Library Application Collaboration, Development Tools and Resources

Final Report

Submitted by Bobbi Fox 15 November 2011

Project Summary

In this Library Lab project, we (Chris Jeris of HCL and Bobbi Fox of OIS) proposed to conduct research and discussions among the library application development community at Harvard in order to answer the following independent but connected questions:

1. *Connecting and collaborating.* How can we improve internal collaboration among the library application development community, including more effectively connecting development ideas with existing or planned projects?
2. *Ongoing support and sustaining engineering.* How can we more effectively provide ongoing support and sustaining engineering for library application development projects, including successful Library Lab projects that are past their incubation period?
1. *Specialized support services.* What specialized development support services would be useful to the library application development community, and how can they be effectively and efficiently delivered?

We originally intended to pursue this goal through discussion with individual library application development groups and individuals. Very early on, it became apparent that we would get a fuller picture if we also included librarians who interacted with these people.

In approving our proposal the Library Lab Board also suggested that, we also try to revive the "virtual" ABCD-Library Working Group; as part of that effort, at the first meeting, we also conducted a guided discussion.

Challenges

The most fundamental challenge to successfully completing this project was the departure from the University of Chris Jeris, the project's initiator. This had two consequences: all the remaining work was left to Bobbi Fox, the sole remaining project participant (who did not somehow thereby acquire double the amount of time to devote to the project); and OIS was not explicitly met with, since having a member of OIS conduct the discussion was undesirable. This last consequence was somewhat mitigated by the active participation of many OIS individual contributors (and managers) in the ABCD-Library guided discussion.

It was very difficult to line up meetings with some of the groups that we had initially targeted; while we were able to cross the river to meet with people from the Business School, we were unable to schedule a meeting with anyone from the Longwood area. This was marginally mitigated by some participation at the ABCD-Library meeting. However, it is a very large hole in our understanding, and if further work were to evolve out of this report, it needs to be addressed.

Accomplishments

Reviving the ABCD-Library Working Group

"ABCD is an informal association of system managers, programmers, researchers, students, administrators, and faculty at Harvard University and its affili ated institutions in the Boston area… The group's primary objective is to promote communication over a broad range of computer related topics and issues."[1] ABCD is composed of "various subsidiary working groups, each tackling different facets of computing at Harvard."[2]

The Library Lab Board suggested that, in aid of our efforts, we take what had become an infrequently used mailing list (a "virtual" working group), and try to revive it. To that end, the Library Lab generously provided money for lunch to serve as an inducement to people to attend ABCD-Library Working Group meetings. We had budgeted for lunch for approximately 20 people for three meetings' worth. Our first meeting was attended by approximately **60** people; our second meeting by only slightly less, thereby eliminating our ability to provide a free lunch. The third meeting was only sparsely attended; however, once we moved the time to the late afternoon, thereby enabling staffers who worked outside of the Yard a better opportunity to attend. Our meetings have averaged between 20 and 35 people since.

We believe that the initial meetings drew such large crowds not only due to the free (and delicious) food, but also because there's a huge information/communication gap and extreme anxiety at this time of Library Transition, and people will make an effort to come, just so they can get more information.

Below is a list of our meetings to date:

June: "Developing ideas for collaborating on applications, resources, and shared services across libraries " [A guided discussion as part of this project]

July: "Collaboration between/among Institutions" [Presentation]

August: Preliminary presentation of this project

September: "Screencasting 101 for Libraries" [Presentation]

October: "Web Application Development for Libraries" [Presentation]

November: "LibraryThing" [Presentation]

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[1] Solomon, L. "About ABCD: A Brief History of the ABCD Committee". (http://www.abcd.harvard.edu/intro.html). August 1, 1997.
[2] Loc.cit.

Meeting with Application Developers

In order to get varied perspectives on collaboration and tools and services, we met with representatives of six relevant Library groups (total of 18 people) :

- Law School Library Innovation Lab
- Law School Library Digital Lab
- Business School Library
- Loeb Music Library
- Divinity School
- John G. Wolbach Library & Information Resource Center

We conducted these meetings at a place convenient to the participants. We also met with Jim Waldo, Chief Technology Officer for the University.

