3: The system shall provide an online, hierarchical, and cross-linked help system in HTML that describes and illustrates all system functions.

1.9 Assumptions and Dependencies

- AS-1: Web Services are part of an enterprise-level Library Automation System.
- AS-2: Web Service process are consolidated at a central location, and accept input and provide services to multiple locations.
- DE-1: Web services rely on the data structures and functionality of an enterprise-level Library Automation System, including Acquisitions, Cataloging, and Circulation modules.
- DE-2: Web Services interface with a variety of vendor websites, via published APIs and/or automated transfer of standard-format data files (e.g. USMARC21, EDIFACT).
- DE-3: Web Services include and interact with a patron interface, also known as an Online Public Access Catalog (OPAC).

System Requirements

Category: Web Services: General

Req ID:	7110	Source:	WEB	Priority:	3
Name:	web usability				
Description:	The catalog website, patron account website, and related components use standards-compliant HTML, XHTML, XML, CSS, JAVA, ASP.NET, and/or ColdFusion code which is fully within the control of the Library. Global and contextual navigation elements are fully customizable. The web architecture supports the embedding of custom code, widgets, and data extracted from external APIs. Catalog website and related components must be Section 508 compliant.				
	Related Reqs:	7120	Related Process		
Req ID:	7112	Source:	WEB	Priority:	2
Name:	catalog home page				
Description:	The catalog home page is configured by the Library. The system includes modular components (e.g. widgets) that can be added to library pages, including: a search box; buttons for browsing the collection; library news and events; library event calendar; a toggle to limit searches to available items; library branch information; lists of currently popular items; lists of new items; personalized recommendations; a chat box; current holds status; current checked-out item status, and events at the patron's home library.				
	Related Reqs:	7101 7109	Related Process		
Req ID:	7120	Source:	WEB	Priority:	2
Name:	modular website				
Description:	System provides modular customizations for patron web interface, allowing patron to select a base template and add modules or applications, singly or in batch. For example, a patron might select a simple search interface, add a bundle of child-related services, and add "top ten circulating DVDs" and "top ten new mysteries" widgets.				
	Related Reqs:		Related Process		

Req ID: 7106	Source: WEB	Priority: 1
Name: patron web templates		
Description: System supports creation of web templates for different types of patrons -- those who want a simple interface, those who want advanced features, those mainly interested in children's services, etc. -- and allows patrons to switch interfaces and customize interfaces.		
Related Reqs:		Related Process
Req ID: 7202	Source: WEB	Priority: 2
Name: web session length		
Description: Ability to set separate session lengths based on browser IP address ranges. For example, web sessions expire sooner for public computers inside the Library than for remote computers.		
Related Reqs:		Related Process
Req ID: 7403	Source: WEB	Priority: 3
Name: SSL encryption		
Description: Secure Socket Layer, at least 128-bit encryption, is available when patrons are logged in, both for "My Account" transactions and for personalized searching.		
Related Reqs: 6511		Related Process
Req ID: 7418	Source: WEB	Priority: 2
Name: Z39.50 support		
Description: System supports Z39.50.		
Related Reqs: 7219		Related Process
Req ID: 7012	Source: WEB	Priority: 3
Name: MARC logic		
Description: System uses MARC logic in direct and subtle points. All MARC records are referenced, including subfields, indicators, etc., to determine the results of all searches and displays.		
Related Reqs:		Related Process

Req ID: 7228

Source: WEB

Priority: 3

Name: electronic resources indexing

Description: Ability to include electronic resources in indexes.

Related Reqs:

Related Process

Category: Web Services: Administrative

Req ID:	7220	Source:	WEB	Priority:	2
Name:	error message administration				
Description:	Administrative staff can create and modify staff and patron error messages and specify triggers for error messages.				
	Related Reqs:	5216	Related Process		
<hr/>					
Req ID:	7416	Source:	WEB	Priority:	2
Name:	patron error messages				
Description:	Patron error messages displayed in the OPAC are specific and customizable by OPAC administrators. For example, if a hold request is unsuccessful, the error message should say why (hold limit reached, no available copies, etc.).				
	Related Reqs:	5216	Related Process		
<hr/>					
Req ID:	7111	Source:	WEB	Priority:	3
Name:	default patron account view				
Description:	When a patron clicks the "my account" link, the default view is configured by the Library. For example, the default view may show holds that are ready to pick up, checked-out items, and current charges, with other account pages accessible through navigation elements. Library may specify whether empty lists will be displayed (e.g. when there are no holds ready to pick up, Library specify whether to omit that section or display "0 holds available for pickup").				
	Related Reqs:		Related Process		
<hr/>					
Req ID:	7211	Source:	WEB	Priority:	3
Name:	contextual help				
Description:	System supports addition of custom, context-sensitive help on any page.				
	Related Reqs:		Related Process		

Req ID: 7109	Source: WEB	Priority: 1
Name: library events		
Description: System interfaces with external event management software. Patrons can sign up for events online, import events from the library website in standard calendar formats, receive reminders by email or text message, and evaluate or comment on events online. Events can be included in search scopes. Library defines message format, including data fields to include. Patrons may opt out of event notifications.		
Related Reqs: 7101 7116		Related Process

Req ID: 7116	Source: WEB	Priority: 1
Name: event-related resources		
Description: System can be used to record relationships between events and resources, so that patrons who register for an event can receive recommendations of related materials, and patrons who search for materials can learn about related events.		
Related Reqs: 7109		Related Process

Req ID: 7006	Source: WEB	Priority: 3
Name: availability status		
Description: Library can define availability status of items based on item status and other criteria. For example, items may show as available only when their status is "on shelf", or when their status is either "on shelf" or "just returned", etc. This definition is the basis of availability display (see REQ-7009) and "limit to available" searches (see REQ-7224).		
Related Reqs: 7009 7224		Related Process

Req ID: 7020	Source: WEB	Priority: 2
Name: top ten searches		
Description: System tracks patron and staff searches separately, and administrators can review and publish a dynamic list of the most popular search types, search terms, limits, and sorts.		
Related Reqs:		Related Process

Req ID: 7225

Source: WEB

Priority: 2

Name: trend reports

Description: Ability to generate a report showing top ten holds placed, top ten circulations, etc., per library branch and per system.

