Interim Report
Technical Support for Integrated Library Systems – Comparison of Open Source and Proprietary Software
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Project Start Date: August 2009

Summary: The project has achieved its milestones set for the first year, all the information gathering, data collection, data analysis and some dissemination has been done. The time line given in the project proposal has been adhered to in its entirety. Two graduate research assistants were hired for this project. A Drupal based website is established for the project with a vision of developing an online community of open source software users in library settings. The URL for the project website is: www.oss-research.com

Proposed Project TimeLine and Activities Completed Comparison

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<tr>
<th>YEAR 1  (2009-2010)</th>
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<td>ONGOING FOR THE 3 YEARS OF PROJECT</td>
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Narrative

2009 August:
- Hired one graduate research student from School of Library and Information Science, University of Tennessee.
- Advertised for the second RA position in engineering college with focus on computer science graduates to develop a website that would be the platform for building an online community of librarians as outlined in the project proposal.
- Established timeline for project with research activities and tasks and responsibilities for the research team.
- Developed an overview research plan with descriptions of data collection, resources and available materials.
- Began evaluating different open source products available for developing online communities.
- Identified the need for a logo – style, format, etc. for the website and the promotional material related to the project.

2009 September:
- **Work on Research Objectives (Objectives are attached as Appendix – A)**
  - Located sources for library data collection (Lib Web CATS)
  - For this task, we did a keyword searched for open source software and integrated library system web sites. We used the following as keywords: “oss ils”; “oss applications”; “ils enterprises”; and “ils software”. Began a literature search on OSS ILS and OSS applications and reviewed the source citations of the papers that addressed these areas. These searches yielded many results, and it was necessary to read through a large volume of material in order to glean the best resources. We also mined Marshall Breeding’s web site, as he has maintained a database concerning library automation information (Lib Web Cats). We then listed the relevant sources on the web site. All these materials are now available through the website.

- **Website Related Work**
  - Created an HTML version of site for early publication
    The early version of the site displayed a temporary logo and a summary of the project. The site was hosted by UTK SIS, and is still live but has not been updated recently due to access issues.
  - Began logo development and finalized on Drupal as the content management software to be used for the community building initiatives. Finalized a Drupal theme corresponding to the project logo. We wanted a theme that had advanced menu options and a two to three column layout. We also wanted a theme that had a simple color scheme with an interchangeable logo option and a logo display in the web address. The theme that was chosen fits those requirements.
and has an added option for the nested menu which has been helpful in dealing with organizational issues.

• Hired a research assistant from computer science graduate program to maintain Drupal site – administration, maintenance, access, etc.

2009 October:

➢ Website Related Work
  • Created web page on the CCI Drupal Website
  • Created local installation of Drupal to develop and stage the Drupal site.
  • Worked with the CCI System Administrators to secure web space for the Drupal site.
  • Implemented public drupal site, including theme, account types, and internal research sections.
➢ Work on Research Objectives (Objectives are attached as Appendix – A)
  • Created a list of potential participating libraries. The list was created using MS Excel. The Excel spreadsheet for library data contained the following pieces of information: library name; library location; library type; contact person; and library size.
  • Created spreadsheets for research questions The Excel sheet for the research questions listed the initial five primary questions regarding ILS usage and a request for survey participation. This was just done to publicize the project on various mailing lists. The list of questions is attached as an Appendix - B
  • Gathered library data: location, type, ILS
  This information gathering was done in stages beginning with Marshall Breeding’s automation database and ending with a literature review. As previously mentioned, keyword searches were used to identify sources and then the information regarding specific library locations was entered into the spreadsheet.
  • Gathered contact data for survey participants
  The contact data was gathered from library web sites listing personnel and title as well as the Lib Web Cats database.

