Aspen Testing Plan

June 2020

Introduction

SWAN completed a comprehensive Discovery Platform Evaluation in March 2020, which identified two potential platforms that could provide a better discovery experience for SWAN patrons: Aspen, an open-source platform supported by ByWater Solutions, and BiblioCore, a proprietary platform from Bibliocommons.

SWAN is proceeding with further testing of Aspen, the highest-scoring platform with the most capability to meet and improve on our vast e-content integration needs. The open-source model, and the willingness of ByWater solutions to partner with us, allows us to implement a small test system without committing to a full support contract.

In this project, SWAN will perform a variety of evaluation activities, in partnership with our members and user groups, to determine if SWAN should commit to a full migration to the Aspen Discovery platform. This testing will fall into two categories: 1) Expert review, conducted by SWAN staff and SWAN user groups, that will identify issues and configuration needs and 2)Usability testing, which SWAN will conduct with patrons and member library staff to identify potential usability and design improvements.

This testing plan is an initial outline of testing tasks and priorities, and these are subject to change over the course of testing.

Expert Review

Heuristic evaluation and expert review is a methodology in which subject-matter experts review a site interface and apply accepted usability principles. SWAN staff will conduct a thorough system evaluation to identify opportunities for improvement and problems with the system configuration, features, and SWAN data and processes. This phase can happen in tandem with iterative user research and usability testing. [1]

We have identified the following categories, goals, and tasks for this review.

Accessibility
Goal: Identify specific accessibility issues to address in Aspen and ensure compliance with the most current accessibility standards.

Tasks
1. Conduct automated accessibility evaluation through FAE: https://fae.disability.illinois.edu/
2. Partner with a library with assistive technology to conduct in person usability testing or
3. Complete a heuristic evaluation with assistive technology and user stories

Grouped Records
Goal: Identify data cleanup needs for successful FRBR grouping.

---

[1] https://www.usability.gov/how-to-and-tools/methods/heuristic-evaluation.html

1. Identify set of searches to test in the following categories:
   a. Works with many expressions, manifestations, and items e.g. Tom Sawyer (work) includes several editions of books and multiple movie adaptations
   b. Generic titles associated with multiple works
2. Document test searches and records that do not group properly based on work and manifestation
3. Test configuration parameters meant to separate media and book expressions

Search Relevancy & Limits

Goal: Develop a detailed comparison of search relevancy and limits in Enterprise and Aspen.

Tasks

1. Evaluate keyword relevancy for known item searches (Consortia level search):
   a. Record the position of the item on the search results page for Aspen
   b. Record the position of the item on the search results page for Enterprise
2. Evaluate keyword relevancy of topic searches (Consortia level search):
   a. Evaluate precision of search results in Aspen (what fraction of results on the first page are relevant) – in this context, a "result" is one grouped record that may contain many items/formats.
   b. Evaluate precision in Enterprise – in this context a result is an individual record that may contain many items but one format
3. Evaluate pre-search limits (Consortia):
   a. Title
   b. Author
   c. Subject
4. Evaluate post-search limits (Consortia):
   a. Availability
   b. Fiction/Non-Fiction
   c. Format
   d. eContent vendor
   e. eContent device
   f. Author
   g. Series
   h. Subject
   i. Language
   j. Publication Dates
   k. Reading Levels (multiple)
   l. Recently added
5. Evaluate search scoping by Library:
   a. Does scoping by library create an AND statement with limits above

Search Results Displays

Goal: Identify immediate usability issues and opportunities to improve search displays

Tasks

1. Develop discovery-specific tasks to evaluate using heuristics and user stories
2. Conduct a heuristic evaluation of search results displays
3. Conduct a heuristic evaluation of item details displays
4. Conduct sability testing with patrons

Advanced Search

Goal: Identify immediate usability opportunities and opportunities to improve the advanced search functionality

Tasks

1. Evaluate search filters and limits that will improve results and conflict with results
2. Conduct searches and evaluate the tool's ability to:
   a. Course correct limits that conflict with results
   b. Provide expected results with additional limits and filters in place

E-Content Integrations

Goal: Successfully integrate all eBook & streaming platforms currently in use in SWAN

Tasks

1. Request API keys for e-Content vendors:
   a. Overdrive
   b. Hoopla
   c. Baker & Taylor*
   d. RB Digital
   e. Cloud Library
   f. Freegal*
   g. BiblioBoard*
2. Set up each key for each test library profile
3. For each vendor, use known titles from the Search Query Set to review imported eBooks and eAudio for correct display of fields and FRBR grouping.
4. For each vendor test checkout and account features:
   a. Complete checkout process on desktop
   b. Complete checkout process on mobile device
   c. Review account features
      i. Checkouts
      ii. Holds
      iii. Expiration dates
5. Test sideloading with Kanopy
6. Test placards functionality

EBSCO Discovery Service (EDS) Integration

Goal: Inform the design and functionality of the development of the EDS integration