Related Reqs:

Related Process

Category: Web Services: Search and Browse

Req ID: 7407 **Source:** WEB **Priority:** 3

Name: rules of suppression (OPAC)

Description: System honors all rules of suppression (see REQ-5278), as determined by the organization and implemented by OPAC administrator.

Related Reqs: 5278

Related Process

Req ID: 7405 **Source:** WEB **Priority:** 3

Name: enhanced vendor content

Description: Ability to accept enhanced OPAC content from vendors, e.g. jacket images, full text reviews, tags, read alike suggestions, etc. System will support LibraryThing, ChiliFresh, Content Café, LiveChat, and other vendors.

Related Reqs: 2190

Related Process

Req ID: 7003 **Source:** WEB **Priority:** 3

Name: search scope

Description: System provides robust and fast searching capabilities. Search scopes can be defined to include any or all indexed fields, bibliographic record information, and any or all meta-data attached to the bibliographic and item record. Ranking of search results can be defined by which field(s) the keyword was found in.

Related Reqs: 1726 7014

Related Process

Req ID:	7013	Source:	WEB	Priority:	3
Name:	search: general characteristics				
Description:	System supports wildcards (any single character, any group of characters). System supports "AND", "OR", and "NOT" operators. System supports regular expressions, BOOLEAN, and proximity searches, but each of these can be enabled or disabled independently for staff and patron interfaces. System supports case-sensitive and case-insensitive searches. System supports limiting searches to a specified date range. System supports a method for literal interpretation of reserved characters (for example, interpret "*" as a wildcard, but interpret "\" as an asterisk). In general, all Unicode characters, to include symbols, diacritics, and foreign language characters, can be included in a search term.				
	Related Reqs:		Related Process		

Req ID:	7011	Source:	WEB	Priority:	2
Name:	search interfaces				
Description:	Search interfaces should be consistent for staff and patrons, with similar look-and-feel even when staff interfaces include additional options or features not available to patrons.				
	Related Reqs:		Related Process		

Req ID:	7016	Source:	WEB	Priority:	3
Name:	search engines				
Description:	All search pages should provide the same options and the same look and feel, even when they rely on different search engines.				
	Related Reqs:		Related Process		

Req ID:	7210	Source:	WEB	Priority:	3
Name:	default search box				
Description:	Default search box does not require selecting a search type. The Library defines the default search type.				
	Related Reqs:		Related Process		

Req ID: 7017	Source: WEB	Priority: 3
Name: search: custom templates		
Description: Ability to create pre-defined searches and provide them to users. Users can modify and save searches, and can limit and refine searches from the initial search results screen.		
Related Reqs:		Related Process
Req ID: 7206	Source: WEB	Priority: 3
Name: search: word stemming		
Description: Ability to broaden search results by including all word stems (e.g. word tenses, singular and plural, etc.).		
Related Reqs:		Related Process
Req ID: 7221	Source: WEB	Priority: 3
Name: searching numbers		
Description: System supports number searches, including call number, ISBN, OCLC number, government document number, standard music number, UPC code, barcode number, bibliographic record number, title control number, and item record number.		
Related Reqs:		Related Process
Req ID: 2380	Source: WEB	Priority: 3
Name: searching non-roman characters		
Description: Ability to search for non-roman characters, using standard input methods.		
Related Reqs:		Related Process
Req ID: 7015	Source: WEB	Priority: 2
Name: search shortcuts		
Description: System provides a variety of search shortcuts (e.g. "T:abc" to search Title field for "abc") which can be used from any search field. Expert users can perform advanced searches in a simple search field, without going to an advanced search screen.		
Related Reqs:		Related Process

Req ID: 7201	Source: WEB	Priority: 3
Name: search: add more rows		
Description: Advanced search provides the ability to add additional criteria rows.		
Related Reqs:		Related Process
Req ID: 7022	Source: WEB	Priority: 3
Name: search: spell check		
Description: System suggests alternate spellings for search terms, based on words that occur in indexes. (In other words, the system will not suggest a word that will result in no search results.) Library can modify the system thesaurus as needed to reflect local preferences.		
Related Reqs:		Related Process
Req ID: 7018	Source: WEB	Priority: 2
Name: search limits		
Description: Library can define two or more search limits. Examples of search limits are: "DVDs and video downloads", "items at nearby libraries", "Chinese language books, DVDs, and CDs", "large print items", etc. Limits may include search targets outside the library catalog as well. Searches can be toggled between limited view and expanded view as controlled by OPAC administrator.		
Related Reqs:		Related Process
Req ID: 5501	Source: CAP	Priority: 3
Name: opac displays call numbers in initial search results		
Description: opac displays call numbers in initial search results		
Related Reqs:		Related Process
Req ID: 7007	Source: WEB	Priority: 3
Name: search limits: display		
Description: System supports placing multiple limits on any search. System provides a visual indicator when limits are in effect on search results. Limits can be toggled on and off individually.		
Related Reqs:		Related Process

