

**Optimizing the User Experience
in a Rapid Development Framework**

**FUNCTIONAL REQUIREMENTS
for the
PORTAL to TEXAS HISTORY**

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Introduction

Project Overview

The University of North Texas Libraries received a National Leadership Grant from the Institute of Museum and Library Services for a two-year project¹ to identify the user interface requirements of genealogists interacting with the libraries' Portal to Texas History. The Portal provides users with a digital gateway to collections in Texas libraries, museums, archives, historical societies, and private collections. It contains primary source materials, including maps, books, manuscripts, diaries, photographs, and letters.

The IOGENE project involves genealogists in the design process beginning with the initial assessment of their requirements and continuing through usability testing of the redesigned Portal interface. The results of this study will provide the library community with information about the needs and interface requirements of a little-studied group of lifelong learners who comprise a significant proportion of digital library users.

This report includes the results of the initial assessment of genealogists' requirements for the redesign of the Portal's interface. Assessment data included transcripts from three focus group discussions with genealogists and the log of user comments from the Portal for the past few years.

The remainder of this introduction is an overview characterizing genealogists and their information seeking process. This is followed by a description of the methodology used to identify genealogists' requirements for the redesign of the Portal's interface. The bulk of the report consists of the requirements themselves, both functional enhancements and new functionality. Following the requirements is a section reporting participants' reactions to prototype display options. This is followed by sections reporting usability and terminology issues that emerged in the focus group discussions. The final section reports the results of the content analysis of the Portal's comment log.

Genealogists

Experience

"You have researchers in their 70's and 80's that are working on computers for the first time. They're working on using the computer just for genealogy really. They're very savvy genealogists but not computer [savvy]."

There is considerable variance among genealogists as a class of users based on their chronological age, their educational achievement, and their experience with computers and technology. Sensitivity to the needs of both more and less experienced users is important in terms of their requirements. The differences manifest themselves particularly in the following areas:

¹ Since being funded, a more descriptive project name was created: IOGENE - Interface Optimization for Genealogists. <http://iogene.unt.edu>

Less experienced

- Do not understand technical terms, such as 'metadata', and need explanations for terms such as 'full text' and 'creator'
- Need examples or explanations regarding how to formulate searches, in particular Boolean and phrase searches
- Have a good deal of difficulty downloading objects in the absence of a 'download feature'
- Have difficulty formatting plain text after cutting and pasting information contained in tables
- Use browser features to 'save' objects; often print objects in order to save them
- Lack an understanding of image file formats (i.e., gif, jpeg, tiff)

More experienced

- Some understand technical terms: metadata, relevance, permalink
- Use Boolean search techniques and phrase searches
- Use 'right mouse' features to copy and save objects
- Use 'control F' to find terms within web pages

Research

Genealogists conduct research both in regard to individual family histories and historical topics, such as 'free African-Americans in Texas prior to the Civil War' or 'superintendents of a particular school district in Texas'. Their research fundamentally involves searching along three key parameters:

1. Name: primarily surname but also full name
2. Location: county, city, town, township, community
3. Time Period: range of dates

Names in particular pose many search challenges, primarily due to the variance in their spelling. Genealogists are likely to perform multiple trial-and-error searches based on variations in the spelling of names. Therefore, access to search history is important to assist with recalling which name variations have already been searched.

Access to information by county is a major requirement for genealogical research. Genealogists are accustomed to both searching by county and filtering search results by county. The ability to conduct more refined location searches, including cities and townships, is highly desirable.

Some genealogists conduct family history research on behalf of others, either for payment or not. They often deal with family information that may be owned by a family and in the family's possession, in addition to information in databases, archives, and repositories, such as the Portal to Texas History. Because genealogists often publish their findings, either in hard copy or web-based formats, they strive to be in compliance with copyrights and they are concerned with obtaining necessary permissions prior to publishing information. Likewise, genealogical practice encourages the citation of source materials that support research findings.²

² The emerging citation standard for genealogists is *Evidence Explained* by Elizabeth Shown Mills.

Genealogists often travel to locations to use or discover source materials. As part of their professional training, genealogists are encouraged to not rely solely on copies of source materials or ‘copies of copies’, but to actually view source materials from time to time. If a researcher discovers that one institution holds a lot of resources of interest to them, they might well travel to that institution to see the originals. In this manner, resources discovered in archives or repositories actually result in visits to institutions that might not otherwise occur without exposure of those collections in repositories such as the Portal to Texas History.

Conceptual Framework

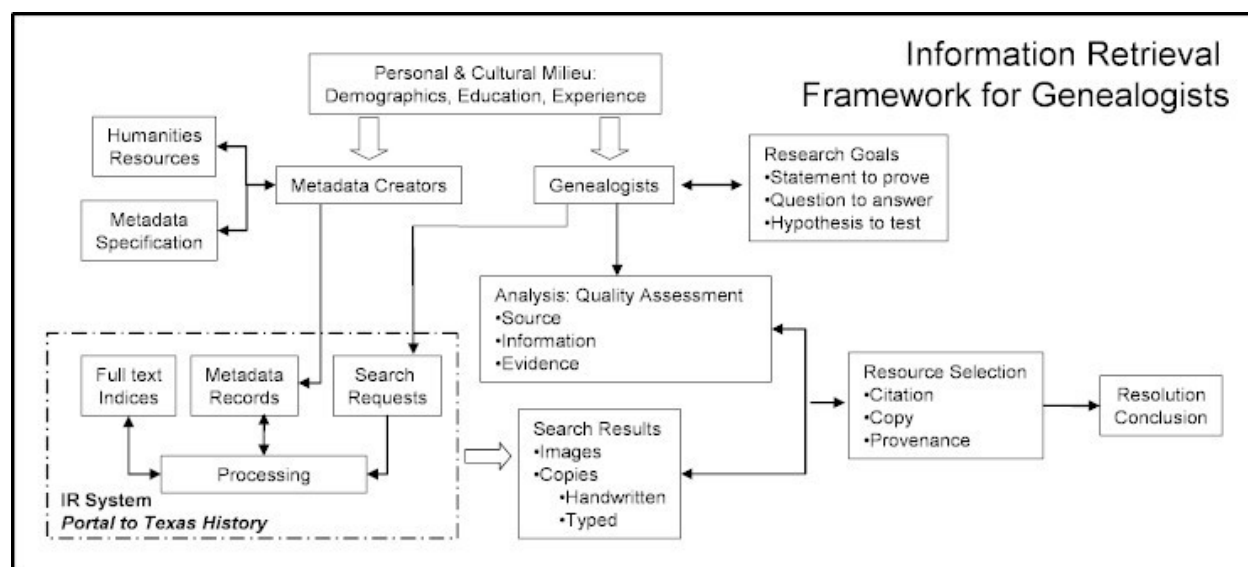


Figure 1. Conceptual Information Retrieval Framework

Figure 1 depicts a conceptual framework for information retrieval in a humanities digital library, the Portal to Texas History at the University of North Texas Libraries. It incorporates elements of Lancaster's (1986)³ representation of the major components of an information retrieval system in a non-networked environment as well as process elements from Taylor's (2008) "Genealogy Research Process" map⁴.

Metadata creators and genealogists are individuals within the context of their social and cultural milieu, through which they filter information and resource objects. This filtering process results in unique individual views of the world and its resource objects, with which the individuals interact.

Manifestations of this unique individual view are the metadata records created by professional information workers. These professionals characterize humanities resources using both their

³ Lancaster, F. W. (1986). Why vocabulary control? In *Vocabulary Control for Information Retrieval*, (2nd ed.) (pp. 1-4). Arlington, VA: Information Resources Press.

⁴ Taylor, M. (2008, February 24). Genealogy resource map. Retrieved from <http://www.thinkgenealogy.com/2008/02/24/genealogy-research-map/> on March 24, 2008.

perceptions of the users of the system and standardized metadata schemes, such as the Dublin Core Metadata Initiative and the University of North Texas Libraries' Descriptive Metadata Guide⁵.

Individual genealogists engage in an information seeking process in which they:

- identify and refine their research goals
- generate search requests
- assess the quality and utility of search results
- select resources that match their research goals

Based on metadata records and full text indices representing the resources in the Portal, genealogists' search requests are matched to resource objects. Genealogists evaluate the results of this matching process for relevance to their research goals using a quality assessment process. It is possible that the information seeking process will include iterative search interactions with the Portal resulting from or informed by interim evaluations of search results.

The end result is the selection of humanities resource objects deemed to be relevant to the resolution of the genealogists' research goals. Ultimately genealogists write a conclusion, or final proof, that explains their research goal, identifies resources investigated, and presents evidence, including citations, in support of the conclusion(s) as well as any conflicting evidence.

⁵ <http://www.library.unt.edu/digitalprojects/assets/files/metadata/sections/descriptive-metadata.pdf>

Methodology

Participants

Focus Group Discussions

During February and March of 2008, three focus group discussions were held. In all, 19 persons participated. All participants were recruited from one of two northeast Texas genealogical societies: the Collin County Genealogical Society and the Dallas Genealogical Society. Participants were primarily females (84%; $n=16$) and over the age of 50 (Table 1).

Years	#	%
51 - 60	9	47%
61 - 70	5	26%
71 - 80	5	26%

Table 1. Age of Participants ($N=19$)

On average, participants have been doing genealogical research for 21 years. The range was eight to 45 years (Table 2.) Of the 19 participants, only three reported having professional genealogical credentials and these three were all members of the Association of Professional Genealogists (APG). However, about 70% reported having memberships and affiliations with local, state, and national genealogical organizations, including the National Genealogical Society, the USGenWeb Project, the TXGenWeb Project, the Hispanic Organization of Genealogy and Research (HOGAR de Dallas), and several local genealogical societies.

Years	#	%
9 or less	1	5.3%
10-19	9	47.4%
20-29	4	21.1%
30-39	2	10.5%
40+	3	15.8%

Table 2. Experience of Participants ($N=19$)

Most participants reported that Flash was installed and JavaScript was enabled on their computers. While no one reported not having these technologies installed or enabled, four reported not knowing if Flash was installed on their computers and seven did not know if JavaScript was enabled. (See Table 3.)

Technology	<i>N</i>	Yes		No		Don't Know	
		#	%	#	%	#	%
Flash installed	18	14	78%	0	0	4	22%
JavaScript enabled	19	12	63%	0	0	7	37%

Table 3. Available Technologies

Comment Log

Any Portal user has the option to anonymously submit comments. Users do this via a link on the descriptive metadata page display for an object (Figure 1). Between October 13, 2005 and January 8, 2008, 425 users submitted comments. No information was collected to characterize these users.