2009 November:

➢ Website Related Work
  • One of the research assistant underwent training with Office of Information Technology for the UTK MR Interview Tool.
  • Installed new Drupal Theme and several custom modules.
  • Created iframe for embedding MR Interview interface within Drupal.
  • Created response forms for the drupal site which allows interested parties to apply to take part in the study.
  • Drupal Site Maintenance
Work on Research Objectives (Objectives are attached as Appendix – A)

- Continued data gathering for libraries and survey participants
- Developed questions for survey 1 (APPENDIX – C)
  - The survey questions were keyed towards identifying the expectations of librarians regarding their ILS and technical support. The phrasing of the questions was simple and direct. A minimal number of qualitative questions were used, but the majority of questions were quantitative with a selection of answers provided by the researchers in the form of a rating scale.
- Gathered resources for OSS ILS literature review
  - These sources were gathered from searches primarily conducted in the Web of Science database. Academic materials were reviewed as well as paper citations and scholarly journals within the OSS field. Materials were evaluated for relevancy on an individual basis.
- Established G-mail address for survey & participants; created e-mail filters so that respondents were collected in a single “folder”

2009 December:

- Work on Research Objectives (Objectives are attached as Appendix – A)
  - Wrote publicity blurb to solicit respondents and interested parties regarding survey participation
  - Publicity sent for survey - From the sources that were mined for information, several potential media outlets were identified. The blurb was sent to these outlets as well as the major agencies and publications in the field, such as Library Journal and OSS4Lib.
  - Researched publication venues and available conferences. Located conference schedules compiled by various universities and made note of the dates and topic areas for presentations.
  - OSS 2010 paper was written and published in the library review journal. The goal of this paper was to provide an overview of the saturation of OSS applications in libraries and to define the various types of OSS used in library settings. (Reference)
  - Completed the IRB application materials which included a description of the project and the survey questions.

Website Related Work

- Began implementing online survey in the MR Interview tool.
- Created participant map for the Drupal website. [Image Attached]
- Created custom views and content types for participants in the Drupal website.
- Drupal Site Maintenance
2010 January:
➢ Work on Research Objectives (Objectives are attached as Appendix – A)
   • Continued publicity and reminders for Survey 1
   • Wrote an initial draft of a paper comparing technical aspects of four ILS Systems.
➢ Website Related Work
   • Logo finalized for Drupal site
   • Content upload for Drupal site, including sources, blogs, web sites, and researcher profiles
   • Continued development of the MR Interview Survey
   • Created a custom programmed email invitation system for inviting and maintaining survey responses.
   • Added entries to the Drupal participant map.
   • Rethemed the Drupal website.
   • Drupal Site Maintenance

2010 February:
Work on Research Objectives (Objectives are attached as Appendix – A)
• Paper revisions from December
• Survey 1 Launch; sent to individuals who responded to the publicity materials and the targeted e-mails
• Contacted publicity news outlets
• Launched the online survey for the first round of responses.
• Used our custom email programs to invite participants and send reminders to non-responders.
• Retrieved response statistics to track survey activity.
• Extracted survey data for use in SPSS.

2010 March:
➢ Work on Research Objectives (Objectives are attached as Appendix – A)
   • Survey 1 Data analysis: work flows, processes, and qualitative responses
   • We analyzed the public and private qualitative survey responses in order to identify help seeking behaviors, workflow processes for support, technical support channels, and librarian expectations.
   • Created Excel chart for survey responses: public & private responses segregated for analysis
   • The data analysis was represented in an Excel spreadsheet. The responses were arranged by frequency. The analysis yielded a finite number of workflow processes, etc., so each process was assigned a corresponding letter. Then the letters were sorted alphabetically so that the frequency of the like answers could be identified for each question.
   • Performed data analysis on survey responses.
• Collated survey responses for further analysis.
• Continued reminders for survey.

Website Related Work
• Updated participants list on Drupal.
• Drupal Site Maintenance

2010 April:

Work on Research Objectives (Objectives are attached as Appendix – A)
• Continued survey 1 data analysis
• Submitted OSS 2010 paper to the Library Review
• Closed survey 1
• Finished survey
• Created finalized data sets for survey data.
• Performed analysis on survey data.
• Began work on implementing the phase 2 survey.