Req ID: 7224	Source: WEB	Priority: 3
Name: search limits: available		
Description: Ability to limit searches to available items, as defined in REQ-7006.		
Related Reqs: 7006		Related Process

Req ID: 7205	Source: WEB	Priority: 3
Name: search limits: call number range		
Description: Ability to limit keyword searches by call number range.		
Related Reqs:		Related Process

Req ID: 7002	Source: WEB	Priority: 2
Name: search limits: reading level		
Description: Ability to limit searches by one or more reading levels, as defined by library. Reading levels may be defined at will, based on MARC Audience field, item call number, owning library, internal or external metadata, and other information in the bibliographic and item record.		
Related Reqs: 7007		Related Process

Req ID: 7216	Source: WEB	Priority: 3
Name: searching fixed fields		
Description: Ability to use MARC fixed fields for searching.		
Related Reqs:		Related Process

Req ID: 7014	Source: WEB	Priority: 3
Name: search results: relevancy ranking		
Description: Relevancy ranking can be customized based on which field the search term was found in, individual weighting of fields, and other criteria from the bibliographic record.		
Related Reqs: 7222		Related Process

Req ID:	1704	Source:	CAP	Priority:	3
Name:	search results: display				
Description:	Ability to customize all search result display screens, including selection of fields to display and sorting/limiting options. Ability to set preferred default displays defined by individual user logons with ability to further customize and change settings as needed.				
	Related Reqs:	2271 2272 227	Related Process	CAT010	

Req ID:	7226	Source:	WEB	Priority:	3
Name:	search results: deduplication				
Description:	All search results honor the database deduplication to ensure that a single record does not appear more than once.				
	Related Reqs:		Related Process		

Req ID:	7209	Source:	WEB	Priority:	3
Name:	search results: refinement				
Description:	Search results can be refined, limited, and sorted from the initial results list. All search criteria are remembered when search results are refined, limited, or sorted.				
	Related Reqs:		Related Process		

Req ID:	2361	Source:	WEB	Priority:	3
Name:	search results: sorting				
Description:	System provides ability to sort search results by any field by clicking on column heading, or by selecting a predefined sort from a drop-down menu.				
	Related Reqs:		Related Process		

Req ID:	7213	Source:	WEB	Priority:	2
Name:	search results: highlight search terms				
Description:	System provides an administrative setting to enable (or disable) ability to toggle highlighting of search terms in search results screens.				
	Related Reqs:		Related Process		

Req ID: 2366	Source: WEB	Priority: 1
Name: search results: details		
Description: When viewing search results, ability to view selected details in a pop-up window by hovering mouse cursor over an item. Clicking a search result displays the full bibliographic record. This capability can be toggled on or off per patron and per system.		
Related Reqs:		Related Process

Req ID: 7223	Source: WEB	Priority: 2
Name: search results: details level		
Description: Ability to expand and collapse search results to view different levels of details.		
Related Reqs:		Related Process

Req ID: 7208	Source: WEB	Priority: 3
Name: search results navigation		
Description: Ability to navigate back and forth between search criteria; initial search results; and refined, limited, and/or sorted search results.		
Related Reqs:		Related Process

Req ID: 7212	Source: WEB	Priority: 3
Name: search expansion		
Description: Searches can be expanded on-the-fly to include additional sources, e.g. journals, external websites, WorldCat, Google Books, etc.		
Related Reqs:		Related Process

Req ID: 7009	Source: WEB	Priority: 3
Name: search results: availability		
Description: Ability to display availability (as defined in REQ-7006), last check-in location, and/or last check-in time in search results and on bibliographic or item records. Library may choose to display any or all of this information, in staff interfaces, patron interfaces, or both.		
Related Reqs: 1922 7006		Related Process

Req ID: 7217	Source: WEB	Priority: 3
Name: search results: related items		
Description: Ability to expand search to include related items, e.g. items that have the same subject headings, authors, etc. as the items in the original search results.		
Related Reqs:		Related Process
Req ID: 7204	Source: WEB	Priority: 3
Name: faceted search		
Description: Ability to browse search results by format, language, location, and other categories specified by the Library.		
Related Reqs:		Related Process
Req ID: 7021	Source: WEB	Priority: 1
Name: search results to RSS		
Description: Every search can be turned into an RSS feed directly from the search results page.		
Related Reqs: 6003		Related Process
Req ID: 7207	Source: WEB	Priority: 3
Name: search results pages		
Description: Specific search types can be configured to display the nearest matches in browse mode. For example, when executing a subject search without any results, the system displays nearest matches in the index, and allows browsing up and down the index.		
Related Reqs: 7119		Related Process
Req ID: 7119	Source: WEB	Priority: 2
Name: empty search results		
Description: Empty search results screens are fully customizable, with ability to specify different screens for different types of search. For example, keyword searches and subject browse searches may have different empty results screens. Each empty results screen can include custom links, buttons, widgets, and applications.		
Related Reqs: 7207		Related Process

Req ID: 7101	Source: WEB	Priority: 1
Name: personalized recommendations		
Description: System provides recommendations and event notifications and reminders, based on patron's stated preferences, borrowing patterns, home library, and demographic information.		
Related Reqs: 7112		Related Process

Req ID: 7214	Source: WEB	Priority: 1
Name: visual association		
Description: Visually associative search refinements by type, subject, genre, etc. (Need clarification on this one!)		
Related Reqs:		Related Process

Req ID: 7203	Source: WEB	Priority: 3
Name: item records: persistent URLs		
Description: Item records have persistent URLs.		
Related Reqs:		Related Process