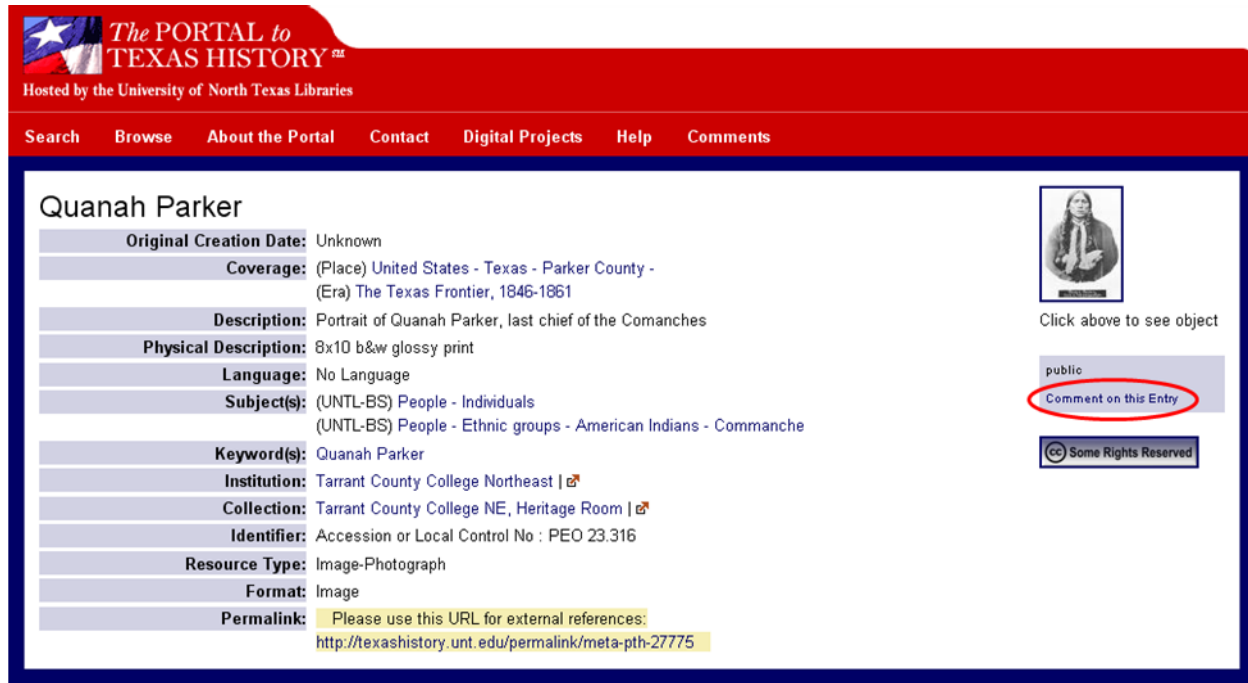


Figure 2. Portal to Texas History Comment Feature

Data Collection

Focus Group Discussions

Focus groups were led by the IOGENE project manager, who obtained each person's written consent to participate in a group discussion. A slide presentation was used to guide the discussions, which explored several functional areas within the Portal: Search, Browse, Search Results, and Object Navigation. Potential new features and interface designs for the Portal were also discussed, although due to time constraints, this primarily occurred in the third focus group. Each focus group discussion was recorded and the audio recordings were subsequently transcribed by the project manager.

Participants completed a questionnaire (Appendix A) that identified demographic characteristics and captured their ratings of possible new features for the redesigned Portal to Texas History. Additionally, participants ranked their preferences from among five object navigation screen designs for the Portal (Appendix B).

Comment Log

Comments submitted by users were written to a log file. Each comment was time-stamped and, in most cases, the associated object for each comment was recorded. The contents of the log file consisted of 425 comment records, which were exported to a delimited text file for analysis.

Data Analysis

Focus Group Discussions

The major functional areas within the Portal provided the overall framework for analyzing the focus group discussions: Search (basic and advanced), Browse, Search Results (list, grid, and faceted), and Object Navigation (photographs, maps, multi-page documents). Additionally, metadata was a major topic in the discussions.

Within each of these topical areas, five categories guided the content analysis: problems, preferences, terminology, help, and suggestions. Ideas and concerns that emerged during the focus groups were sorted into these categories for each of the topical areas. Additionally, ideas and concerns related to genealogical research and experience factors were assigned to an experience category.

The project manager and another project team member categorized the content of the focus groups and areas of disagreement were resolved. Analysis of the merged categorized content informed the requirements and issues reported in this document.

Comment Log

Content analysis classified the comments into two groups: comments and feedback. If a comment related to a specific object in the Portal, it was classified as a 'comment'. If a comment related to the Portal in general, it was classified as 'feedback'. There were two exceptions to this classification: (1) all comments pointing out grammatical and spelling errors were classified as 'feedback' and (2) all comments about obtaining either copies or permission to use objects were classified as 'feedback'.

The items in the comment group were then classified into three categories: (1) pertaining to people depicted in an object; (2) pertaining to locations depicted in an object; and (3) pertaining to other content in an object, including the descriptive metadata. Within each of these three categories, comments were further classified as errors, identifications, questions, or notes.

The items in the feedback group were classified into four categories: questions, errors, problems, and miscellaneous. As previously stated, all errors and any questions related to obtaining copies of objects or permission to use objects were included in this group.

The number and percentage of comments was calculated for each group, category, and sub-category. Illustrative comments for key results were selected.

Functional Enhancements

Function Definitions – Current System

Search [SCH]

All users are allowed to search the contents of the Portal using both basic and advanced search features.

Basic Search [SCH-B]

Basic searches can currently be limited to fulltext, metadata, title, subject, and creator.

Advanced Search [SCH-A]

Advanced search options currently include Boolean operations (AND, OR, NOT) and exact phrases. Users can also specify an institution, a collection, a language, an object type, and a date range, as well as limit their search to source materials.

Browse [BRW]

All users are allowed to browse the contents of the Portal based on predefined categories that currently include: subject, collection, contributor, era, and county. Users can currently search Portal contents within two browse categories: collection and contributor.

Search Results [RST]

Search results can be displayed in either a list or grid format.

List View [RST-L]

Metadata displayed with objects in the list view includes: title, date, creator, and description. When date and creator are not specified in metadata records, the fields are left blank. Each object in search results include as a 'more info' link that displays a page containing: the descriptive metadata record, a clickable thumbnail of the object, an 'about the publisher' link, a 'comment on this entry' link that opens a form for users to enter and submit comments, and a Creative Commons license designation that links to an explanation of the appropriate license. Some objects in the search results also include a link, 'Hits in text', which displays a page containing just the pages in a multi-page object that contain hits.

Grid View [RST-G]

Metadata displayed with objects in the grid view includes: title, year, and creator. When date and creator are not specified in metadata records, the fields are not included in the display. Search results all include a 'more info' link that leads to the page described in the List View. 'Hits in text' are not indicated for objects in this view.

Metadata [MDT]

Descriptive metadata records for objects are based on the 15 Dublin core elements. The elements are: title, publisher name, place of publication, original creation date, coverage, description, physical description, language, subject(s), keyword(s), contributor (donor), institution, collection, identifier, resource type, format, and permalink. Some fields are optional and many fields are repeatable. At least one subject/keyword must come from the University of North Texas Libraries Browse Subject vocabulary.

Object Navigation [NAV]

The Portal is comprised of several object types including: maps, books, manuscripts, diaries, photographs, and letters. Most books, manuscripts, diaries, and letters are multi-page documents. In terms of navigational controls, object displays include:

- a title
- a 'view the description' link that displays the same page as the 'more info' link described in List View
- a 'view all pages' link that displays a thumbnail and associated sequence number for all pages contained in an object
- a magnifying glass icon that toggles between two image sizes
- three types of navigation for multi-page objects:
 - sequence drop-down menu
 - previous/next arrows above and below images
 - previous/next navigation from left and right sides of images

Help [HLP]

Help is accessible on all Portal pages from both the header and the footer. This 'help' is an FAQ of nine questions and answers. Help with formulating search queries is available from both basic and advanced search pages. This 'help' provides guidance in regard to capitalization, automatic 'and' queries, stemming, phrase searches, negative terms, and diacritic characters.

Requirements Format

The Functional Enhancements that follow contain all the requirements identified for the redesign of the Portal interface. They are listed here in their entirety; however, it may not be feasible for each requirement to actually be developed.

Each functional area (e.g., Basic Search) includes a set of requirements. Each requirement has a unique ID, a Priority (1=required; 2=optional), and a Description.

ID	Priority
Description	

Priorities reflect the weighting expressed by participants in the focus groups and provide an indication of the importance of each requirement to these participants. These priorities may not translate to actual development priorities.

Notes are provided at the end of each set of functional requirements. These largely illustrate focus group participants' ideas and preferences.

Websites referenced by participants in the course of the focus group discussions are listed in Appendix C. The specific features mentioned for each website are listed.

Search - Basic

Basic [SCH-B]

SCH-B1	1
Default to basic or simple search box, with option for advanced search functionality	
SCH-B2	1
<p>If user provides both a surname and a given name, join the two names and **only** do an exact phrase-type search</p> <ul style="list-style-type: none"> • If no middle name or middle initial is specified, include any in search results • Do not, by default, produce results based on the appearance of either name in objects • Quote: "When you're looking for 'Gene Bowen' you want 'Gene Bowen' to come up and no one else." 	
SCH-B3	1
<p>Have basic search incorporate advanced search features in the manner that Google does</p> <ul style="list-style-type: none"> • Quotation marks used for exact phrase search • Minus sign in front of a term to exclude it • Combine a phrase (i.e., in quotes) and single word(s) • Quote: "I did it the way that I would do it in Google, which is put "cotton mill" in quotes and then put McKinney. So, I'm thinking that I'm telling it that I want to know about a cotton mill, any photograph, any statistics, anything you have about any cotton mill that existed in the town of McKinney." 	
SCH-B4	1
<p>Search using wildcards, both question marks and asterisks</p> <ul style="list-style-type: none"> • Preferred to stemming searches because wildcards appear to have more search precision and flexibility • Example: "J*" or "S?ll*" using wildcards versus a stem of "Jam" or "Sull" 	
SCH-B5	1
<p>Search for names using Soundex; allow user to indicate this choice</p> <ul style="list-style-type: none"> • Use a character, for example a tilde, in front of a name (~Smith), to indicate a soundex search • Option in drop-down box • Checkbox option, similar to box for Source Material checkbox on the advanced search screen 	
SCH-B6	1
<p>Include common abbreviations for given names in name searches, for example, Jno for John and Wm for William</p>	
SCH-B7	2
<p>Include common nicknames for given names in name searches, for example, 'Sarah' could be 'Sally' and 'Mary' could be 'Polly' or 'Molly'</p>	

SCH-B8	2
Select a collection (e.g., Collin County Chronicles or STIRPES) and then search within the collection for a particular county	
SCH-B9	2
Limit search to an object type, for example, photographs	
SCH-B10	2
Identify other web-based resources, like the Handbook of Texas, and submit search criteria to those sites. If that search produces results, alert Portal user and allow user to easily switch between the Portal and the external site(s)	

NOTES:

- Many prefer to start with an 'advanced' search versus a 'basic' search
- Stemming
 - Useful for finding variations in spelling of names
 - Not useful for finding common abbreviations of names (e.g., Wm. for William)
 - Stemming might produce unexpected results, for example, genealogists would use 'William' as a search term if they wanted that exact term and would not want the variations on the stem 'Will'; would use a wildcard [*] to search for all terms beginning with the root of a word
 - Preference for wildcard searching
 - Stemming might be of some use but could introduce problems for surname searches:
 - "Barn" as a stem could bring up objects related to farm structures that would not be relevant
 - In the absence of the ability to search specifically by 'given name' and/or 'surname', stemming searches could produce irrelevant search results based on first names. For example, search for Thomas Barnett might result in Barney Smith.
 - This problem might be reduced if searches could be limited to a surname field in object metadata records
- The card catalog for genealogy resources at the Dallas Public Library is organized by county and then within each county by 'cemeteries', 'marriages', 'deeds' and other sub-categories of interest to genealogists. This organizational scheme might provide useful object type values for metadata records.