Tasks

1. Work with ByWater to define design requirements for EDS interface

2. Test authentication through the EDS interface
3. Conduct usability testing with patrons

Digital archives

Goal: Explore digital archives integration possibilities

Tasks

1. Conduct a survey to learn more about the digital archives currently in place at member libraries
2. Implement a test of the Digital Public Library (DPLA) integration in Aspen

Holds

Goal: Understand and identify any needed refinements to hold functionality with grouped records

Tasks

1. Review documentation on holds placement logic for grouped records
2. Using test accounts and grouped records, test holds scenarios and review the hold queue
   a. Record with home library items
   b. Record without home library items
   c. Record with multiple editions
3. Test volume selection

Patron Accounts

Goal: Ensure patrons can complete functions currently available in the Enterprise catalog along with additional functionality offered in Aspen

Tasks

With test patron accounts perform the following tasks:

1. Check out items in the following formats
   a. eBook or eAudiobook from each available eBook vendor
   b. Book
   c. large print
   d. audiobook
   e. DVD
   f. Blu-ray
   g. juvenile items in each category above
2. Create at least 5 item lists
3. Create an overdue fine
4. Create a block
5. Review suggested items for relevancy

Branding, Integrations, Alerts

Goal: Learn and implement branding and integration features not currently available in Enterprise

Tasks

1. Install test instances of SWAN library catalogs with logos and custom colors
2. Set up test instances of the following features:
   a. Website indexing

b. Featured "placard" suggestions
c. "Explore more" database and digital collections suggestions
3. Test ProPay integration
4. Test third-party chat tools
5. Test StackMap

Readers Advisory & Social Features

Goal: Work with SWAN user groups to ensure SWAN library staff can create lists and suggested searches in the catalog.

Tasks

1. Implement on each test library catalog instance;
   a. Suggested searches
   b. Curated item list
2. Set up test accounts and permissions for user group participants
3. Develop how-to documentation and train user group participants in reader's advisory tools
4. Gather feedback on the reader's advisory tools and identify potential improvements in staff processes

Language Support

Goal: Ensure that language translation features will meet patron needs

Tasks

1. Identify SWAN members that can review translations of the catalog in Spanish and Polish, which represent the majority of SWAN non-English language collections
2. Test the translation capabilities using a set of search queries and patron account use cases

System Management

Goal: Ensure that permissions in Aspen are optimized for SWAN staff and library staff needs

Tasks

- Identify staff permissions needs
- Design standard roles and permissions

ILS Connectivity

Goal: Ensure connectivity to ILS is established in a secure and reliable manner that does not impact ILS performance

Tasks:

1. Simulate "search query flood" to determine ILS impact
2. Sniff Aspen/ILS traffic and observe result
3. Measure ILS server performance prior to Aspen connectivity
4. Measure ILS server performance during Aspen harvest and normal operations

System Security

Goal: Ensure Aspen system security meets the standards of SWAN

Tasks:

1. Simulate Denial of Service (DoS) attack, determine results
2. Determine open system ports
3. Determine data stored on server, potential PII

Patron Privacy

Goal: Ensure patron privacy functions meet SWAN standards

Tasks:

1. Determine how lists are stored/displayed
2. Ensure PII is not passed through URLs (attempt to determine through Google Analytics)

Performance

Goal: Ensure that Aspen search queries, harvest processing, and patron interactions produce a comparable or better result than current Enterprise catalog

Tasks:

1. Measure time needed to perform typical search queries between both platforms, documented in a spreadsheet
2. Measure time needed to perform full ILS harvest tasks between both platforms, documented in a spreadsheet
3. Measure time needed to perform typical patron login and account management functions between both platforms, documented in a spreadsheet
4. Incorporate Google Analytics statistics from Enterprise and Aspen

ILS Harvest Processing

Goal: Ensure data harvests and ILS queries are seamless and automatic but verifiable

Tasks:

1. Determine and test options for harvest completion notification and success tracking
2. Determine and test options to manually process harvest data
3. Determine success of delta harvest options

System Requirements

Goal: Determine necessity for system scale, cost to perform at optimal configuration

Tasks:

1. Determine adequacy of performance and cost at initial specification
2. Through DoS and performance testing, determine optimal configuration for sustained use and cost relating to configuration
3. Compare

Usability Testing

Usability testing will happen on an ongoing and iterative basis, with a goal of completing at least two rounds of testing with each major user group – library staff and library patrons.

At this time, usability testing will likely be restricted to online, remote testing only, which will require participants with high-level digital literacy skills to use and operate remote meeting software. If in-person interactions become a safe and available option, SWAN staff will transition to in-person testing and recruit participants with a range of digital literacy skills.

Library Staff

The first testing session will take place in May 2020, in partnership with the UX Team at Oak Lawn Public Library, with a generic testing instance of Aspen.

Library Patrons

Testing with library patrons will begin when a SWAN Aspen test instance is installed and minimally populated with MARC data and e-content.