Req ID: 7227	Source: WEB	Priority: 3
Name: material type icons		
Description: Search results and item lists display material type icons.		
Related Reqs: 5517		Related Process

Req ID: 7215	Source: WEB	Priority: 3
Name: bibliographic record export		
Description: Ability to export a single bibliographic record to file, printer, or email, in any of several specified formats (APA, MLA, etc.) specified by the Library.		
Related Reqs:		Related Process

Req ID:	7406	Source:	WEB	Priority:	3
Name:	serials holdings record display				
Description:	Information from the serials holdings record can be displayed in the OPAC in a customizable, user-friendly way. Specifically, summary holdings statement is easily browsable, issues are listed in reverse chronological order, and patron can easily place hold on first available copy (i.e., issue-level hold). Patrons can also place holds on upcoming magazine titles.				
	Related Reqs:	4303			
		Related Process			

Req ID:	2391	Source:	WEB	Priority:	1
Name:	virtual shelf browsing				
Description:	Provide virtual browsing by call number so that a remote patron can see what is on the shelf.				
	Related Reqs:				
		Related Process			

Req ID:	7005	Source:	WEB	Priority:	1
Name:	patron preferred search types				
Description:	System remembers patrons' search types and defaults to preferred search types on search pages and in search type menus. Patrons can manually specify and save preferred search types.				
	Related Reqs:				
		Related Process			

Req ID:	6003	Source:	WEB	Priority:	3
Name:	favorite searches				
Description:	Patrons can save their favorite searches. Favorite searches are accessible in patron account. Favorite searches can be edited, copied, deleted, and printed in a friendly format defined by the Library. Favorite searches can be used to generate RSS feeds or book alerts (see REQ-6001).				
	Related Reqs:	6001 7021 711			
		Related Process			

Req ID:	7222	Source:	WEB	Priority:	1
Name:	patron search ranking				
Description:	Patrons can assign weights to fields to change their default search result rankings.				
	Related Reqs:	7014			
		Related Process			

Category: Web Services: Patron Services

Req ID: 7108 **Source:** WEB **Priority:** 1

Name: patron content

Description: System provides a platform and/or system interface for creating and sharing patron content, to include reviews, forums and discussion, ratings, book lists, photos, video, blog entries, shared searches, etc. Patrons have full control over sharing of their content.

Related Reqs: 2190 **Related Process**

Req ID: 7118 **Source:** WEB **Priority:** 1

Name: patron friends

Description: System allows patrons to add "friends" and create "friends groups", to easily share item lists and other patron content. As in Facebook and other social networking sites, friends can only be added with their approval. Patrons can set permissions to identify how much personal content their friends can view.

Related Reqs: **Related Process**

Req ID: 6002 **Source:** INT **Priority:** 1

Name: book alerts: restrictions

Description: Book alerts are generated using rules of suppression (REQ-5278), i.e. books that cannot be viewed or held are not included in book alerts.

Related Reqs: 5278 6001 **Related Process**

Req ID: 2394 **Source:** OUT **Priority:** 1

Name: forthcoming new book alert

Description: When placing a hold for a patron on a specific author, system displays staff alert if books by the same author are on order and facilitates placement of holds on those books. This feature can be toggled on or off.

Related Reqs: **Related Process**

Req ID: 7103	Source: WEB	Priority: 1
Name: automatic subscriptions		
Description: System provides ability for patrons to subscribe to specific authors, subject headings, magazine titles, or series. When a relevant item is ordered and released to the catalog, the item is added to a patron item list and/or a patron hold is automatically placed. The Library can the select item list to add to. The Library can select whether holds will be active or frozen by default.		
Related Reqs:		Related Process
Req ID: 7114	Source: WEB	Priority: 3
Name: title lists: definition		
Description: Patron can create multiple title lists. If a patron is not logged into his/her account, the list is purged when the session cookie times out. If a patron logs into his/her account, lists are saved to the patron account and remain accessible until deleted or purged. Patrons are prompted to save lists to their accounts. Titles can be added to or removed from lists; can be moved between lists; and can be annotated by the patron. Patrons can place holds simultaneously on all titles in a list, or on selected titles. Patrons can export lists to file, printer, or email in several specified formats (e.g. APA, MLA, CSV, etc.) specified by the Library. The Library may configure an "idle" period after which lists are automatically deleted.		
Related Reqs: 7105		Related Process
Req ID: 7105	Source: WEB	Priority: 1
Name: shared lists		
Description: System provides a platform (with administrative console for control and oversight) and/or interface to share title lists with other patrons, including several levels of permission (visible to all, visible in search results, visible to "friends", visible to specified patrons only).		
Related Reqs: 7114		Related Process
Req ID: 7409	Source: WEB	Priority: 3
Name: hold functions		
Description: Patron has ability to view and manage all holds from OPAC. Patrons may place holds, freeze holds, cancel holds and sort the list in a variety of ways (e.g. by date placed, by title, etc.).		
Related Reqs: 5214		Related Process

Req ID: 7417	Source: WEB	Priority: 2
Name: hold wait estimate (OPAC)		
Description: OPAC can display the hold wait estimate as defined in REQ-5214.		
Related Reqs: 5214		Related Process

Req ID: 7408	Source: WEB	Priority: 3
Name: hold status visibility		
Description: Ability to configure which hold statuses are visible to patrons.		
Related Reqs: 5226		Related Process

Req ID: 7411	Source: WEB	Priority: 2
Name: 'not wanted after' holds		
Description: Patrons have the ability to manage their holds calendar. For each hold or group of holds, a patron may specify a date after which the item(s) will not be wanted. A hold will be cancelled automatically if it is not delivered by the designated date.		
Related Reqs: 5263		Related Process