Image from Discussion

Everything Books Maps Photos Newspapers More

Search For: fulltext

- The above prototype initial search display was discussed and, in general, elicited comments similar to those made earlier in the discussion regarding genealogists' search preferences:
 - Some rarely use basic search; prefer advanced search
 - Genealogists search by: name, location, and timeframe
 - Object 'type' follows these three search fields as a priority for searching
-

Search - Advanced

Advanced [SCH-A]

SCH-A1	1
Add field for 'surname'; optionally include fields for given or first name and middle name	
SCH-A2	2
Add location field, in particular to limit search to a county, but preferably a city as well; location should be as listed in the record, and not be the location of the institution holding the object	
SCH-A3	1
Search by date: time period, that is, a date range (Note: This is an existing feature)	
SCH-A4	2
Add historical period field, with options to designate pre- or post-Republic, Civil War, Reconstruction	
SCH-A5	1
Add fields from browse categories: subject, era, and county Note: 'collection' and 'contributor' are already present; 'contributor' is called 'institution'-- make the terms consistent	
SCH-A6	1
Include explanations or examples of what to include in the 'name', 'location/place' search boxes	
SCH-A7	1
Allow Boolean searches; in particular of 'surname' field and another field	
SCH-A8	1
Perform a phrase search, whether or not user encloses the phrase in quotes. This is particularly important for name searches when the first name and last name are included. Example: When a first name/last name pair are entered in basic search box, search results should include both names appearing adjacent to each other and not simply any appearances of either name	
SCH-A9	1
Ability to enter two exact phrases, possibly by enclosing phrases in quotes	
SCH-A10	1
Selecting an institution from the drop-down menu limits the selections in the 'collection' drop-down menu to the collections held by the selected institution	
SCH-A11	1
Include as an option for name searches: 'names beginning with'	
SCH-A12	2
Search for names using Soundex code, i.e., user actually inputs the code as a search argument	

SCH-A13	2
List the following types of materials in drop-down menu: <ul style="list-style-type: none"> • Family bible records • Family portrait collections • Wills in possession of a family member • Special collections, such as photographic collections • Papers • Diaries • Correspondence • Business collections • Maps 	
SCH-A14	2
Include an option to use a map of Texas counties to begin a search, which would result in all objects related to that county being returned in the search results; follow-on searches could be done	

NOTES:

- Might use advanced search if looking for topical resources at a particular institution
- Liked the ability to include and also exclude certain search terms
- It is not clear how to search using either two exact phrases or one term and an exact phrase
 - Example: T G Harris – and – San Marcos
 - Do you put each phrase in quotes in the ‘exact phrase’ box? Would that work?
 - Can you put each phrase in quotes in the basic search box?
 - Quote: “Cause what I'm likely to do is [put] in all the words, just do that. Put "T G Harris" (quotes) AND (in caps) and then "San Marcos" and see what I get.”
- The ‘type’ drop-down menu includes: ‘image-map’ and ‘image-photo’. Perhaps it would be better to just use ‘map’ or ‘photograph’ as these might be more readily recognized genre-types for users.
- One participant identified the following site as having a ‘better than Soundex’ feature for name searches: Name Thesaurus. The site includes a demo for surnames.
<http://www.namethesaurus.com>
- Certain surnames are particularly problematic for genealogists when searching collections that do not allow them to limit searches to a surname field. Examples that illustrate this include these surnames: Spain, Germany, and Quick. Names like this produce an abundance of irrelevant results.
- One participant gets too many hits for ‘Nacodoches’ and would like to limit the search to a particular historical period of interest, like, pre-Republic Texas, but this period is not specifically identified as an ‘era’. As a result date range has to be re-entered for each search in order to limit results to this historical period.

- Participant provided an example of a site with the ability to do multiple phrase searching:
Library of Congress – OCLC – Advanced Search - <http://www.loc.gov/coll/nucmc/oclcsearch.html>

Browse

Browse [BRW]

BRW-1		1
Add 'date range' as a browse category; allow users to specify range of years and browse within that range		
BRW-2		1
Search within a collection by: name, location, date range, type, contributor, and historical periods		
BRW-3		1
Sort objects within a collection		
BRW-4		2
If a finding aid exists for a collection, include it		
BRW-5		2
Add a search feature for all browse categories; currently exists for 'collection' and 'contributor'		

NOTES:

- Main categories of importance: Timeframe, Location, Institution, Subject
- One participant made a distinction between 'era' and 'timeframe' and saw these as separate browse categories

Search Results - List

Search Results [RST-L]

RST –L1	1
For multiple word searches: results should first list items with all words, then items with more than one word (if applicable), then items with only one word	
RST –L2	2
Allow limiting of results by current browse categories: subject, collection, contributor, era, and county	
RST –L3	1
Either include or omit 'hits-in-text' for all objects in search results; If omitted, then display 'hits' navigation feature with objects	
RST –L4	1
Indicate the number of 'hits-in-text'	
RST –L5	1
Option for proximity search when multiple search terms are used. At a minimum, terms should be on the same page in order to be considered a 'hit'.	
RST –L6	1
Open selected objects in new windows or tabs	
RST –L7	1
Limit search results by: first name, location, and date range	
RST –L8	1
Display (and sort) results by relevance in this order: <ol style="list-style-type: none"> 1. Exact phrase(s) 2. Adjacent terms 3. Terms proximally located (e.g., on same page) 4. Single terms 	
RST –L9	1
If fields are searchable, weight the following fields heavily in determining relevance: <ol style="list-style-type: none"> 1. Surname 2. Location 3. Date 	
RST –L10	1
Select the number of results to be displayed for a basic search; include options for 10, 20, 25, and 'all' results	

RST –L11	
Clicking on a thumbnail of <u>photograph</u> results in a larger image being displayed	
RST –L12	1
[NOTE: No single preference established. ⁶] Clicking on a thumbnail of a <u>book</u> or <u>journal cover</u> : <ul style="list-style-type: none"> • Displays page where first ‘hit’ is located and includes navigational features (as in Google Books) • Displays a larger image and includes navigational features 	
RST –L13	1
Clicking on the ‘title’ of <u>photograph</u> results in a larger version with additional information about it	
RST –L14	1
[NOTE: No single preference established. ⁷] Clicking on the ‘title’ of a <u>book</u> or <u>journal</u> : <ul style="list-style-type: none"> • Displays page where first ‘hit’ is located and includes navigational features (as in Google Books) • Displays first page and includes navigational features • Displays the Table of Contents, if the object has one, and includes navigational features 	
RST –L15	1
Limit by any field in the record that is displayed with an object: currently title, date, and creator	
RST –L16	1
Option to eliminate display of thumbnails	
RST –L17	1
Add location field; in particular include Texas County and if possible, include the township	
RST –L18	2
Add collection field	
RST –L19	1
Include some value for all fields; no blank values for fields	
RST –L20	1
If date for an object is not known, include some value, possibly ‘nd’; possibly date photographs by the photographer’s life span	
RST –L21	1
For objects that have the same title, or objects that are part of a series, like Collin Chronicles or STIRPES or Laws of Texas, include only one icon in the search results with a list of the specific volumes	

⁶ It seems that the goal of searching is to find hits. So, displaying the page containing the first hit does seem like the top priority.

⁷ Ibid.

RST –L22	1
Highlight search terms in search results if possible	
RST –L23	1
Clicking on 'hits in text' brings user to the first hit and includes features to: <ol style="list-style-type: none"> 1. Navigate between hits: next, previous, first , last 2. Browse the object Note: If do not indicate 'hits in text', then must decide how user will navigate hits	
RST –L24	1
Display current search terms	
RST –L25	2
Display object size and download time	
RST –L26	2
Access search history; re-run searches from history	
RST –L27	2
Refine current search; possibly by link to search screen with current parameters	
RST –L28	1
Display object type; use caution in overly repetitive display of icons for object types	
RST –L29	1
Display date object was last modified, which initially would be the date added to collection	
RST –L30	2
Search within search results (e.g., for a town within results for a county) (See NOTES.)	
RST –L31	1
Include ready access to the Index for any object that has an Index; provide this access from search results and object display pages	
RST –L32	2
Ability to easily navigate to a display of all the volumes within a title or all the volumes within a collection or series (e.g., the Collin Chronicles)	
RST –L33	2
Ability to view Table of Contents or Index for any volume within a collection or series (e.g., the Collin Chronicles)	
RST –L34	1
Include navigational feature at both the top and bottom of all search result pages	

RST –L35	1
Print search results	

NOTES:

- Participants often select the highest possible number of records to display in search results; like to quickly scan search results; one even suggested 200 records was OK
- Displaying both the range of results in the current display and the total number of results is a desirable feature (e.g., 1-10 or 95)
- Most agree that the Portal's materials are of high quality. Some materials, particularly historical materials, are of value to genealogists. Materials increase in value if they can only reasonably be accessed online, for example, because of the distant location of source materials.
- Only a few are familiar with RSS. Most were not certain how they would use it.
- 'Title' and 'creator' are not important in determining relevance for genealogists.
- One person found sorting by date (oldest) helpful in quickly discovering items of interest
- Displaying 'date' and 'creator' fields containing no values can elicit a question in peoples' minds about the quality of the information; a few preferred to omit empty fields from the display
- A blank 'date' element in the display suggests that 'date' was not included in a search; dates are a key search parameter for genealogists; it is very important to populate this metadata element
- Highlighting search terms where they appear in the metadata displayed in the list view of the search results is desirable; one person understood that it seemed unlikely that there would be many matches in that brief display
- The primary goal of searching is to find objects containing search terms of interest
 - Design navigation to easily display terms found in objects: Search → Search Results (with number of hits displayed) → Display of first hit
 - "The most information in the least amount of clicks."
 - "My pet peeve with web sites is if you have to click through more than three screens to get to the end result. It's one too many."
- There is no need for the ability to 'search within search results' if the advanced search screen has the necessary features to limit searches (e.g., searching using two exact phrases and searching by name, location, and date range).
- JSTOR's navigation to volumes of a title was offered as a good example of this feature
- List view is useful to scan results for clues in order to refine search and to locate a previous result by remembered location on list

Search Results - Grid

Search Results [RST -G]

RST –G1	1
Limit fields displayed in order to maximize number of thumbnails displayed; priority field to add: number of hits; candidate to remove: ‘creator’	
RST –G2	1
Visually indicate the relevance of search results (e.g., a bar containing filled or dimmed boxes or stars); include visual indication of the direction of relevance, top to bottom versus left to right (e.g., arrows)	
RST -G3	1
Highlight search terms in search results	
RST –G4	1
Omit metadata element name for object when value is empty	
RST –G5	1
Select number of objects to display; include values for 50 and 100 objects	
RST –G6	1
Print search results	
RST –G7	1
Option to print as ‘list view’; option to exclude thumbnails	
RST –G8	2
Save all or selected objects in search results for later use; combine search result sets, for example, previously saved set with current set	

NOTES:

- Grid display is better suited for some types of objects, particularly photographs and maps
- List view useful for more in-depth review of results
- Most have a preference for list view; however, many prefer grid view for particular tasks:
 - quickly reviewing a large number of objects, in particular photographs
 - returning to Portal to look for a known object
 - discovery of object in a familiar series of documents
- Issues involved in grid view include: load time, monitor size, visual impairment
- “I think I would prefer the list but I would prefer the list to be visually laid out in a much nicer layout.”
 - Consider a table layout for search results with clickable headings to sort the results

- Enables quick scanning of results, which is important for many
 - Include critical information needed to evaluate objects or else the time saved being able to scan a large number of objects will be lost in trial-and-error viewing
- Generally, the fields to include are the same as those in list view; however, participants suggested that the metadata to display along with objects in search results is related to the object type and the search results view (list or grid)
 - Date and location seem important for all objects
 - People and place names are important for images: photos and maps
- For quickly reviewing maps, photographs, and possibly finding familiar objects, there seems to be a preference for more objects to be displayed with limited metadata
 - “So, everything would come off except the title, I can get the other stuff by going back in the list view, if I need the rest of the stuff.”
- Saving selected search results to create one’s own ‘collection’ is of interest to some; examples of this are ancestry.com’s ‘shoebox’ and the commonly used ‘shopping cart’

Metadata

Metadata [MDT]