What we found out

There is an astonishing amount of variability across libraries. While some libraries have dedicated IT people, others are dependent on the IT group of the particular faculty with which the library is associated – or librarians try to do it themselves.

Similarly, there is a wide range of technology (computer languages used, source code management and bug tracking systems – where they exist!, etc.) amongst the libraries.

However, everyone we met with spoke to the need for better communication among their fellow technologists at Harvard, and bemoaned the isolation they feel in their different groups/libraries.

Specifically:

- There is a general feeling that people don't know what other people/groups are doing; librarians don't know what they can reasonably ask for
- Software developers feel that they cannot talk to anyone outside their group – including potential users of their work
- Everybody wishes that they/their group had more Usability expertise.
- Many groups don't have Source Control Management or Bug Tracking software available to them
- Many groups do not have time or expertise for performing Quality Assurance – frequently, their clients are their QA.
- Some librarians feel that software applications and features are frequently dropped on them with no warning, and no opportunity to affect the design, make suggestions, etc.

Recommendations

Connecting and Collaborating

The ABCD-Library working group meetings are indeed a place for library technologists to connect. The associated abcd-library@abcd.harvard.edu mailing list is also beginning to be used outside of meeting announcements: the soon-to-come "Wikipedia loves Libraries" event was developed and announced on the list. However, despite the fact that the mailings are archived, the archive itself is hard to search. Thus, information that might be useful some months later is obscured. Further, because of its ephemeral nature, while the list is a good place to ask for help solving a problem, it is **not** a good mechanism to document the eventual solution(s) for other people to find subsequently.

Besides the problem of communicating problems/solutions, there is also the stated need to identify people who might have the expertise to provide guidance on possible projects/enhancements. While OIS is now offering "T4L" (http://isites.harvard.edu/icb/icb.do?keyword=k79160&pageid=icb.page423528) as a place to disseminate *some* information, it only provides one-way information: short of sending an email message to Wendy Gogel via the "Feedback" link, there is no place for dialog to occur – no blog, wiki, RSS feed, etc.

Tracey Robinson of OIS had suggested to her staffers that they assign "Organization Tags" (including areas of expertise) to their profiles in Harvard Connections (https://connections.harvard.edu/profiles/home.do?lang=en) as a way of identifying themselves to the outside world (and to each other). However, that has not served to solve the problem, even internally, because there is no controlled vocabulary (different people used different words to describe the same thing), and very few people even know about the system.

What is really needed is a site that combines information dissemination with sharing, back-and-forth communication, in a way that does not require that interested parties to have to monitor Yet Another Channel of Communication. Such a site should provide various entry points (including individualized RSS feeds and subscription by email), to suit the various workflow needs of the staff, and include a wiki-like structure for collaboration, as well as blog-like features for interactive communication. This writer proposed to develop such a site as a Library Lab project, but the proposal was rejected; it is to be hoped that the new Library Directors consider such a site at a not-too-much-later date.

Specialized Support Services

While some Library development groups have their own Source Code Management and Bug Tracking systems in place, many smaller groups do not. Further, every one we interviewed saw the need for more Usability expertise, and help with QA. The re recommendations therefore are:

1. Make Source Code Management system available to those who need it. Note that HUIT has a Development Standardization Project underway (http://isites.harvard.edu/icb/icb.do?keyword=standardization) to address that area more globally.
2. Make Bug/Enhancement Tracking software to those who need it. There are many options on the market; the big "win" would be a Library-wide license. HUIT is also exploring a University-wide option.
3. Create a Library Usability Center of Excellence, that would serve to advise groups on their projects.
4. Create a Library Software Quality Assurance Center of Excellence, to serve a similar function – or indeed to actually be the QA testers.

Changing the Culture

By far, the biggest need expressed by those we talked with is that the culture of the Library needs to change drastically. Issues that need addressing:

- The perception that software developers are not allowed to talk to end users about the applications they're developing, *while they are in the development phase* had to be addressed.
- Related to that is the perception that: "it's a struggle to get the right people at the table for requirements;" managers tend to talk to managers, rather than developers talking to the people who will actually use the applications.
- The tendency for groups not to announce – or even acknowledge developing -- an application until it is ready to be released.
- Managers of the various groups should not only expect, but also encourage, their people to be available for an hour's consultation with some other group contemplating developing/enhancing applications.