Website Related Work
• Worked on Drupal Theme
• Installed Blogging and RSS Aggregation models on Drupal.
• Created facebook group for the research project.
• Drupal Site Maintenance

2010 May:

Work on Research Objectives (Objectives are attached as Appendix – A)
• Survey 2 preparation
• Developed Survey 2 questions (Appendix – D)
• Launched Survey 2
• Publicized Survey 2
• Created comprehensive invitation list for the phase 2 survey.
• Implemented the phase 2 survey in MR Interview.
• Launched the phase 2 survey and sent invitations and reminders.
• Assisted in creating addendum to IRB documents for phase 2.

Website Related Work
• Continued maintenance on Drupal site.

2010 June:

Work on Research Objectives (Objectives are attached as Appendix – A)
• One Research Assistant attended SLA 2010 Conference: interviewed six individuals using questions from Survey 1 for authentication purposes
• Continued publicity for Survey 2
• Gathered data for technical support channels for OSS ILS
• The technical support channels that were identified in Survey 1 and by the resource gathering were placed into a spreadsheet. Several primary ILS support vendors were located as well as their contact information and pricing structures.
• Concluded the phase 2 survey.
• Created SPSS datasets for phase 2 data.
• Performed data analysis on phase 2 data.

➤ Website Related Work
• Upgraded all Drupal modules and themes.
• Performed routine maintenance on Drupal site.
• Updated participant map on Drupal and made the map available to the public.

2010 July:
• Wrote a poster for ASIST that was accepted.
  • The poster abstract provides an overview of the three year project with a focus on the key phases of the study. In particular, we identified the goals of the project and the results thus far.
• Created Poster graphic – visual representation of the project with logos, images, and text
• Created text transcripts for the interview materials.
• Sought out other open source ILS systems.
• Listed support options for top five open source ILS systems.
• Continued work on comparative paper.
• Extracted several reports from survey data.

2010 August:
• Performed major upgrade of the base Drupal system. Brought all modules and themes up to date with the latest available versions of each.
• Continued work on comparative paper.
• Continued seeking out and listing support options for proprietary and open source systems. Including costs and requirements for joining mailing list archives.
• Began making notes on data collection methods for existing support sites.
• Wrote this report.
APPENDIX A

Research Objectives from the Research Proposal

Objectives (RQ: 1&2)

1. Identify the expectations of the librarians about technical support for ILS (both open source software and proprietary software)
2. Assess the effectiveness of the current channels and processes for technical support in satisfying the expectations of the librarians

Objectives (RQ: 3)

3. Identify the existing channels and processes of technical support for open source software and proprietary software
4. Develop a matrix for comparing and contrasting the open source ILS with proprietary ILS
5. Compare the technical support on the developed criteria

Objectives (RQ: 4)

6. Develop a model for evaluation, adoption, implementation and maintenance of OSS ILS.
7. Develop a website for information dissemination about the existing technical support for open source ILS
APPENDIX – B

1. Does your library use an ILS?
2. If yes, is it open source or proprietary?
3. What is the name of the ILS you / your library use?
4. What type of library do you work in?
5. Is it a rural library or an urban library?
6. Would you be interested in participating in this research?
APPENDIX – C

Survey 1 Questions

1. What type of ILS do you use – open source or proprietary?

2. What type of technical support do you use – paid or unpaid?

3. What type of technical support do you use – in person or online?

4. What is your go to place for technical support for your ILS?

5. On an average, how many times do you need technical support in a month?

6. What are your expectations for response time from your ILS technical support staff?

7. What are your expectations for problem resolution time for your ILS technical support?

8. What type of follow-up you expect from the technical support staff after the problem is resolved?

9. What do you expect from the technical support staff when a problem is not resolved?

10. What do you expect from the technical support staff when you are having the same problem over and over again?

11. Would you be willing to share your best technical support scenario? If yes, please do.

12. Would you be willing to share your worst technical support experience? If yes, please do.

13. Do you have any recommendations for making the technical support better?

14. What can the technical support staff do to improve the process?

15. What can the librarians do to improve the process of technical support in libraries?

16. How satisfied are you with your ILS technical support in general?
**APPENDIX – D**

**Survey 2 Questions**

1. What type of Integrated Library System (ILS) do you use – open source (e.g. Koha Evergreen) or proprietary (e.g. Horizon, Millennium)?