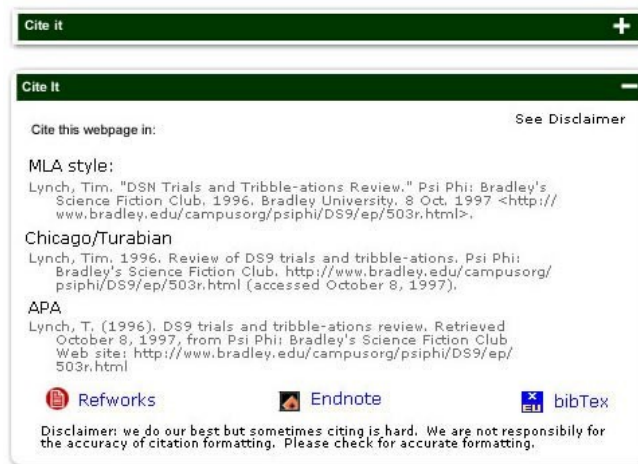
MDT1	1
Include some value for 'date' field	
MDT2	1
Format for printing; default to landscape when more suitable to object; use only one page for metadata; simple text format preferable to tables	
MDT3	1
Test print format of metadata record on these browsers: Internet Explorer, Firefox, Safari; Alert users if one of these three browsers is not supported	
MDT4	1
Include citation for objects; minimum elements 'location' (e.g. permalink) and 'date accessed'	
MDT5	1
Include object's citation when printed	
MDT6	1
Include a clickable 'report errors' feature	
MDT7	2
Clicking 'more info' displays full metadata record; no intermediate step between limited search results display and full record display	
MDT8	2
Include location information; e.g., MAPSCO location; link to map application for institution location, historical marker location, other appropriate locations	
MDT9	1
Use accepted conventions for linking to locations external to the Portal, i.e., mimic the way this is done on leading Web sites	
MDT10	1
Open linked content in new window or tab	
MDT11	1
Provide users with citations in two formats: Chicago Manual style and Elizabeth Shown Mills style guide	
MDT12	1
Inform users of what citation standard(s) Portal provides	

MDT13	1
Display copyright information; include whom to contact for permission to publish	
MDT14	2
Search place names that are commonly known or used but may not be actual cities, towns, or townships or may be defunct cities and towns	
MDT15	1
Include a clickable 'comments' feature	

NOTES

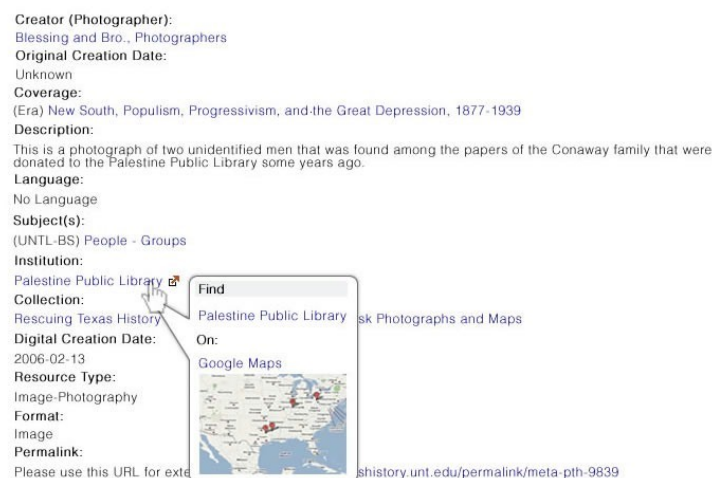
- Size of thumbnail on screen in metadata record display is fine
- Expected to be able to download photographs by right-mouse clicking
- Citation
 - Providing citations is useful and genealogists are moving to standardize their citations
 - Need metadata elements in user-friendly version; many want to cut and paste information of interest; most prefer not to have to remove information from tables in another application before they can paste into their genealogy files/applications
 - Critical citation elements: URL [permalink] and date viewed; other elements are important to some people some of the time
 - Available in a printer-friendly version
 - Some might prefer to have all of the descriptive metadata downloaded with an object. It may be that they are more serious, experienced researchers and are used to creating their own citations from the type of information in the Portal's metadata display. They did recognize that formatting citations for users in the two common styles would be of value.
 - Standard(s)
 - Include location of source and when accessed; 'Handbook of Texas' does this
 - Elizabeth Shown Mill's "Evidence Explained" is the citation standard reference for genealogists
 - Many use Chicago style
- Have no desire to edit metadata information directly; quality issue involved; would like to submit error reports and identify people in photographs
- Only one person had heard of Creative Commons
- There was some interest in having location metadata include defunct Texas cities and towns that were identified from within documents or incorporated from existing lists, possibly from Rootsweb or the Handbook of Texas Online or another website.
- One participant suggested adding a standard footer to all pages in the Portal that includes a key to icons, for example, the icon for a hyperlink that accesses content external to the Portal or a link to download Adobe Reader. Another thought using commonly used conventions for such

things was preferable to adding footers. It was understood that some people will not understand all commonly used icons and that accommodating the range of users is important.



- The 'cite it' prototype widget above is on target in terms of offering citations. In terms of exporting citations, no citation application was identified. Biggest need appears to be the ability to easily export a simple text version. It might be of interest to see what type of import capability commonly used genealogy application software supports.

- The following prototype captures some features participants discussed as desirable: using standard icon for external link and using Google Maps to locate institutions



Object Navigation

Object Navigation [NAV]

NAV1	1
Include 'return to results' link on object display pages, including each page of a multi-page object	
NAV2	1
Display with object: names, location, date of the item, number of annotations, link to comments; NOTE: Split opinions on displaying name of institution; if displayed, do not superimpose institution name on object	
NAV3	1
For display of photographs: When available, include names of people under photograph; title is not important	
NAV4	1
Include search terms and highlight their occurrence on object display pages	
NAV5	1
Use familiar image navigational controls, for example, 'hand' and 'magnifying glass' icons	
NAV6	1
Zoom in and out of images	
NAV7	1
Rotate images	
NAV8	2
Print locally exactly what is displayed as a result of zooming in and navigating an image	
NAV9	2
Include options to move navigational controls to the side of image	
NAV10	1
Navigate to sections of multi-page objects: contents and index	
NAV11	1
If identified in source material, then have navigational features identify: <ul style="list-style-type: none"> • front matter with labels, such as 'title page' 'table of contents' • front matter page numerals, such as 'i, ii, iii, iv' • Index 	

NAV12	1
Identify pages of a multi-page object that have no page numbers in some descriptive manner; for example: cover page, contents, and index	
NAV13	1
Identify Index with both the label 'index' and its page number for ease of locating	
NAV14	1
Navigate to specific page numbers in multi-page objects	
NAV15	1
Navigate multi-page objects using page numbers at top and bottom of display, versus the current drop-down menu; consider navigation strip used by footnote.com	
NAV16	2
Navigate multi-page objects using arrow keys	
NAV17	1
Navigate quickly between hits in multi-page objects: <ol style="list-style-type: none"> 1. Using hits: start with 'hits in text' in search results; leads to "first hit"; each page includes "next hit" "previous hit" features 2. Using browser's 'find in page' (control F) feature 3. On-screen list of linked page numbers where hits are located 	
NAV18 ⁸	1
Browse multi-page objects	
NAV19	1
Navigate documents by clicking on left and right edges; visually indicate this is possible	
NAV20	1
Highlight hits (for search terms) in object pages	
NAV21	1
Use 'page' and not 'sequence' as a navigational label for pages in multi-page objects	
NAV22	2
Include thumbnail view of all pages in multi-page objects: <ul style="list-style-type: none"> • Indicate which pages have hits • Open pages in new windows or tabs • Include "return to view of all pages" feature on individual page displays 	

⁸ Additional review feedback from a key user suggested that the ability to navigate to pages within a book from a hyperlinked index would be desirable.

NAV23	1
On mouse-over, display annotations	
NAV24	2
Search within multi-page objects	
NAV25	2
If a multi-page object is organized alphabetically, additionally allow page access by a alpha list	
NAV26	1
Indicate the image sizes available for download	

NOTES

- Repeat enough metadata in object display to “refresh” user’s memory. For photograph containing people:
 - “You want: picture, names, place, date -- that's it. Everything else - even that title - can go bye-bye. You're more interested in the names of people, the date, and the place. It's that information. And then, if that is relevant to you, then you would go back to view the description and get all the [other information] and download that, or whatever, as a citation. And the library that had it - that would come up there [in the description].”
- Size of the viewable image did not seem too material; in the manner that printing options sometimes have a ‘print to page’, have a viewing space option of ‘fit to screen’
- Zooming in to view the detail in maps and photographs is important and preferable to viewing static images in small and larger sizes, which is not sufficient
- Suggested rotating images might be important for printing
- Rotating maps would be helpful if the text is upside down or sideways “just so you could read it better”
- Impressed with the excellent quality of digitization: “I mean it was great.” “Because when he zoomed in, [it] got bigger and bigger, [and] he could read the text and still move it around.”
- Selecting an object from search results should take user directly to the page containing the first hit. Optionally, after selecting an object from the search results, hits should be highlighted in some way; it should be very obvious which pages have hits. For example, on the existing drop-down menus, pages with hits could be highlighted.
 - “The thing is getting to your information as quickly as possible.”
- One person understood that digitization involved exact replication of original source material, including blank pages and pages with no numbers; however, most found it confusing that sequence numbers were given to blank pages or pages without numbers. Additionally, users found it hard to find pages as listed in Indexes.

- “Actually, one page number I looked up was actually about 30 pages difference in the sequence.”
- General agreement that it is important to identify the Index by label and page number. Ensure the page number for the Index as listed in the drop-down menu matches page number in the object. “Genealogists, when they go out and pull a book off the shelf, the first place they look is the back of the book for the Index.” “And if your ancestor's not there, it goes back on the shelf.”
- Participants see value in using page numbers to jump to certain pages, for example, a known page reference, perhaps found in the Table of Contents
- Navigating multi-page documents by clicking on sides for forward and reverse paging is a desirable feature; this could be made more obvious
- Zoom feature if quite important; seeing two sizes of image is of limited use
- Some like page navigation via sequence/page drop down box:
 - Handy for finding pages listed in the Index for a document
 - If document contains an alphabetical listing, then can use to guess at location
- A few liked the thumbnail view of all pages; highlight in some manner which pages contain hits; need ability to return to this view after a thumbnail was selected for viewing; need to open pages in new windows or tabs
- Take a look at how footnote.com handles navigating through multi-page objects
 - Uses a ribbon navigation at the bottom of object display; the ribbon contains thumbnails of the other objects or pages in sequence
 - Enables movement among a group of pages
 - Examples: a multipage letter, a set of photographs, a series of pension applications
- Display of all ‘hits-in-text’ for an object:
 - Immediate positive response to this slide depicting thumbnail images of pages that contain hits with search term(s) bolded in text excerpted from page
 - Seems acceptable navigation is :
Search Results → Select ‘hits-in-page → View list of pages with hits indicated → Select a page that opens in new window or tab → Option to browse from any page
- One person suggested Portal track how many times objects are viewed:
 - Would seem of interest to institutions “because they're looking to justify budgets as well as you guys are”
 - Would be of interest to individual user in terms of identifying an institution user might like to travel to in order to view their holdings

Help

Help [HLP]

HLP-1	1
Provide explanations for terms on simple search drop-down menu (fulltext, metadata, title, subject, creator)	
HLP-2	1
Provide contextual help for terms, labels, or entry boxes; possibly include a clickable 'what's this' indication or, on mouse-over, display very brief definitions; particularly needed for unfamiliar terms such as permalink and for unclear terms such as creator, contributor, publisher, and institution	
HLP-3	1
In the basic search box, explain how to do advanced searches (i.e., minus sign, quotes, etc.)	
HLP-4	1
Provide instruction for how to use advanced search function; in particular for Boolean searches involving more than one exact phrase or a term and an exact phrase; possibly include explanations under search boxes	
HLP-5	1
Provide guidelines for comment feature	

NOTES:

- Specific help should not be embedded in a long narrative nor should it open in a separate window that requires users to leave the page they are working in to read the help information.
- "The hovering thing drives me nuts and, if it's done, it needs to be done with restraint. If you hover and you just give me the alt-text, which is just a very small amount of text, that's a very excellent thing."
- One participant was adamant that pop-up text boxes of any size were unacceptable. This strong view combined with many who preferred to reference descriptive information at a variety of junctures, and possibly capture the information, might suggest the use of 'light boxes' be avoided.

