
Software Requirements Specification

for the

Outreach Module

of an

Integrated Library System

Version 3.0 final

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Revision History

Name	Date	Reason For Changes	Version
Lucien Kress	10/09/08	Initial Draft	1.0 draft
Lucien Kress	12/1/08	Revisions, Requirements workshop	2.0 draft
Lucien Kress	12/28/09	Revisions, Final	3.0 final

1. Introduction

1.1 Purpose and Perspective

This Software Requirements Specification (SRS) describes the functional and nonfunctional requirements for the Outreach Module of an Integrated Library System (ILS). 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 Outreach Module will replace and enhance the current capabilities of commercially available ILSes, as well as add new functionality.

1.2 Product Scope and Features

The Outreach Module facilitates the processing of materials, patrons, and routes for Outreach programs. Specifically, the Outreach Module supports the following activities, among others:

- Managing routes for delivery materials to Outreach patrons.
- Managing records of patrons who are served by Outreach programs.
- Managing materials that are provided to Outreach programs.
- Managing holds, check-outs, and check-ins for Outreach patrons, including special processes for ensuring that hold expiration and check-out duration rules are sufficient to allow delivery to patrons.
- Managing special collections of materials. Collections may be permanent or temporary and may require transferring materials to or from branches or other collections.

The current specification presupposes the general functionality of an ILS and specifies only those requirements that directly or indirectly relate to Outreach activities. King County Library has previously published specifications for Acquisitions and Serials Management, Circulation, and Cataloging modules. Requirements for OPAC, web services, and management reporting are currently under development.

Moreover, the current specification is focused on functional characteristics of an Outreach Module. 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 and use cases. Requirements include a reference to a process flowchart where appropriate. Use cases are included for some of the most frequently performed activities. They are intended to supplement the requirements and highlight activities that offer a great potential for increased efficiency and ease of use. Use cases should be considered to be contextual rather than prescriptive.

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 either print materials, media materials, or electronic resources.
Outreach Staff	Outreach staff include managers, librarians, library technicians, library assistants, and library pages who are involved with designing and implementing Outreach programs, searching for materials, moving materials between libraries and Outreach locations, processing hold requests, check-outs, and check-ins, and developing statistics and analysis of Outreach programs.
Outreach Managers	Outreach Managers include management staff who oversee the Outreach programs.
Library Managers	Library Managers include Cluster and Site Managers who provide input to the Outreach programs.
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: The Outreach Module supports the needs of a large, multiple-branch library system. Specifically, the system must support a library system with 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 Outreach Module shall operate on a Linux or Solaris server.
- OE-3: The Outreach Module shall be accessible through a web-browser or a Windows-compatible client.
- OE-4: If web-browser based, the Outreach Module shall be accessible through Microsoft Internet Explorer (v.6.0 and later) and Mozilla Firefox (v.2.0 and later).
- OE-5: The Outreach Module 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: The Outreach Module shall use a fully relational database back-end.
- CO-2: The Outreach Module shall produce standards-compliant HTML.
- CO-3: The Outreach Module 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.
- CO-5: These requirements shall not constrain functionality or features of the Online Public Access Catalog (OPAC) module.

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 the Outreach Module.
- 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: The Outreach Module is part of an enterprise-level Library Automation System.
- AS-2: Outreach processes are consolidated at a central location, and accept input and provide services to multiple locations.
- DE-1: The Outreach Module relies on the data structures and functionality of an enterprise-level Library Automation System, including Acquisitions and Cataloging modules.
- DE-2: The Outreach Module interfaces with a variety of vendor websites, via published APIs and/or automated transfer of standard-format data files (e.g. USMARC21, EDIFACT).
- DE-3: The Outreach module interacts with a patron interface, also known as an Online Public Access Catalog (OPAC), accepting input in the form of materials searches and materials requests, and providing output in the form of bibliographic and item record displays and patron account information.