Req ID: 7412	Source: WEB	Priority: 3
Name: freezing holds		
Description: Patrons can freeze any hold at any time, except those on the hold shelf. Hold continues to move up within the queue but will not trigger while frozen. Patron can specify a date to 'unfreeze' the hold.		
Related Reqs: 5176		Related Process

Req ID: 7410	Source: WEB	Priority: 3
Name: default hold pickup location		
Description: When placing a hold in the OPAC, the pickup location defaults to the patron's home branch. A drop-down list allows the patron to change the hold location for each hold or group of holds.		
Related Reqs: 5267		Related Process

Req ID: 5388	Source: CIR	Priority: 2
Name: multiple format holds		
Description: Ability to display option to place a hold that can be filled by one or more formats or editions, as specified by the patron. For example, a patron could place a hold on "War and Peace" that could be filled by several editions of the book, or by the audiobook, but not by the DVD.		
Related Reqs: 5189 7301		Related Process

Req ID: 7218	Source: WEB	Priority: 3
Name: holds ready for pickup		
Description: The patron holds list displays the date by which each hold must be picked up.		
Related Reqs:		Related Process

Req ID: 7404	Source: WEB	Priority: 2
Name: request items		
Description: Ability for patrons to request items that are not in the catalog through the OPAC. Patrons can track request status through the My Account function. Library can enable or disable this function, as well as specify which statuses are visible to patrons.		
Related Reqs: 3101 3102 570		Related Process

Req ID: 7402	Source: WEB	Priority: 2
Name: online library card registration		
Description: Patrons can register for a library card online. Patrons are immediately granted a library card barcode and (if configured as a system setting) a PIN. Library can configure default patron type for online registrations, which can then be used to restrict access until the patron further authenticates his/her account. Library specifies the fields that appear on the online registration form, and which fields are required. System provides a utility to convert patron information to uppercase before writing it to the database.		
Related Reqs:		Related Process

Category: Web Services: Patron Account Management

Req ID: 7113 **Source:** WEB **Priority:** 2

Name: patron information

Description: System provides an architecture for storing information related to a patron, in addition to identification information, holds, circulation transactions, and charges and payments. For example, the patron account may hold information about patron preferences and interests; event registration; links to electronic resources; etc. Data is stored for a configurable period of time.

Related Reqs:

Related Process

Req ID: 7115 **Source:** WEB **Priority:** 1

Name: patron favorite places

Description: System remembers common activities and destinations for each patron, for use in a "favorite places" web page or widget. Library can set default opt-in/opt-out setting, and patrons can opt in or out at any time.

Related Reqs:

Related Process

Req ID: 7104 **Source:** WEB **Priority:** 2

Name: patron PIN reset

Description: System provides a utility for resetting patron PIN and/or password online, without staff intervention.

Related Reqs:

Related Process

Req ID: 7401 **Source:** WEB **Priority:** 3

Name: forgotten PIN

Description: Patron can retrieve his/her PIN after providing library card number and email address currently on file in the patron record. PIN retrieval process follows familiar "forgot my password" procedure found on popular websites.

Related Reqs: 7104

Related Process

Req ID: 7107	Source: WEB	Priority: 1
Name: patron activity history		
Description: System provides a log of patron activities in the patron account. Activities might include placing a hold, freezing or unfreezing a hold, subscribing to an RSS feed, signing up for a book alert, etc. Patrons can delete activities or purge the activity log, but this does not remove activities from the system. Library can specify which types of activities are included; whether patron can opt in or out, and retention policy for patron activities.		
Related Reqs:		Related Process

Req ID: 7413	Source: WEB	Priority: 3
Name: ecommerce (OPAC)		
Description: Payment forms are customizable. System records and stores transaction number, patron record number, IP address, date/time stamp, configurable payment type, payment amount, transaction description, and transaction status (success/failure). System provides option to print and/or email a configurable transaction confirmation to patron, including the vendor transaction number and other payment details.		
Related Reqs: 6008		Related Process

Req ID: 7415	Source: WEB	Priority: 3
Name: payment receipts		
Description: OPAC administrator can create, customize, and configure the "lost and paid" receipt for fines received online. Receipts are consistent with those in all other modules.		
Related Reqs: 5401		Related Process

Req ID: 7414	Source: WEB	Priority: 3
Name: payment forms (OPAC)		
Description: Payment form should be staged ("Enter your billing address and click Next to continue...") and include mouse-tip help and full help links. Patrons can select one, several, or all items; see the payment due in each case; and make a payment in that amount.		
Related Reqs:		Related Process

Req ID: 7230 **Source:** WEB **Priority:** 3

Name: patron messages

Description: System supports internal messaging system, allowing staff and patrons to exchange messages. Patron account includes a message inbox and a "sent" folder, where patrons can read, archive, reply to, and delete messages. Staff can access all messages, including those deleted by patrons. Patron notices can be copied to the patron inbox, regardless of the method they are sent by. Email messages from patrons can be copied to the patron "sent" folder. Additional specifications will be added during development.