New Functions

This section identifies the requirements for new functions for the Portal. At the end of the section, participants' rankings for several new functions are reported.

Function Definitions

Obtain [OBT]

This function would allow users to download and print objects, along with their citations and metadata. Optionally users could select to download, print, or save search results, metadata records, citations, or objects. Users would also be able to order high resolution prints of images.

Comment [CMT]

This would allow users to submit error reports and comments. Only registered users could add comments, view others' comments and communicate with other registered users.

Register [REG]

This would be a simple registration process required of users if they wish to add comments, view others' comments, communicate with other registered users, or create lists.

Create Lists [LST]

This would allow registered users to create and merge search result list(s) and/or lists of selected objects.

View Map [MAP]

This would allow users to view search results on a map of Texas counties. The map would visually indicate the variance in the number of hits for each county. Additionally, users could submit a request to locate a particular county on a Texas map or to locate counties in which a given city name is located.

View Timeline [TML]

This would allow users to view search results on a timeline. The default time interval would be a function of the date range of the objects in a search result set. Optionally, users could modify the time interval as well as specify the interval for grouping results, such as by month, year, decade, etc.

Rate Historical Significance [SIG]

This would allow users to rate the historical significance of objects in the Portal.

NOTE: This function was not desired by participants, hence no requirements are provided.

Requirements Format

The New Functions that follow contain all the requirements identified for the redesign of the Portal interface. They are listed here in their entirety; however, it may not be feasible for each requirement to actually be developed.

Each functional area (e.g., Basic Search) includes a set of requirements. Each requirement has a unique ID, an assigned Priority (1=required; 2=optional), and a description. [Note: Priorities are subject to change.]

ID	Priority
Description	

1. Notes are provided at the end of each set of functional requirements. These largely illustrate focus group participants' ideas and preferences.
2. Websites referenced by participants in the course of the focus group discussions are listed in Appendix C. The specific features mentioned for each website are listed.
3. Some new features were discussed but no requirements were identified. For these features only notes are provided.
4. Where appropriate, images used in the group discussions are included.

Obtain

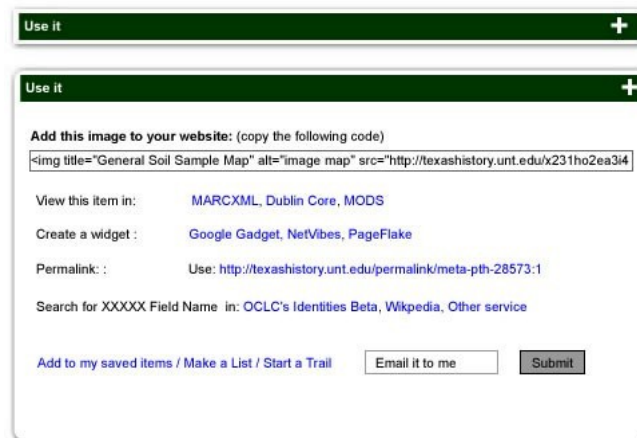
Obtain [OBT]

OBT-1	1
Download object; include ability to do this via 'right mouse click' as well as by clicking on a download link	
OBT-2	2
Download copyright information with objects	
OBT-3	1
Download citation with objects	
OBT-4	1
Download citation; separate from object	
OBT-5	1
Download metadata record	
OBT-6	1
Include a 'download link' with options to allow users to select object format and type for download: <ul style="list-style-type: none"> • Select image size for download; include a high resolution option • Select image format for download; include common options (jpeg, tiff, PDF) Default download size and format should be optimized for slower speed Internet connections	
OBT-7	1
Print object	
OBT-8	1
Print citation	
OBT-9	1
Print metadata record formatted as text file	
OBT-10	2
Print image as displayed on the screen after user manipulates image size	
OBT-11	1
Exclude image navigation controls in print format	
OBT-12	1
Exclude image annotations in print format	
OBT-13	2
Order reprint	

OBT-14	2
Purchase reprint	

NOTES

- Genealogists want to capture and print objects of interest to their research. They also want to document their sources. Depending on their computer skills, they accomplish this via copying and then using the ‘pasting special’ feature in local applications or by other means. Some simply print hard copies. The following would be useful to genealogists:
 - Printer-friendly objects with critical descriptive metadata, the permalink, and the date accessed or printed.
 - Image download capability, also including critical descriptive metadata, the permalink, and the date accessed/downloaded.
 - General agreement that users want to download images
 - “Say one of those people in that photo was one of your ancestors, you would want to be able to add that to your collection - that photo.”
 - Recommended example of format/size options: Bureau of Land Management
 - US land records: jpeg, small TIF, large TIF, PDF
 - <http://www.glorerecords.blm.gov>
 - For metadata record, provide save/export feature analogous to library furnished records:
 - Either short or long version
 - Text file that is easy to manipulate and import into any application, for example, WORD, Word Perfect
 - Ability to print or capture the object with the minimal/key descriptive metadata elements would be a particular value to naïve computer users who will likely just print the web page from their browser because they do not have skills to copy and paste the desirable metadata fields for documentation (citation)
 - There is a good deal of interest in and a willingness to pay for high quality print images; images of one’s ancestors are of particular interest; photographs and maps are good candidates
 - Estimate of amount willing to pay: \$10.00 - \$15.00
 - Suggest researching other libraries and services to establish reasonable rate
 - Thought maps could be expensive
 - Example of unreasonable cost: EllisIsland.org – copies of ship records
 - Genealogists are traditionally retired and have limited disposable income
-
- The following prototype widget might be a model for the Obtain function (Get it), including options for printing, ordering prints, adding to a shoebox, downloading, etc.

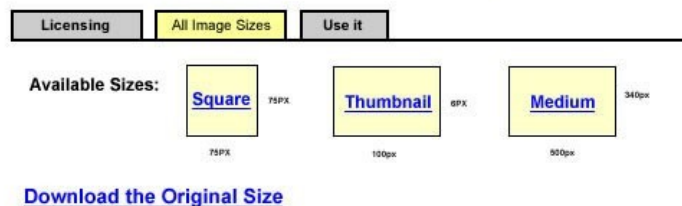


- The following prototype display captures users' interest in obtaining images in various sizes. Also the prominence of the download link matches the need for an obvious download capability for less experienced users, who would likely desire an image optimized for a slower download connection.

Dinner honoring the Vice-President of the United States by his fellow citizens of Texas on the occasion of the visit to Washington of the Goodwill Special Train, National Press Club



This image has notes. [Mouse over the image](#) to see them or [login](#) to add your own.



Comment

Comment [CMT]

Image from Discussion

Comments:

Could the person on the left be uncle Ben?

2/14/07 whicks

Yes, It is.

2/16/07 whicks

Add Comment



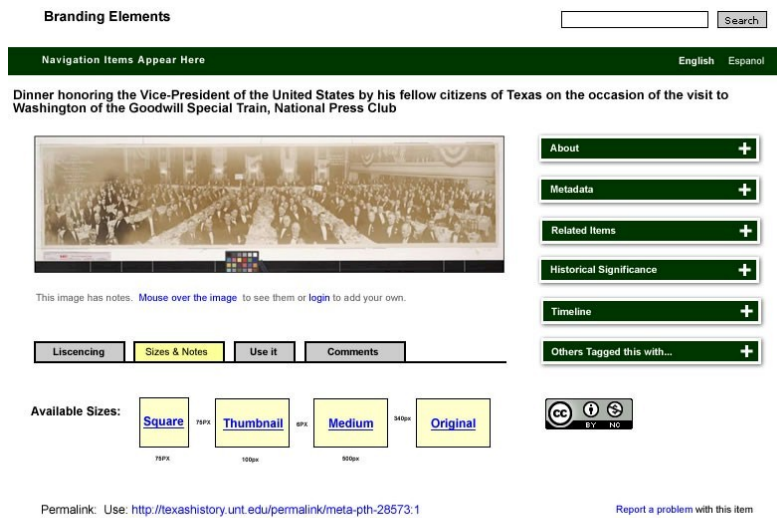
CMT-1	1
Add comment	
CMT-2	1
Read comment(s)	
CMT-3	1
Report errors; different feature than commenting	
CMT-4	1
Communicate with another person regarding their comment	
CMT-5	1
Provide guidance to users for types of comments desired and any evidence or proof needed	
CMT-6	1
Portal staff should monitor/review comments prior to publicly posting	

NOTES

- One participant cautions: keep the Portal easy to use for less experienced users

- Participants made a distinction between adding comments and reporting errors. The former, with monitoring, allows for connections among users, while the latter informs UNT directly of mistakes that they can review for correction
- Will need to monitor for quality control: “You're gonna get annotations and notes that aren't right” . . . “and some weirdies”
- Most do not want to page through a great number of relatively insubstantial comments:
 - “You don't want to be reading through 430 comments that says: "Great picture!" ""That's really great!" or "I was at that picnic in 1961 and I didn't get my picture taken.”
- Suggest users need to offer proof to substantiate their identifications/additions/corrections/comments
 - “They have to be able to prove that it's - what the information they're giving for correction is correct information.”
 - Simply adding comments without “proof” is not of value
- Genealogists are familiar with two commenting sites: RootsWeb.com and footnote .com
 - Rootsweb ‘post-em notes’: Can add post-em notes to objects; users see that an object has notes and can elect to view them or not
 - Footnote ‘annotations’: Users ‘box in” text on hard-to-read documents and add ‘annotations’ to suggest the word(s) or to add comments about the person/name/etc.
 - The number of annotations is indicated in the record for an object
 - Only visible on mouse-over
 - Not printed with objects
- One person wondered if the Portal was looking to become a social networking application and indicated that, if that was the goal, then comments would be dictated by social network application practices/features

- In the prototype display below there is a 'report a problem' link (bottom right) that matches what participants wanted.



Register

Register [REG]

REG-1	1
Register user	
REG-2	1
Create user profile	
REG-3	1
Modify user profile	
REG-4	1
De-activate user profile	

NOTES

- While a few are adamant that they would never register, generally everyone is OK with a simple registration system that is required in order for a user to add comments or create personal lists
 - Require email address or username only
 - No password
 - Ability to very easily change email address within a 'user profile'
- They have experience with registration being required at other sites genealogists use: RootsWeb and footnote require registration in order to add comments
 - "It's a quality control that you're not just out there adding stuff. And it's also a great feature because then if I go in and see somebody's added a footnote, then I might contact that person -uh- for more information or say "What! My records don't show this." And you could communicate back and forth."
- Privacy issues are addressed in different ways by different websites:
 - Some allow communication among users only via email; email address is provided for users to contact one another; name and address are not provided
 - Ancestry.com offers users the option to have others communicate with them directly via email or more anonymously through ancestry's server
- One wanted users to optionally include their physical address in their profile because in their recent experience their physical address was more enduring than their email address, which service providers can change. Another participant advised that users should get an email address not connected to their service provider (for example, from Yahoo or Google) and use that for registration.

