

Optimizing the User Experience in a Rapid Development Framework

INTERIM PERFORMANCE REPORT

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Submitted by:

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This is the first interim performance report for the project titled: *Optimizing the User Experience in a Rapid Development Framework*. The reporting period is December 1, 2007 – June 30, 2008. The report includes three sections: Interim Goals and Accomplishments, Significant Findings and Accomplishments, and Project Achievements and Lessons Learned.

I. Interim Goals and Accomplishments

A. Design and IRB approval of testing instruments

In November, 2007, the University of North Texas Institutional Review Board approved the research protocol for the project. Consent forms and data collection instruments for three activities were approved:

1. Individual interviews with key informants
2. Focus groups with members of genealogical societies
3. Usability testing with members of genealogical societies

B. Identification of the information context and information needs of genealogists – initial usability testing

The following activities were conducted to identify the functional requirements of genealogists interacting with the Portal to Texas History [<http://texashistory.unt.edu>].

1. Three focus groups were conducted with two genealogical societies in northeast Texas: the Dallas Genealogical Society and the Collin County Genealogical Society. In all, 19 persons participated in the three focus group discussions. The discussions were recorded and transcribed. Additionally, participants completed a ranking exercise related to proposed interface redesigns for object navigation and information discovery. These proposed designs were incorporated a variety of navigational features and web 2.0 features. Participants also completed questionnaires related to their demographic characteristics and web 2.0 preferences.
2. Five usability testing sessions were conducted with members of the Denton County Genealogical Society. The tests were designed to elicit information discovery and use problems encountered by genealogists using the existing interface to the Portal to Texas History.
3. Content analysis of the focus group discussions was completed and the completed ranking exercises and questionnaires were analyzed. These analyses identified functional requirements for the redesign of the Portal to Texas History in the following areas: Searching & Browsing; Search Results; and Navigation.
4. Usability tests were analyzed both to identify information discovery and use problems with the existing Portal to Texas History and to further identify unique requirements specific to genealogists using the types of cultural heritage materials contained in the Portal.
5. Ten interviews were conducted with genealogists to characterize their information use environments. Four dimensions of particular interest were discussed: general background and research practice characteristics; the settings in which genealogists work; the types of problems

genealogists typically address; the genealogical research process; and the manner in which information resources are used in the research process.

6. Problems hiring a graduate research assistant were experienced in the spring of 2008. This resulted in rescheduling the analysis of the interview data to the summer of 2008. A transcriptionist was hired in May 2008 and the interview transcripts will be available for analysis this summer. Completion of the project by the expiration of the grant is not in jeopardy.

C. *Implementation and refinement of the rapid development framework to support the iterative redesign process*

1. A preliminary model of the software development process was created. The model describes the functional areas of the IOGENE project: User Studies, System, and User Interface. The model illustrates the interaction between the different functional areas during the rapid development process.
2. Diagrams depicting the development framework and the infrastructure elements were created. Each diagram describes a different part of the overall rapid development framework. The first diagram provides an overall look at the core pieces of the rapid development framework. A second diagram depicts the way that the functional pieces are broken out into various Django applications and a final diagram illustrates the steps that are taken for each request type to the framework. These diagrams help in explaining the overall structures to members of all the functional areas of the IOGENE project.
3. A preliminary investigation into modifications required to make our current Solr based search system meet the needs of our target group was started. However, a decision was made to delay the final recommendation for changes pending conclusion of the data collection and analysis work underway by the user studies team.
4. Five design possibilities for the Portal's user interface were created. These incorporated web 2.0 features, such as commenting and tagging, and were used in the focus group discussions.
5. A survey regarding design characteristics and preferences was completed by members of the Digital Projects Unit staff. The results were used to guide a discussion among these stakeholders regarding priorities for the Portal's redesign in three areas: overall design, functionality, and information architecture/content. Further discussion was conducted on the project's management site.

II. Significant Findings & Accomplishments

1. Functional requirements for the initial redesign of the Portal were produced. These requirements are based on the results of the focus groups and the usability tests.
2. Specifications for major system components were written and prototype implementations of key software modules were completed. This prototyping of the key software components

enabled testing of various technologies and standards that are being discussed for final implementation.

III. Project Achievements & Lessons Learned

Achievements related to project management and communications completed during this reporting period are listed below.

1. An advisory board comprised of genealogists from national, state, and local genealogical societies and organizations was established.
2. A project name was created: IOGENE, Interface Optimization for Genealogists. This decision was made to better reflect the central role genealogists have in the project.
3. A project web presence was established at [<http://iogene.library.unt.edu/>]. The site includes a blog with posts categorized into four Areas of Interest: Project News, System Development, User Interface, and User Studies.
4. A project management site was created. This site provides online tools for project management and collaboration.
5. Project team members represented the project at three 2008 national conferences: cod4lib, Web Wise, and the National Genealogical Society.