2. What type of technical support do you use – paid or unpaid?

3. What type of technical support do you use – in person or online?

4. On an average, how many times do you need technical support in a month?

**Unpaid Support Questions**

1. In case of self directed online search your technical support questions usually get the first response (not necessarily a solution) in
   - Less than 2 hrs
   - Same working day
   - 24 hrs
   - 1 week
   - More than 1 week

2. In case of self directed online search/support your technical support problems are usually solved in
   - Less than 2 hrs
   - Same working day
   - 24 hrs
   - 1 week
   - More than 1 week

3. How would you rate the interactivity of the online process of technical support during the process of problem resolution?
   - Highly Interactive
   - Moderately Interactive
   - Non Interactive

4. The technical support community uses jargon free language in communicating with you
   - 100% of the time
   - 75 to 99% of the time
   - 50 to 74% of the time
   - Less than 50%
5. The technical support community always provides you solutions that are directly related to the issues and no non-relevant information like promotions, sales is presented to you
- 100% of the time
- 75 to 99% of the time
- 50 to 74% of the time
- Less than 50%

6. The first response community members are knowledgeable
- 100% of the time
- 75 to 99% of the time
- 50 to 74% of the time
- Less than 50%

**Paid Support Questions**

1. When you call you have an option of talking to a representative rather than an automated system
- 100% of the time
- 75 to 99% of the time
- 50 to 74% of the time
- Less than 50%

2. In case of self directed online support your technical support questions usually get a response in
- Less than 2 hrs
- Same working day
- 24 hrs
- 1 week
- More than 1 week

3. The technical support representative responds to your phone/email questions in
- Less than 2 hrs
- Same working day
- 24 hrs
- 1 week
- More than 1 week

4. The technical support representatives or group members respond to your online inquiry (mailing lists, listserv) in
- Less than 2 hrs
- Same working day
5. When your problem is resolved your paid technical support representative follows up with an
   - On-site visit
   - Phone call
   - Email
   - No Response

6. If the technical support representative is not able to resolve your problem s/he
   - Visits On-site
   - Calls on Phone
   - Emails
   - No Response

7. When you are having the same problem repeatedly the technical support representative
   - Visits On-site
   - Calls on Phone
   - Emails
   - No Response

8. How would you rate the interactivity of your technical support representative during the process of problem resolution?
   - Highly Interactive
   - Moderately Interactive
   - Non Interactive

9. The technical support representative uses jargon free language in communicating with you
   - 100% of the time
   - 75 to 99% of the time
   - 50 to 74 % of the time
   - Less than 50%

10. The technical support representative(s) always provides you solutions that are directly related to the issues and no sales communication
    - 100% of the time
    - 75 to 99% of the time
    - 50 to 74 % of the time
    - Less than 50%
11. The technical support representative have a method of remotely accessing your machine to solve problems
   • 100% of the time
   • 75 to 99% of the time
   • 50 to 74% of the time
   • Less than 50%

12. The first response staff is knowledgeable
   • 100% of the time
   • 75 to 99% of the time
   • 50 to 74% of the time
   • Less than 50%

**General Questions**

5. How would you rate the quality of the assistance you received from technical support?
6. The documentation of the Integrated Library System you use is
   • Complete
   • Sporadic
   • Incomplete
   • Non-existent

7. How many options/channels exist for your technical support
   • One
   • Less than 3
   • Less than 5
   • More than 5

8. Would you be willing to participate in a telephonic interview as a follow up of this survey?
   • Yes
   • No

9. If yes, can you provide your contact information
APPENDIX – E

Map of Participating Libraries