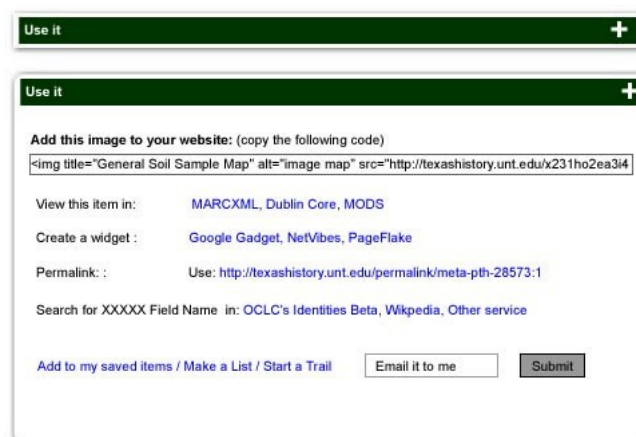
Create Lists

Create Lists [LST]

LST-1	2
Create list	
LST-2	2
Print list	
LST-3	2
Combine lists	

NOTES

- Creating lists was specifically discussed in one group; most do not use this feature on other websites; one acknowledged lists were useful some researchers
 - Another person would like this feature and suggested that she and other researchers are often interrupted during their research sessions and lists are an efficient way to resume work
 - One notification service she used as an example was JSTOR. She liked the ability to set up a personal profile that allowed her to get email notification of new articles/resources that matched certain criteria (e.g., articles with keyword 'genealogy')
 - On a related topic, participants indicated that they bring lists of objects with them when they travel to libraries and other locations to do research
-
- The bottom of the prototype widget below illustrates the 'make a list' feature



Map View

Map View [MAP]

Image from Discussion



MAP-1	1
Display results by county; provide visual indication of frequency of hits	
MAP-2	1
Show county location(s) when user inputs county name or city name	

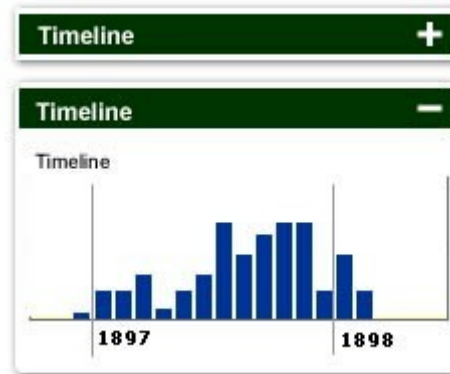
NOTES

- Several thought a map view of search results by county would be useful, for example, in searching for a name when a county of residence was unknown
- Some suggested that a map would help in identifying counties:
 - To identify the geographical location of counties within the state
 - To identify the county in which a city was located
- One thought the map might quickly become “overloaded”, in particular for commonly found words in Texas, like Bowie (i.e., most of the counties would have results)

Timeline View

Timeline View [TML]

Image from Discussion



TML-1	1
Modify date range; default date range is from search result	
TML-2	2
Select time scale for bars; month, year, decade, etc.	
TML-3	1
Display results by selecting one or more bars; also display as a 'right-mouse' feature	
TML-4	1
Open results in new browser window or tab	

NOTES

- Clicking on the bars in the timeline to view results appears to be intuitive and desirable to many
- This view addresses primary interest of genealogists in date ranges
 - "Because you may be looking for a particular time period."
- One wondered if a user could select multiple 'bars' and display combined results
- Have results associated with a bar open in a new window or a new tab
- Include functionality to right-mouse click on a bar and display the results associated with it in a new window

Rating Historical Significance

Rating Historical Significance [SIG]

Image from Discussion



NOTES

- Participants seemed to take a narrow view of rating significance and to see it mostly in terms of finding the picture of their ancestor(s). Genealogical research deals with individual family research and the participants did not get beyond that scope to see how their significance ratings of objects could be of value to other genealogists. They stayed focused on 'the picture of my ancestor' and could see that such photos might be of interest to someone researching the same family but not to others.
- One wondered: Significance "in relation to what?"
 - When it was suggested this could be a rating of historical significance, they had the same issue: Historical significance "in relation to what?"
- Most agreed that one person's rating of significance would not matter to other people
 - "Because what's important to us is not going to be important to her."
 - "If it's a picture of our lost great-great-grandfather Abe that rates very high. If it's somebody else's great grandfather, forget it. I could care less about that."
- One thought rating objects was akin to a "popularity contest" and this did not characterize genealogical research

Ranking of New Functions

Participants in the focus groups were asked to indicate, by marking “yes”, “no”, or “don’t know”, if they would like the Portal to Texas History to allow users to have each of the functions listed in Table 4. The results were tabulated and the functions were ranked by the percentage of users indicating “yes” for each function. Table 4 lists the functions in rank order.

Function	RANK
	<i>N</i> =19
Save items (images, maps, letters, etc.)	1
Save search results	2
Access personal search history for an active session	3
Add items to personal “favorites”	4
Comment on items	4
Build and maintain lists of objects	6
Annotate images (like Flickr)	7
Comment on comments written by others	8
Receive RSS feeds of search results	9
Rate items on a historically significant scale	10

Table 4. Ranks for New Functions

The results of the ranking exercise suggest the relative interest users have in one additional feature that was not discussed in the focus groups: Adding to Favorites. This appears to be of some interest to users. Since it was not discussed, no additional details can be included.

New Display Options

This section reports the discussion of the four prototype screen displays listed below. Participants' rankings of five displays for navigating objects are included at the end of the section.

Search -Facetted [SCH-F]

This display provides access to search results based on facets. Type of object seems like a good choice for a facet. This needs more discussion.

Search Results – New View [RST-NV]

This display presents a new view of search results, including icons for common functions.

Object - Metadata Dominant Display [OMD]

These displays present two views of objects and their metadata, with the object being dominant in one view and the metadata being dominant in the other view.

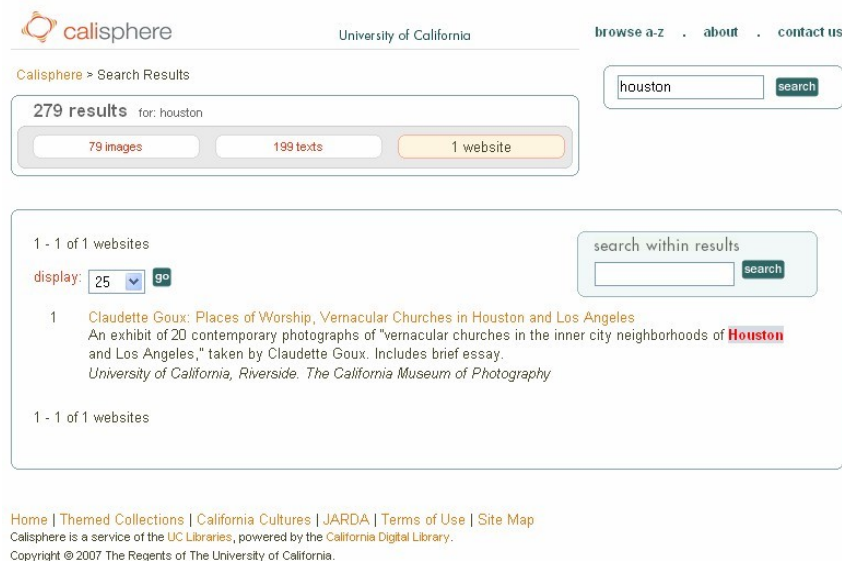
Multi-Page Object – Sidebar Navigation [NAV-S]

This display presents a new navigational feature for multi-page objects involving a sidebar containing thumbnail images of all pages in an object.

Search - Facetted

Search: Facetted [SCH-F]

Image from Discussion



In the discussion, participants were shown the screen image above of search results from Callisphere. The 279 results were sorted into 3 categories by type: images, text, and websites.

Participants were also shown this list of descriptive metadata elements:

- Place
- Creation Date
- Type/Format
- Collection
- Institution
- Creator/Contributor/Publisher
- Subject

They were asked to consider how useful these elements would be as possible facets for grouping their search results. Table 5 lists the descriptive elements participants identified as important for genealogists. These elements echo priorities previously identified for searching the Portal, for limiting search results, and for the display of object metadata. The four most important elements are: name, location, date, and type.

Name <ul style="list-style-type: none"> • Surname • Given name
Location <ul style="list-style-type: none"> • County • Town/township
Date <ul style="list-style-type: none"> • Date in Time • Date Last Modified
• Type
• Collection
• Institution
• Author
• Publisher
• Contributor
• Subject

Table 5. Important Descriptive Elements for Genealogists

Facetted search results were discussed following discussions of:

- what descriptive metadata information was important for genealogists
- what metadata fields they would like to search within
- What metadata fields they would like to use to sort their search results

This discussion was more of probe for their interest in facetted presentation of results and their take on what facets would be helpful to them in their research. Given the general lack of familiarity with facetted search, the discussion was fairly brief. Following are points made by participants.


- A few participants indicated facetted search results would be of interest to them
- Assuming a name search: group results by subject, place, type/format
- Both name, particularly surname, and location, particularly county and township, are important facets. Can you present separate results by surname and by location?
- One thought evaluating search results by each facet (in Table 5) might be useful
- A few thought 'type/format' was a very important facet. Type categories of interest:
 - Document
 - Book
 - Diary
 - Map
 - Picture
 - Photograph


- Author was mentioned by one participant and modified to also include compiler (as Author/Compiler)
- Location of facets
 - Across the top of the screen if only a few categories
 - A few preferred on the side, especially if there are more than 4 categories; One liked left, one right, and another did not care
- It is desirable to have the ability to turn off faceted presentation and revert to list view

Search Results – New View

Search Results – New View [RST-NV]

Image from Discussion



Results 1-20 of 200 results for "Hunting party" [Refine your search](#) | [Sort](#) [Relevance](#) 




Title: Hunting Trip

Description: Photograph (copy) show hunting party and its winnings

Institution: Star of the Republic Museum









Title: Map of Texas

Description: Map of Jefferson and surrounding counties

Institution: Star of the Republic Museum









Title: The Laws of Texas, 1882-1897 Vol 10


Description: Early laws of Texas comiled and arranged by H.P.N Gammel of Austin


Institution: Star of the Republic Museum







hunting AND party appear in multiple locations throughout this item.
[View results where they occurrence on the same page](#)

[Book View](#)

[View Object - Metadata](#)

[Images Sizes & Notes](#)

[Texas Map](#)

NOTES

- Most indicated they liked the icons and one said: "To me, it's more user-friendly."
- Indicate the number of hits in each object
- Replace 'metadata' with another term
 - 'Metadata' is too "technical and in terms of verbiage you want to be able to communicate with the broadest audience possible."
 - Suggested 'item information': "Because you're talking about the specifics of the item, the photo you're getting, when it was taken, where it was taken."

Object - Metadata Dominant Display

Object – Metadata Dominant Display [OMD]

Images from Discussion

General Soil map of Texas



About

Creator (Comiler): Carter, William T.
Publisher Name: Texas Agricultural Experiment Station
Coverage: (Place) United States - Texas
Description: Map displays principle soil groups in regions of Texas

[View Entire Record](#)

General Soil map of Texas

Creator (Compiler): Carter, William T. (William Thomas)
Creator (Author): Texas Agricultural Experiment Station.
Creator (Author): United States. Bureau of Chemistry and Soils.
Publisher Name: Texas Agricultural Experiment Station
Place of Publication: College Station, Tex.
Original Creation Date: 1931
Coverage: (Place) United States - Texas
(Era) New South, Populism, Progressivism, and the Great Depression, 1877-1939
(Era) The Texas Landscape
(Date) 1931
Description: Map displays principle soil series groups in regions of Texas.
Physical Description: 1 map : color ; 91 x 112 cm. ; scale 1 inch = 24 miles
Language: English
Subject(s): (LCSH) Soils -- Texas -- Maps.
(LCSH) Soil surveys -- Texas.
(UNTLL-BS) Agriculture
(UNTLL-BS) Texas Landscape and Nature - Geography and Maps
Keyword(s): soil surveys
More metadata



[View All Sizes](#)

NOTES

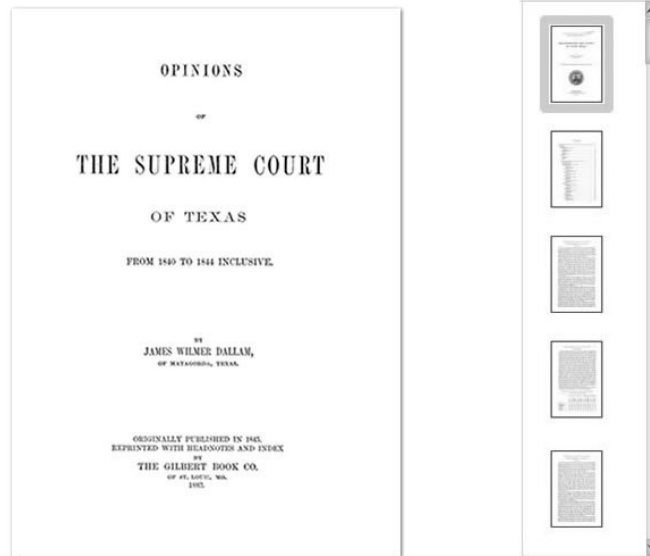
- The object dominant view could display the metadata dominant view when mouse rolled-over object

- Display of object with key metadata (names, location, date of the item, number of annotations, link to comments) seems to be the preference of most
 - “Metadata for most people is irrelevant. They want the object that they see [in their search results].”
 - One person reiterated that there should be only 2 steps to viewing objects:
 - Search → Search results → Image
 - Search → Search results → First hit in text

Multi-Page Object - Sidebar Navigation

Multi-Page Object – Sidebar Navigation [NAV-S]

Image from Discussion



NOTES

- One person had an immediate positive response to this type of navigation
 - “Adobe works this way and, again, because so many people have access to Adobe Reader, then there's no learning curve for them.”
- Need to have some indication of which pages have hits
- Others thought this view would “be great” for browsing a book; however, it would not work so well when user is looking for hits
 - “‘Cause you don't know what page you want to go to.”
 - “And those things [books] are huge.”