System Requirements

Category: Outreach: General

Req ID:	5802	Source:	OUT	Priority:	2
Name:	outreach database support				
Description:	System supports synchronization of outreach patron and outreach route data with an external database (e.g. Microsoft Access).				
Related Reqs:		Related Process			
Req ID:	2415	Source:	OUT	Priority:	3
Name:	low-bandwidth support				
Description:	System can be accessed using a low-bandwidth network connection.				
Related Reqs:		Related Process			
Req ID:	5816	Source:	OUT	Priority:	3
Name:	offline utility				
Description:	System provides an offline utility for recording check-in and check-out transactions, in case the system is unavailable.				
Related Reqs:		Related Process			

Category: Outreach: Route Management

Req ID:	5806	Source:	OUT	Priority:	3
Name:	outreach routes and stops				
Description:	System stores Outreach routes and stops which are used to group patrons and schedule visits. Patron records can be assigned a route and stop, and outreach patrons can be queried by route or stop. Stops are easily moved between routes.				
Related Reqs:	5412	Related Process			

Req ID: 5807	Source: OUT	Priority: 2
Name: outreach route queries and reports		
Description: System supports querying of patrons by route and by stop; list patrons by route and by stop; search patrons at a specific stop by name, address, phone number, birthdate, etc.; list all addresses for a specific stop.		
Related Reqs:	Related Process	

Req ID: 5811	Source: OUT	Priority: 2
Name: outreach patron broadcast		
Description: Ability to send email and text message broadcasts to patrons on a specified route or at a specified stop. (For example, send an alert if a visit is cancelled due to weather.)		
Related Reqs:	Related Process	

Category: Outreach: Patron Management

Req ID: 2416	Source: OUT	Priority: 3
Name: outreach patron records		
Description: Patron records can be flagged as Outreach patrons; Outreach patron records can be queried and exported separately from other types of patron records.		
Related Reqs:	Related Process	

Req ID: 5803	Source: OUT	Priority: 2
Name: patron groups		
Description: Ability to define a group of patrons and perform batch tasks on the group. For example, define a group called "Historical Fiction Fans" and add selected patrons to the group.		
Related Reqs: 5804	Related Process	

Req ID: 2417	Source: OUT	Priority: 2
Name: volunteer patron type		
Description: Outreach volunteers can pick up holds for homebound patrons, when preauthorized. Volunteer uses their own card to pick up the hold, but the item is checked out to the homebound patron's account.		
Related Reqs: 5362		Related Process

Req ID: 5362	Source: CIR	Priority: 3
Name: patron record, pickup authorization field		
Description: Patron can review list of those authorized to pick up holds in the patron record. Hold is checked out to the patron who placed the hold, regardless of who picks it up.		
Related Reqs: 5410		Related Process

Req ID: 2396	Source: OUT	Priority: 1
Name: check-out history printout		
Description: Patron check-out history can be printed in an easily readable format. (Assumes patron has enabled check-out history.)		
Related Reqs: 5046		Related Process

Req ID: 2408	Source: OUT	Priority: 2
Name: print custom patron info from barcode		
Description: Ability to print custom labels from a patron record, e.g. displaying patron identifying information and Outreach route/stop information. Label contents and format can be saved, modified, and deleted at will.		
Related Reqs: 5322		Related Process

Category: Outreach: Collection Management

Req ID: 5393	Source: CIR	Priority: 3
Name: rotating collections		
Description: System supports rotating collections (such as large print and audiobook collections). Bibliographic records can be added or removed from the collection and can be updated in batch.		
Related Reqs:		Related Process

Req ID: 5818	Source: OUT	Priority: 3
Name: item transfer utility		
Description: System provides a utility for transferring batches of items between branches, used for example to move books into a mobile library, an outreach program collection, or a "just-in-time" warehouse. Utility includes ability to query for candidate materials; ability to save queries for repeated use; ability to manually select titles from query results; and ability to change records of all or selected items to move to new location. Mechanisms for moving items include changing location field, generating pull lists, etc. In addition, utility provides means to revert items to original location after a set period of time, and/or based on other criteria.		
Related Reqs: 5603		Related Process