Related Reqs:

Related Process

Category: Information Only

Req ID: 6075 **Source:** INT **Priority:** 2**Name:** telephone notices: advanced features**Description:** Telephone notification system provides patrons the ability to record their spoken names for use in future calls. System provides patrons an "opt-out" or "do-not-call" option.**Related Reqs:** 6071**Related Process**

Req ID: 6007 **Source:** INT **Priority:** 2**Name:** mail delivery: system settings**Description:** System supports mail delivery of patron holds. Delivery charges can be set on a per item, per item format, and/or per package basis. Delivery charges can be differentiated by service area (e.g. delivery outside local service area has different costs than local delivery). System manages delivery charge accrual and can place patron blocks when delivery charges are overdue by X days or more (X configurable). System flags patron accounts with bad mailing addresses and does not attempt to mail to those patrons until address is reverified.**Related Reqs:****Related Process**

Req ID: 6008 **Source:** INT **Priority:** 3**Name:** ecommerce: definition**Description:** System interfaces with third-party ecommerce gateway providers and leading shopping cart software solutions and supports multiple forms of payment (e.g. Paypal, credit cards, electronic checks). Payment forms, if provided by the system, are customizable. System records and stores transaction number, patron record number, IP address, date/time stamp, configurable payment type, payment amount, transaction description, and transaction status (success/failure). System provides option to print and/or email a configurable transaction confirmation to patron, including the vendor transaction number and other payment details.**Related Reqs:** 7413**Related Process**

Req ID: 6010	Source: INT	Priority: 3
Name: ecommerce: patron interface		
Description: Payment interface should be identical, whether online or at a self-check station. Payment form should be staged ("Enter your billing address and click Next to continue...") and include mouse-tip help and full help links. Patrons can select one, several, or all items; see the payment due in each case; and make a payment in that amount.		
Related Reqs:		Related Process

Req ID: 6512	Source: ITS	Priority: 3
Name: SQL-based database		
Description: System runs on a fully relational, SQL-based database system. Ability to run SQL queries against any table in the database. Ability to access database as an ODBC source. All data tables and data storage are fully accessible.		
Related Reqs: 2456 2475		Related Process

Req ID: 1652	Source: INT	Priority: 3
Name: ecommerce error messages		
Description: The system is able to parse vendor error codes, in order to provide specific and user-friendly error messages.		
Related Reqs: 5216		Related Process

Req ID: 6201	Source: INT	Priority: 3
Name: self check-out user interface		
Description: Self check-out system shows the same data to patrons as all other interfaces, including staff check-out interface and patron web interface.		
Related Reqs:		Related Process

Req ID: 5323	Source: CIR	Priority: 3
Name: field and record sharing		
Description: Ability for multiple staff members and patrons to simultaneously access and update patron and item records, including on staff check-in and check-out terminals, on self check-out stations, through SIP2/NCIP2 and similar protocols and APIs, and in OPAC. Depending on assigned privileges, staff can view all patron and item fields; patrons can access only selected fields. Record changes are applied in a reasonable way, with prompts to warn when a record has been changed since it was displayed.		
Related Reqs:		Related Process

Req ID: 5182	Source: CIR	Priority: 3
Name: customizable views		
Description: Ability to create and edit views (i.e. custom layouts) to hide fields, tabs, and command buttons that should not be used. Visible fields can be sized and ordered. Views can be assigned to users individually or via user groups or roles.		
Related Reqs:		Related Process

Req ID: 5278	Source: CIR	Priority: 3
Name: suppression rules		
Description: System provides customizable 'Rules of Suppression' that specify whether patrons and staff can view authority, bibliographic, order, and item records in staff and public (OPAC) interfaces. Records may be visible to specific workgroups only; to all staff and patrons at specific locations; or to all staff and all patrons. (See REQ-5057 for related requirements on loan rules, and REQ-5190 for related requirements on holdability.)		
Related Reqs: 5057 5190 580		Related Process CAT180

Req ID: 2438	Source: ITS	Priority: 3
Name: patron API		
Description: System provides a well-documented Patron API, for interfacing with external applications. System receives either a username, a barcode or a record number, and optionally either a PIN or a password. System returns an error code and patron information, if available. Error codes include: valid patron (no PIN or password provided), valid patron and valid PIN or password; valid patron and invalid PIN or password; invalid patron. Patron information includes at least: patron username, patron barcode, patron record number, patron type, name, address, phone, birthdate, creation date, last updated date, last use date, last electronic use date, expiration date, account balance, number of items checked out, number of items on hold, blocks, collections blocks.		
Related Reqs: 6026		Related Process

Req ID: 5057	Source: CIR	Priority: 3
Name: loan rules		
Description: System allows creation and modification of loan rules that allow or disallow check-out of items, calculate loan periods, and determine renewal limits. Loan rules may evaluate patron type, current number of items checked out, current patron account balance, item type, item status, owning location code, check-out location code, and other criteria. For example, loan rules may prohibit patrons from checking out items with an unavailable status, e.g. an item with a triggered hold for another patron or an item that is already checked out to another patron. Loan rules can access check-out location open/closed schedule in calculating due date. Loan rules also specify whether a specific criteria may be overridden by staff with specific privileges or roles. (Also see REQ-5190 re requesting rules.)		
Related Reqs: 5190		Related Process HOL-131

Req ID: 5190	Source: CIR	Priority: 3
Name: requesting rules		
Description: System allows creation and modification of requesting rules that determine whether a patron can place a hold on an item. Requesting rules may evaluate patron type, current number of holds, current patron account balance, item type, item status, owning location code, and other criteria. For example, requesting rules may prohibit patrons from placing holds on on-order CD titles, but allow patrons to place holds on other on-order titles. Requesting rules also specify whether staff with specific privileges or roles can override specific criteria. (See REQ-5057 re loan rules, REQ-5278 re visibility.)		
Related Reqs: 5057 5278		Related Process HOL-011