Budget Spent

The $1000 allocated was spent on food for the ABCD-Library Working Group meetings.

Publicity

Email messages to HLCOMMS, ABCD groups

Presentations

- Preliminary report presentation to ABCD-Library Working Group
- Presentation to Library Lab Showcase

− Respectfully submitted,

Bobbi Fox

Appendix: A Response to Questions posed by Chris Jeris and Bobbi Fox

Kate Bowers, Harvard University Archives

In response to questions posed by ABCD Library Lab project proposed by Chris Jeris and Bobbi Fox

http://osc.hul.harvard.edu/sites/default/files/Jeris_collaboration_final.pdf

1. Connecting and collaborating

Opening up Harvard projects to the world would open us up to each other

We have a tendency to make our collaborations into silos. For example, often our collaboration projects use I-sites and email for communication and document sharing. These are highly problematic because they are largely inaccessible.

Assuming that the I in I-sites stands for "internal," this is proper, but is it always wise? Although an I-site may be exposed to Google and other search engines, the default position for most projects is to keep these sites closed. I-sites are helpful to the "in-group," but without advertising their existence in other media, they are largely unknown resources. Even within Harvard, unknown sites are not discoverable by serendipity, while even a known site can be hard (if not impossible) to find without knowing its numeric "keyword." Even with this keyword, they may be impossible to find if access is not open to all of Harvard.

So where do others present works-in-progress? Our peers have begun project blogs (e.g.: http://futurearchives.blogspot.com/ and http://www.library.yale.edu/mssa/at/) While blogs may not be the answer, they are one answer. Changing our default decisions regarding I-site access is another. Harvard seems to be afraid of letting the world eavesdrop, and the result is that we often can't hear each other.

2. Ongoing support and sustaining engineering

Environmental impact statements for information systems and software

At the ORCID ID conference, one of the metaphors that I heard again and again (probably because the participants were mostly scientists) was "The ecology of information." It started me thinking about what an environmental impact statement for a Harvard library system or piece of Harvard library software might look like. Here are a few thoughts:

- It would tell me what functions the system serves and what would happen if the need for those functions changes or ends.
- It would tell me whether the system is intended to be sustained or if it is ephemeral, and under what conditions it should be dissolved or discontinued.
- It would tell me about the resources needed to sustain it, as well as giving a schedule and resource requirements for its continued maintenance, assessment, revision, and its eventual succession or dissolution.
- It would identify the systems with which it interacts, including identifying itself as a source of information or a deliverer of information, or both, and the audience, which might be a class of people, another system, or both.
- It would tell me about other systems at Harvard that have similar functions or data, and identify why it is needed and how data would be shared with those other systems.
- It would address the information in the system separately from the system's current functionality.
    1. It would tell me if the information in the system needs to be permanently retained.
    2. If data are to be permanently retained, it would identify a potential data migration strategy.
    3. It would tell me if it is a system of record for its information and identify other systems that use the same information.
    4. If it is not a system of record, it would tell me where the system of record is for each piece of information it uses, and tell me how the systems will be synchronized.
    5. It would tell me which data standards the information in the system must adhere to, and what the system would do if those standards change, and who keeps an eye on the standard.

3. Specialized support services

<u>Checklists of core functionality</u>

I'm not sure if this is the right area, but it strikes me that it would be desirable to create high-level checklists of valuable functions or specifications to which systems should adhere. This is a meta-list, or set of meta-lists. For example, all systems probably require reporting features for administrative purposes.

Other items on a checklist might depend on the system's intended audience or user community. For example, checklist items for systems that deliver scholarly resources could include end-user bookmarking and citation functionality and also administrator access to usage metrics. Some functions of this kind have been identified here (see p. 3):
http://www.jisc.ac.uk/media/documents/programmes/digitisation/Impact_Synthesis%20report_FINAL.pdf. In another example, standard functionality for metadata creation systems might include the ability to ingest and export data, search functions, a "preview" function, a validation function, and auditing functionality to record which users have edited records and produce productivity statistics.