Ranking of Object Navigation Options

Participants in the focus groups were asked to rank the five options for object navigation included in Appendix B. The options incorporated several of the new functions discussed by the groups. The average rank for each option was calculated and used to determine final rankings. Table 6 lists the functions in rank order.

Rank	Average	Choice	Title
1	1.7	6.5	Tabs & Widgets
2	2.7	6.4	Tabs & Collapsed Menu
3	3.4	6.2	Collapsed Menu
4	3.5	6.1	Tabs
5	3.7	6.3	Widgets

Table 6. Rank of Object Navigation Options

Usability Issues

Search: Basic

- Lack of description about the Portal's resources on the initial search screen resulted in confusion regarding how to select an appropriate search limit term (fulltext, metadata, title, subject, creator)
- Inconsistent application of metadata for 'creator' makes discovery difficult
 - Example: "this is really difficult because you have letters, you know, historical letters written from a person who was a particular government official to another person who's a government official, and so sometimes they'll put it under his particular name and sometimes they'll put it under the official capacity which he wrote the letter."
- There was some general confusion regarding fulltext searches when a full name (e.g., Martin Varner) was entered in the basic search box. Does the Portal do a fulltext search using both names appearing adjacent to one another, whether or not the two names are enclosed in quotation marks? Some thought yes; others thought no; others were uncertain [Note: Users experience and related opinions might be based on whether their particular names actually appeared together in the Portal objects, versus the name or names only appearing separately.]
 - "It treats it as separate Boolean objects."
 - "It gives you the same thing. I searched for Martin Varner. It found all the Martins and all the Varners and a few Martin Varners."
- Rediscovery of a particular object by searching the 'title' field is successful only if the entire title is known, for example, if it was previously written down
- Searching for a town or community name and the county it is in, results in too many results not related to the specified town or community name. For example, searching for 'Mesquite, Dallas County' brings up a number of results related to Dallas or Dallas County but not related to the town of Mesquite.

Search: Advanced

- One person with medical issues related to wrist/hand tries/needs to use keyboard controls whenever possible versus a mouse. This is especially the case when using a laptop.
- Users are not certain what genealogical resources are on the Portal.
- One participant was not certain what drop down menu would allow a user to limit search to 'maps'; another knew this limiter was in 'type' drop-down menu
- Another was uncertain how to search for photographs of a prominent Texan

- It can take a long time for search results to load because of the thumbnails; this is especially annoying when search results contain many objects with the same thumbnail image, for example the STIRPES cover; the image was of no value to this user and the longer load time was annoying
- Expected both 'Collin Chronicles' and 'STIRPES' to be listed as collections; neither is in the collection drop-down menu on the advanced search page nor in the 'browse by collection' page

Browsing

- Two of the five browse categories allow searching: collection and contributor; the other three do not
- Browsing by 'eras', as listed in the Portal, is not very useful to some. The range of years is too large; thought problem was with whoever determined these.
 - "If you went to browse by era, if you clicked on browse by era, that was one thing that I found least helpful. Yeah, because like I said, they talked about 'era' being 1900 to 1939."
 - "For me, 'era' as it was defined by the designers there; it was browse by 'epic'."
- If the 'era' of interest is not listed, then users have to input a date range that covers the period in which the event/era occurred. However, the dates that include an historic event, like the Great Depression, World War I, or the Vietnam era, yield search results that do not relate to the event of interest.

Search Results: List View

- Specifically searching Gammel's Laws, it is not clear how to find a known volume and page from the resulting search results
- Date Field
 - Date format for an object (i.e., 1961-12) is confusing
 - "Now, a genealogist would say: "1961 – 2012."
- Getting to the appearance of search terms in objects: "What gets you to the results of the search?" [Note: The hits.]
 - Several expected to get there from 'more info' link
 - Most expected title and thumbnail to link to object's cover page, not to appearance of search terms in object
- Thumbnails
 - Not obvious that clicking on thumbnails brings user to pages that match search terms
 - One person had these problems with thumbnails, which she found 'distracting':
 - Take a long time to load when user advances to the next page of search results
 - In particular, thumbnails of cover pages for journals are "useless", and multiple displays of the same cover page appear to be quite annoying
 - Take up a lot of space; uses more paper to print

- Hits in Text
 - Search for a phrase in basic search with quotes yielded 1 result with a 'hits in text' link; this link led to page with hit. Search for the same phrase in the advanced search 'exact phrase' box yielded the same 1 result but without a 'hits in text' link. Selecting the 'more info' link and then repeating the search using the 'search within object' for the same phrase resulted in the page with the hit, which was the same page that resulted from the basic search using quotes.
 - Inconsistent display of 'Hits in text' results in tedious navigation to find search term within a document⁹
 - "It doesn't always say "view hits". Sometimes it just says "more info" in some of the books that are in there that have been digitized like the Grayson County Pioneer People. It doesn't take you to the hits. You have to scroll through 50 or 100 pages looking for what you're looking for." "If there's no index, you really have trouble finding your page in the document."
 - Why would objects be listed in search results without an indication of 'hits in text'? It seems that either there were hits in the text and this should be indicated in the search results or there weren't hits in the text and the object should not be included in the search results. "Well, if there're no hits, why are we even seeing it?"
 - Use of "hits" in Heritage Quest is problematic as well because each occurrence of any search term is considered a 'hit', which can result in a number of irrelevant hits.
 - Example: Searching for Sullivan and Mississippi returns hits for each term when the researcher is only interested in "Sullivans in Mississippi" and would like to see hits only when these two search terms are in proximity to each other, or at a minimum on the same page.
- There is no 'return to search results' feature on object pages; this causes users to hit browser back button and if too many pages were viewed, users simply opt to or have to redo their search
- When the display of objects from search results does not automatically open a new window, users are very frustrated:
 - Have to use the back button many times to return to search results
 - Unable to easily switch between search results and object display

⁹ Review feedback available from a key end user also indicated problems related to locating search terms within a book. Using the basic search feature, this individual had the desired item appear in search results but without any 'hits-in-text'. He assumed that a subsequent search within the book was required to locate appearances of his original search term. Additionally, this person found the location of the 'Search Inside' feature (on the metadata record display) to be "restrictive" and recommended that book object display pages include a 'Search Inside' feature on each page. Further, this individual suggested that the initial search term(s) should populate the 'Search Inside' box by default to enable easier identification of and navigation to hits within the book.

Search Results: Grid View

- Uncertainty regarding what grid view was: “I didn't really know what it was about”
- When data is missing in an object's record it raises questions. Participant could not quite “accept” that at least a publisher, creator, or date could not have been ascertained from the following:
 - “Well, on the Mineral Wells guide: Guide to what? Guide to genealogy research? Guide to the city? Guide to the restaurants?”
- Not clear how relevance is displayed: left to right or first column top-to-bottom
- If the critical information for evaluation of search results is not included with objects, user must select objects in search results and view their detailed information to evaluate them and then return to the results. This back-and-forth navigation is time-consuming and not desirable.
- Link for ‘hits-in-text’ is not displayed in grid view. This compounds the problem of how to get to the appearance of search terms in the objects.
- Visual layout could be improved:
 - color scheme
 - placement of “sort” feature on right makes it easy to overlook

Metadata

- One participant discovered that the value of ‘creator’ meant different things, for example ‘author’ or ‘agency’, for different objects in the Portal and concluded that whoever applied the metadata was unclear of the meaning of ‘creator’ or that it meant different things to the different people/organizations applying the metadata
- Not certain what categories that are of interest to genealogists are specified in metadata: Deeds? Marriages? Cemeteries?
- Printing a record that is presented after clicking ‘more info’ in search results posed problems for one person, although it is not clear whether her personal printer setup contributed to some of the problems:
 - Prints records on two pages; wastes space on page, which wastes paper
 - Includes a black border, which wastes space and paper
 - Descriptive metadata breaks the text into a column, which wastes space; better to have it formatted to continue across the page width
 - Text does not need to be double-spaced [It appeared to be so in the printout.]
- Quote: “I find that there's probably useful information in there that I might be interested in, but I've got to really struggle to read those labels and really struggle to find the one particular one that I'm interested in.” Suggestions from this participant:
 - Locate image of object on the left of display
 - Make ‘description’ bigger and more prominent
 - No need to use term ‘description’; it's obvious in context of display

- Display more detailed metadata with labels lower than the more prominent fields, like description
- One user was not aware that they could navigate to a collection from the metadata display for an object
- Copying metadata information from a table requires pasting it in another application and removing the table structure; not all users know this is possible or how to do it
- Some appear to be confused between Portal features and browser features, in particular when printing. For example, one thought the permalink did print with the object as well as the date it was accessed; this may have been caused by browser printing parameters.
- One person could not cut and paste objects
- Links in the metadata record:
 - Icon (box with arrow) is not known to all; some expected this to link to “more information or something”
 - Text links (navy text) were not obvious [This might be because of display on slide versus live Web.]
- One person was confused by the Era=1939-Present; thought this implied the photo was in 1939; http://texashistory.unt.edu/data/SUM2007/CCMH/folder_09/meta-ptb-34453.tkl
- Metadata for many photographs does not include names of people or dates, only locations are specified. Such photographs are of little or no value to genealogists
 - “It's nice to have photos but if you don't know who's in them, they don't do a lot of good.”

Object Navigation¹⁰

- Locating objects they previously downloaded is very problematic for new users:
 - “One of the biggest frustrations in teaching new users is they download stuff and then they never find it again.”
- Participant was confused about what to click in search results to get to the multi-page document display
 - Quote: “Is this [the object] what you get when you click on the 'more hits' or the 'more info'? Is this where it would go?”
- Could not get to a page listed in the Index of a multi-page document object.

¹⁰ A review of book navigation from a key user was available for this analysis. This user observed that the header and footer on the Portal's object display pages took up valuable vertical display space. He suggested that a much narrower header be designed and that the footer information be more concise or be removed to a 'help' feature.