Req ID: 1959	Source: CIR	Priority: 2
Name: patron password (PIN)		
Description: Patron passwords are alphanumeric; numeric-only passwords are allowed. Library may set minimum and maximum limits on password length.		
Related Reqs:		Related Process

Req ID: 2184	Source: ACQ	Priority: 3
Name: view copies, holds, and check-out status		
Description: Ability to see number of copies, check-out status, and number of holds all on one screen. (Staff interface and patron interface.)		
Related Reqs:		Related Process SEL005

Req ID: 5181	Source: CIR	Priority: 3
Name: hold functions		
Description: All hold functions are available in all modules and modes, including placing holds, freezing holds, and changing position in queue.		
Related Reqs:		Related Process

Req ID: 5271	Source: CIR	Priority: 3
Name: hold note field (patron)		
Description: Have a hold note field for patrons that would print within the (email or mail) pickup notice but not on the holds slip and would display in My Account.		
Related Reqs: 5272		Related Process

Req ID: 1843	Source: CIR	Priority: 3
Name: sequenced holds		
Description: Ability to place hold on a several items, and have them arrive in order. (I.e., hold B is not triggered until hold A is filled, checked out, and returned.)		
Related Reqs:		Related Process

Req ID: 5276	Source: CIR	Priority: 3
Name: 'deny if locally available' setting		
Description: By default, items can be held regardless of whether they are available on the shelf. If the 'deny' flag is on, that condition is evaluated after the loan and holdability rules are evaluated. The existence of non-circulating copies should never prevent a hold on a title. Requesting rules may prevent placing holds on locally available items, if desired. In that case, staff may override for specific holds. (See REQ-5190 for details on holdability.)		
Related Reqs: 5190		Related Process

Req ID: 5267	Source: CIR	Priority: 3
Name: default hold pickup location		
Description: When patron places hold, the pickup location defaults to the patron's home library.		
Related Reqs: 7410		Related Process

Req ID: 5176	Source: CIR	Priority: 3
Name: freezing holds (patrons)		
Description: Patrons can freeze any hold at any time, except those on the hold shelf. Hold continues to move up within the queue but will not trigger while frozen. Patron can specify a date to 'unfreeze' the hold.		
Related Reqs: 7412		Related Process

Req ID: 1803	Source: CIR	Priority: 2
Name: hold first available copy		
Description: Allow staff and patrons to place holds on first available copies of materials, including first available copies of specific magazine issues or specific volumes in a multi-volume set.		
Related Reqs: 5268		Related Process

Req ID: 5260	Source: CIR	Priority: 3
Name: holds on non-circulating items		
Description: Ability to place holds on non-circulating items, such as new issues of magazines. The hold is 'frozen' until the item starts circulating. There needs to be a special indicator in the item record to designate that a currently non-circulating item will eventually start circulating.		
Related Reqs:		Related Process

Req ID: 5103	Source: CIR	Priority: 3
Name: fine calculator		
Description: Fine Calculator calculates total fines owed if patron pays today, as well as subtotal of selected overdue items in checked-out list.		
Related Reqs:		Related Process

Req ID: 5129	Source: CIR	Priority: 3
Name: credit card payments		
Description: Accept credit and debit card payments at accounts desks, self check-out stations, and through the public web interface. Payments should be visible in the patron account immediately, and related blocks should be removed immediately.		
Related Reqs:		Related Process

Req ID: 5128	Source: CIR	Priority: 3
Name: charge types		
Description: Ability to record charge type for every transaction. Charge types include Overdue, Replacement, Donation, Manual Charge, Copying, etc. Additional charge types can be configured.		
Related Reqs: 6008		Related Process

Req ID: 5120	Source: CIR	Priority: 3
Name: remove fines-related block		
Description: Remove fine-related blocks (maximum fines block, collections block, etc.) immediately when charges are paid down to required threshold, whether payment is at customer service desk, at self check-out station, or online.		
Related Reqs:		Related Process

Req ID: 6511	Source: ITS	Priority: 3
Name: secure protocol support		
Description: System supports secure protocols, including SFTP, SSL, and SSH. SFTP is supported in both active and passive modes, configurable per vendor.		
Related Reqs: 7403		Related Process

Req ID: 7010	Source: WEB	Priority: 3
Name: staff access to patron functions		
Description: Staff can perform actions on behalf of patrons, such as placing holds, checking availability, etc., without logging out of staff accounts or changing current view. For example, from a search results screen, staff can select one or more items and place a hold for a specific patron, without leaving the current window. In cases where the action requires displaying additional information, a new window is opened and the staff person returns to the original window when done.		
Related Reqs: 5264		Related Process

Req ID:	7001	Source:	WEB	Priority:	3
Name:	authentication gateway				
Description:	System serves as an authentication gateway for online subscription databases and other electronic resources and external services. For example, patron clicks to access a subscription database on the Library website; system prompts for username or patron barcode, and password or PIN; system authenticates patron and redirects to subscription database with an authorized session cookie and/or an authorized referring URL. In case of an invalid username, patron barcode, password, or PIN, the system returns a customizable error message to the patron. On successful authentication, the patron's "last electronic use date" field is updated with the current date. System supports single login for multiple resources. Session cookies can be configured to expire after a specified time period. Referring URL can be configured per subscription database and updated at will.				
	Related Reqs:	6101			
		Related Process			

Req ID:	6026	Source:	INT	Priority:	3
Name:	transactional communication				
Description:	System supports transactional communication with external services, for example providing APIs to read and update patron records, bibliographic records, item records, etc.				
	Related Reqs:	2438 1636			
		Related Process			