Req ID: 5286	Source: CIR	Priority: 3
Name: sets and kits		
Description: Support sets (large number of items sharing one barcode) and kits (small number of items sharing one barcode). Ability to display the number of items and a list of descriptions.		
Related Reqs:		Related Process

Req ID: 5801	Source: OUT	Priority: 3
Name: missing kit items		
Description: Ability to flag items that are missing from a kit. Staff can mark an individual item as missing; search for kits with missing items; and view missing item details easily from the search results.		
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: 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: 5805	Source: OUT	Priority: 3
Name: collection visibility and requestibility		
Description: Collections of items can be suppressed or made visible as a collection. Collections of items can be made requestable or not unrequestable as a collection. For example, ABC books are visible to staff but not to patrons, and cannot be requested by either patrons or staff.		
Related Reqs: 5278 5190		Related Process

Category: Outreach: Searching and Selecting Items

Req ID: 5809	Source: OUT	Priority: 2
Name: outreach patron item search		
Description: When viewing the results of an item search, ability to toggle highlighting for items that have not been previously checked-out or refused by a specific patron. (Assumes patron has enabled check-out history.)		
Related Reqs: 5810		Related Process

Req ID: 5813	Source: OUT	Priority: 1
Name: original publication date sort		
Description: Ability to sort search results by original publication date.		
Related Reqs:		Related Process

Req ID: 2394	Source: OUT	Priority: 1
Name: forthcoming new book alert		
Description: When placing a hold for an Outreach 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.		
Related Reqs:		Related Process

Req ID: 5814	Source: OUT	Priority: 2
Name: cover display		
Description: System provides option to display book covers on patron's checked-out item list and check-out history list.		
Related Reqs:		Related Process

Req ID: 5810	Source: OUT	Priority: 2
Name: rejected items		
Description: Ability to record that an outreach patron has rejected specific items in the past, and alert if staff attempts to place a hold for that patron.		
Related Reqs: 5809		Related Process

Req ID: 5812	Source: OUT	Priority: 1
Name: outreach book alerts		
Description: Ability to set up an automated query that locates new items and places in patron booklists, or places holds, or alerts staff to place holds, for specified groups of patrons.		
Related Reqs:		Related Process 5803 6001 711

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: 2412	Source: OUT	Priority: 2
Name: remember prior searches per patron		
Description: Ability to store prior searches for each patron group.		
Related Reqs:		Related Process 5803

Category: Outreach: Holds

Req ID: 2395	Source: OUT	Priority: 1
Name: automated check out		
Description: System can be set to automatically check out items when holds are triggered for specific patron types and/or for patrons from specific home libraries. (Primary use case is Outreach patrons.)		
Related Reqs:		Related Process

Req ID: 5233	Source: CIR	Priority: 3
Name: hold rollover days		
Description: Ability to control which days auto-transfer of holds occurs, on a per-branch basis.		
Related Reqs: 5232		Related Process HOL-070

Req ID: 5817	Source: OUT	Priority: 3
Name: hold expiration		
Description: Hold expiration period can be configured separately for Outreach patrons.		
Related Reqs:		Related Process

Req ID: 5804	Source: OUT	Priority: 3
Name: group holds		
Description: Ability to place holds for a group of patrons on a group of one or more bibliographic records. For example, select a group of historical novels and place holds for all members of the group "Historical Fiction Fans".		
Related Reqs: 5803		Related Process

Req ID: 5189	Source: CIR	Priority: 3
Name: holds, multiple per item		
Description: Allow specified patron types to place multiple holds on a single title. (At a minimum, these types will include branch cards.) Also see REQ-5190, rules of requesting.		
Related Reqs: 5190 5386 730		Related Process