Req ID:	1636	Source:	INT	Priority:	3
Name:	SIP2 and NCIP2 support				
Description:	System supports SIP2 and NCIP2 for interfacing with external applications. Support standard SIP2 and NCIP2 messages, and provide capacity for adding additional messages as formats evolves.				
	Related Reqs:	6026			
		Related Process			

Req ID:	6124	Source:	INT	Priority:	2
Name:	suppress patron name				
Description:	Ability to suppress patron name on all displays, on a per-system or per-patron basis. Patron may select option to display or mask patron name through patron account settings.				
	Related Reqs:				
		Related Process			

Req ID: 7121	Source: WEB	Priority: 3
Name: notification preferences		
Description: Patrons can select notifications they would like to receive; specify one or more methods for receiving each type of notice; specify preferred frequency of notifications; and specify whether to receive repeat notices (e.g. receive hold pickup notices every day until hold is picked up or expired, or receive one hold pickup notice per item). See Requirements 1938, 5101, 5109, 5111, 5211, 5384, and 7229 for related requirements. Note that OPAC will support these functionalities and provide an interface for patrons to make selections.		
Related Reqs:		Related Process

Req ID: 7229	Source: WEB	Priority: 3
Name: RSS notifications		
Description: System supports RSS feeds for patron notifications, including hold notifications, overdue notifications, lost materials, etc.		
Related Reqs: 6122		Related Process

Req ID: 3101	Source: ACQ	Priority: 3
Name: patron purchase requests		
Description: Patron requests are collected through website (or, less preferably, through a separate webform); patron information is authenticated against ILS; requested items are checked for existence in the collection; owned items are flagged for communication to patron; unowned items directly populate a selection list (see REQ-3004) in the ILS so that retyping is unnecessary. Additionally, information on which vendors have the requested titles would be helpful at the review stage. Ability to manage patron requests throughout the selection and ordering process and generate patron notifications (see REQ-3102).		
Related Reqs: 3102 3004 430		Related Process PAT000

Req ID: 2190	Source: ACQ	Priority: 3
Name: enhanced vendor content		
Description: Ability to accept enhanced opac content from vendors, e.g. jacket images, full-text reviews, tags, read-alike suggestions, etc. System will support LibraryThing, ChiliFresh, Content Café, LiveChat, and others vendors.		
Related Reqs: 2188 7108 740		Related Process

Req ID: 4303	Source: SER	Priority: 3
Name: serials holdings record display in opac		
Description: Information from the serials holdings record can be displayed in the OPAC in a customizable, user-friendly way. Specifically, summary holdings statement is easily browsable, issues are listed in reverse chronological order, and patron can easily place holds on first available copy.		
Related Reqs: 2309 2311 740		Related Process

Req ID: 5517	Source: CAP	Priority: 2
Name: material type codes		
Description: Support unlimited number of user-definable material type codes, values, and indexes (e.g. book, music CD, online resource, etc.).		
Related Reqs: 7227		Related Process

Req ID: 5408	Source: CIR	Priority: 3
Name: patron-selected username		
Description: System provides option for patron to select a username and password, which can then be used to access OPAC, self check-out station, online databases, public PC booking system, and other electronic resources. In every case where patron authentication occurs, patrons can enter either a patron barcode or a username, and a password, and the system will handle authentication transparently.		
Related Reqs:		Related Process

Req ID: 1979	Source: CIR	Priority: 3
Name: patron address changes		
Description: Patrons can update their addresses, phone numbers, email addresses, and pickup location through the public web interface. Address changes are put in a review list for confirmation by library staff.		
Related Reqs:		Related Process

Req ID: 5226	Source: CIR	Priority: 3
Name: patron hold position		
Description: Current hold position is shown as 'nth hold on x circulating copies' or 'Ready for Pickup'. Additional statuses like 'In Transit' may be hidden from patron but visible in staff interfaces.		
Related Reqs: 7408		Related Process

Req ID: 5214	Source: CIR	Priority: 3
Name: hold wait estimate		
Description: Ability for patron hold list to include an estimate of how long patron will wait for a hold, based on position in queue, number of circulating copies, average length of time kept by patrons, and other criteria specified by Library. When held item is in transit, display a system-defined value (e.g. "1-2 days"). This feature can be enabled or disabled by a system parameter.		
Related Reqs: 7409 7417		Related Process

Req ID: 5216	Source: CIR	Priority: 3
Name: patron error messages		
Description: Patron error messages are specific and unambiguous. For example, if a hold request is unsuccessful, the error message should say why (hold limit reached, no available copies, etc.).		
Related Reqs: 1652 7220 741		Related Process

Req ID: 5046	Source: CIR	Priority: 3
Name: patron holds and check-out history		
Description: Patrons can choose to keep history of items held and/or checked out. By default, no check-out history is maintained. If enabled, history is visible through the patron account and can be searched. Patron can export history to file, printer, or email, in any of several formats defined by the Library. Patron can clear individual items or all items from the history, and can set a parameter to retain items for X months. Opting out deletes existing history, with appropriate warnings to patron. Library may set parameters for saving items, e.g. file size limit. Staff can not view patron history.		
Related Reqs: 5410		Related Process

Req ID: 5263	Source: CIR	Priority: 3
Name: 'not wanted after' holds		
Description: Patrons can enter Not Wanted After date. Holds are removed from patron hold list after Not Wanted After date. Do not send cancellation notice. Default to two years.		
Related Reqs: 7411	Related Process	

Req ID: 7219	Source: WEB	Priority: 3
Name: OpenURL support		
Description: System supports OpenURL (ANSI Z39.88).		
Related Reqs: 7418	Related Process	