Req ID: 7301	Source: OUT	Priority: 2
Name: multiple holds on multiple formats		
Description: Ability for specified patron types to easily place multiple holds on items from related bibliographic records (e.g. multiple formats of the same title). For example, a bookclub leader could search for a title, select several formats from the results, and specify the number of items to hold for each format.		
Related Reqs: 5189 5386		Related Process

Category: Outreach: Check-in and Check-out

Req ID: 5815	Source: OUT	Priority: 3
Name: custom due date		
Description: Ability to set a custom due date; all items are subsequently checked out with the custom due date, until it is changed or reset.		
Related Reqs:		Related Process

Req ID: 5808	Source: OUT	Priority: 3
Name: override due date		
Description: Ability for staff (with sufficient privileges) to override renewal rules and renew items for outreach patrons even if there are unfilled holds on the items.		
Related Reqs: 5191		Related Process

Req ID: 5191	Source: CIR	Priority: 3
Name: due date extension		
Description: Allow staff to renew or extend due date on selected items. If this is prohibited by loan/renewal rules (e.g., there are holds on the item, or patron has reached renewal limits, or the patron record has a block), require approval at specified permissions level. Renewal or due date extension is tallied as a renewal.		
Related Reqs: 5808 5815		Related Process

Req ID: 5400	Source: OUT	Priority: 1
Name: checking out same item		
Description: During check-out process, provide an indicator of whether the same patron has checked out the same item before. Ability to enable this indicator by patron type and check-out location. (This feature is required by Library Outreach staff and is not generally required elsewhere. To be effective, it requires patrons to opt-in to retaining check-out history.)		
Related Reqs:		Related Process

3. Use Cases

3.1 Use Case List

We have written use cases for selected, frequently-performed activities. These are included to supplement the requirements, and to highlight places where good software could bring great improvements in efficiency and ease of use. The steps of the use cases should be considered suggestive rather than prescriptive.

Primary Actor	Use Cases
Outreach Librarian	Place Group Holds

3.2 Place Group Holds

Use Case ID:	3.2		
Use Case Name:	Place Group Holds		
Created By:	Lucien Kress	Last Updated By:	Lucien Kress
Date Created:	11/15/08	Date Last Updated:	11/15/08

Actors:	Outreach Librarian (OL)	
Description:	Outreach Librarian places holds for a group of patrons on a group of items.	
Trigger:	Routine, periodic activity.	
Preconditions:	OL is logged into Outreach Module with correct credentials.	
Postconditions:	Holds have been placed.	
	Stimulus	Response
Normal Flow:		R1: OL selects “patron groups” tab.
	S2: System displays list of patron groups.	R2: OL reviews patron groups, and selects the “Mystery Lovers” group.
	S3: System displays group information.	R3: OL selects a saved search for that patron group, “recent mysteries”.
	S4: System displays recent mysteries.	R4: OL clicks checkboxes to select several mysteries. OL clicks “Place holds” button.
	S5: System displays a confirmation prompt.	R5: OL clicks “OK” to confirm.
	S6: System places holds on selected items for each patron in the group.	
Alternative Flows and Exceptions:	<ol style="list-style-type: none"> While displaying list of patron groups, OL has option of editing a patron group. OL can add patrons by barcode or by searching on a patron record field (e.g. route stop, patron type) and selecting all or specific patrons from the search results. While viewing the patron group, OL can select a saved search; initiate a new search and save it to the patron group; or initiate a new search without saving it. OL can initiate a search without first selecting a patron group. OL can select results from the search, click to place hold, and enter either a patron barcode (for a single hold) or select a group (for a group of holds). If a particular patron has already checked out an item, and has enabled check-out history, that patron will not be included in the hold requests. 	
Includes:		
Priority:	3 (High)	
Frequency of	Hundreds of times per month.	

Use:	
Business Rules:	
Assumptions:	
Notes and Issues:	