- Are very interested in printing objects but, in the absence of an overt download feature , inexperienced users are thwarted:
 - Unable to cut-and-paste images
 - Using browser print feature with larger-sized images cuts off part of map
 - Not familiar with Window's right-mouse options
 - One participant wondered if Portal contents were "fixed" so they "couldn't be downloaded"
- A few more experienced persons use the 'control F' feature of browsers to navigate documents; this feature does not work with the documents in the Portal
- One person thought that users were supposed to type in page numbers in the sequence drop-down box, perhaps because in the example provided there was no value listed for sequence
 - It was not obvious to this person that the cover page they were viewing had no value in the sequence drop-down box
- For the document presented, the sequence drop-down menu had 4 blank values at the top; however, three of these pages did have numbers (i, ii, iii)
- When a user knows a specific page they want to view in a document and the 'sequencing' number does not match the actual 'page' number, there is a problem locating the specific page
- Flipping forward and backward in multi-page objects by clicking on the right and left edges of the pages is not an obvious page navigation option
- Inconsistent use of bolding and highlighting of search terms
 - http://texashistory.unt.edu/hits.tkl?meta_id=meta-ptb-29571&query=barclay
 - <http://texashistory.unt.edu/permalink/meta-ptb-29571:33?search=barclay>
- Apparent discrepancy and much confusion caused by use of 'page' and 'sequence' as labels for drop-down page numbers for multi-page objects:
 - <http://texashistory.unt.edu/permalink/meta-ptb-29408:1>
 - <http://texashistory.unt.edu/permalink/meta-ptb-29571:1>
- There is no 'return to search results' feature on object pages
- Photograph containing people: One person was unclear about what the 'title' being displayed was
 - "Is that the description of the 4-H club members?" "So, it's in the notes is where the description of this is at where the names of the three girls."
- One found navigating multi-page objects "terrible"
 - Sequence numbers don't match page numbers: "if you go to the index and you find something and you're trying to look at the page, you gotta check several pages because they don't match up."

- Blank pages have a sequence numbers: “Why have a blank page in there if there's nothin' on it?”
- Could see in the view of all pages that the backs of pictures that had no page numbers were given sequence numbers.
- And worst of all, there is no way to return to search results without either using the browser's back button, which can be very frustrating, or repeating the original search:
 - “You can't get back to where you started without going all the way back and startin' all over again.”
 - “Because even if you've looked at several pages and you go back to the front of that book and you go back, it's gonna take you to the page you looked at before. It won't take you back to the name of that book - the thumbnail sketch.”
- Using arrow keys to navigate multi-page documents is preferable for a person who wants/needs to limit their mouse use

Terminology Issues

Search: Basic

All three focus groups reported problems with two terms: creator and metadata. A few people had some problems with 'fulltext' and 'title'. These problems are summarized below.

Creator

- Creator, as a search term, is not clear: "Who's the creator? Why would I search for the creator?"
- Example: "Like, for example, a deed. Which person is it: Is it the county that created the deed? Is it the individual who wrote the deed, you know, the clerk? Is it the person that's the grantor or the grantee?"
- People recognize the term 'author' but are unclear about what 'creator' means. How is 'creator' different from 'author'? Is creator the creator of the digital object or the author of the work?
- Not certain who created the record, so, not certain what they would be searching by selecting 'creator'

Metadata

- General concurrence that metadata data is not clear to most genealogists. Although a few were familiar with the term, most were not.
- Intimidating to non-technical people and new computer users
- A few suggested using 'all categories' instead of metadata, to mean all the categories or elements in the metadata record; others thought this might not be meaningful
- Example of confusion:
 - "Well, most people think of metadata as keywords." "I don't think of metadata as keywords at all. Metadata is something that's attached to an image." One wondered how/if it is related to metatags in HTML?

Fulltext

- Seemed to be understood: "somewhere in the document"
- Some agreement regarding using 'keyword' to replace both 'fulltext' and 'metadata'; keyword is familiar to most people from other search sites

Title

- One participant noted that at times title is 'made up', as in photographs.

Search: Advanced

Stemming

- Not a term anyone was familiar with; needed to be explained

Browsing

Contributor - Institution

- 'Contributor' is used in main browse page; 'institution' is used in metadata display and in the advanced search screen; contributor and institution appear to be the same list

Era

- Not clear what this terms means on the Portal
- View 'eras' as generally related to significant historical events and not to specific data ranges.

Search Results: List View

Relevance

- As a term, has little or no meaning and begs the question: "relevance to what?"
- One person suggested that "Relevance might be 'number of occurrences' rather than relevance." Several agreed with this. One, with more knowledge of how relevance was determined, only agreed somewhat.

More-Info

- The meaning of 'more-info' is not intuitive. Some understood that it linked to more information about an object. Familiarity with the Portal seemed to be a determining factor in terms of understanding what 'more-info' implied.

More-Info & Hits in text

- Some people confuse the meaning of 'more-info' with 'hits-in-text'. A few thought 'more info' linked to the objects, specifically to the appearance of the search term(s) in objects (i.e., hits).

Metadata

Original Creation Date

- Original creation date is not clear. Does it refer to the date the object was created in its original format or the date when it was added to the digital library?

Institution

- One person wondered if 'institution' meant "the place that donated or has control of the original document"; if so, they thought 'contributor' would be a better term.

Creator

- There is confusion about the difference between 'creator', 'contributor', and 'publisher' versus 'institution'?"
- One thought 'author' could be 'creator'

Permalink

- Few were familiar with this term; view was that most genealogists would not know what it meant
 - "I think it's going to need more explanation. Like, "Please use this URL for external references", that makes sense to me but only because I already know what a permalink is. If I didn't know what it was, I wouldn't know why I would care, why I would use it, and that one sentence there isn't going to be enough to explain it to me."
- It is important, however, and should be included as part of the citation for each object and downloaded with the object.

Title

- 'Title' on photographs is confusing; do photographs, commonly, have titles? Perhaps the practice of adding descriptive titles to photographs should be eliminated or these made-up titles should not be included in search results and object displays for photographs.

Object Navigation**Sequence**

- Not certain what sequence means; Suggest 'page' is a better word
- Because all pages don't have a value in the sequence listing, one user thought that selecting a known page number would not bring them to that page ; rather, it would bring them to that page in the sequence of all the pages
- Expect page number listed in an Index to match the sequence number in both the drop-down menu and the number on the view of all pages in a book

Comment Log Analysis

The Portal to Texas History allows users to submit comments to Portal staff via a link on object metadata display pages. The comments are not available to other users. Users submitted 425 comments between October 13, 2005 and January 8, 2008. Content analysis classified the comments into two groups: comments and feedback. If a comment related to a specific object in the Portal, it was classified as a 'comment'. If a comment related to the Portal in general, it was classified as 'feedback'.

There were two exceptions to this classification: (1) all comments pointing out typos were classified as 'feedback' and (2) all comments regarding obtaining either copies or permission to use objects were classified as 'feedback'. Six of the 425 comments were classified in two categories resulting in a total of 432 comments. About 60 percent of the comments in the log were classified as comments and about 40 percent as feedback (Table 7).

Group	#	%
Comments	255	59%
Feedback	177	41%

Table 7. Comment Log Groups (N=432)

Comment Group

The comment group was classified into three categories: (1) pertaining to people depicted in an object ($n=130$; 30%); (2) pertaining to locations depicted in an object ($n=72$; 17%); and (3) pertaining to other object content, including descriptive metadata ($n=53$; 12%). Within each of these three categories, comments were further classified as errors, identifications, questions, or notes (Table 8).

As indicated by the number of comments related to the people and places depicted in objects, Portal users appear interested in their personal family histories. In particular users are interested in identifying people and locations and their comments often include dates as well. About half (51%) of comments in this group related to people depicted in objects and 28% related to locations. This interest echoes the importance of names, locations, and dates that emerged in the focus group discussions. Overall, comments identifying people in objects constituted the largest sub-category within this group (28%; $n=71$) and within the entire log (16%; $n=71$). Identifying locations depicted in objects ranked second within this group (17%; $n=17$).

Thank you for this priceless family photo! This man is my great great grandfather who served Denton as sheriff in 1856-58 & 66-67. If you could tell me anything about him, I would be very grateful! This is the first picture I have ever seen of him!!!!

Could this be William Andrew Hughes? I am looking for the above, who might be a relation. He is listed as being a resident of Galveston in 1926.

Photo [was] taken in 2006. It is the home of Mr. & Mrs. Robert Hunter. The house was built by Mr. Hunter's grandfather, Howard Layton Roberts in 1909.

The third ranked category in this group also related to people and consisted of notes, which often included personal stories containing details that would be of interest to genealogists researching a particular family's history.

Walker E Floyd was my eldest brother. His date of birth is 11-04-1930. He is now deceased. He was a welder by trade and a fiddle/violin/mandolin maker by "vocation". He was a fantastic fiddler and could have been a professional, if he had been so inclined. His first love, though, was his family; wife Sally Anne and four children: Perry Floyd, Karen Floyd Pratt, Phillip Floyd and Robbie Floyd Lobst.

Users also like to report errors they find in the descriptive metadata relative to objects. Across all three categories, 17% of the comments reported errors.

This is a picture of Patience (Pat) Stephenson, not Margaret Skousen. Margaret graduated in 1959. Pat graduated in the class of 1960.

I recently purchased an old home in Palestine, Texas and found 3 photos of it on this site; however I noticed that the physical address is incorrect. The actual address of the home is 703 S. Magnolia St.

Comments		#	% Comments	% Log
People	Errors	18	7%	4%
	Identifications	71	28%	16%
	Questions	13	5%	3%
	Notes	28	11%	6%
	Sub-total	130	51%	30%
Locations	Errors	7	3%	2%
	Identifications	44	17%	10%
	Questions	9	4%	2%
	Notes	12	5%	3%
	Sub-total	72	28%	17%
Contents	Errors	25	10%	6%
	Identifications	3	1%	1%
	Questions	9	4%	2%
	Notes	16	6%	4%
	Sub-total	53	21%	12%
	Total	255	100%	59%

Table 8. Classification of Comments

Feedback Group

The feedback group was classified into four categories: questions, errors, problems, and miscellaneous (Table 9). Questions were further classified as pertaining to the Portal in general or pertaining to obtaining either a copy of an object or permission to use an object.

Feedback	#	% Feedback	% Log
Questions			
General	54	31%	13%
Obtaining	27	15%	6%
Sub-total	81	46%	19%
Errors	41	23%	9%
Problems	28	16%	6%
Miscellaneous	27	15%	6%
Total	177	100%	41%

Table 9. Classification of Feedback

Almost half of the feedback were questions (46%; $n=81$) of either a general nature (31%) or related to obtaining objects or obtaining permission to use objects (15%). This interest in obtaining and using Portal objects, particularly pictures of ancestors, reflects the interest that emerged in the focus group discussions.

This photograph of Baldwin Parker is my grandfather, is it possible to get a copy of this photograph. This is one of the better photographs I have seen. If there is a charge for the copy please let me know, I would gladly pay.

Andrew Jackson Lewis is my great grandfather. How can I get a copy of this photograph?

However, most of the requests for copies and permission to use were not specifically related to genealogical research. Rather, the requests were from teachers and historical societies wanting to use objects in their courses and publications, and from individuals wanting copies of maps and posters.

The second largest category within the feedback group consisted of error reports (23%). Errors included obvious typos, as well as grammatical and spelling errors. These errors are different from the types of errors classified in the comments group, which related more to the content of the descriptive metadata.

Comments related to problems using the Portal ranked third in this group (16%). Several of these reported missing thumbnail images for objects. A few comments related problems using Gammel's Laws, echoing navigational problems expressed in the focus group discussions.

While I am grateful to have access to the full set of Gammel's Laws, I am extremely concerned about the awkward [sic] access to the volumes and the index. I risk acute nerve damage every time I try to access even [an] indexed page number, because the Gammel page number is not the image number. . . . Since this is a resource that I use VERY frequently, the loss of usability is most distressing.

The remaining comments in the feedback group were classified as ‘miscellaneous’ and covered a range of topics. Many users stated their thanks for the opportunity to access the Portal’s contents, including sentiments related to personal family histories.

Thank you for the wonderful journey of history in pictures of my family and home town of Van Horn, Texas.

My Dad was stationed at Randolph Field during World War II and your site provided me with a lot of information I didn't know. Thank you.

Conclusion

This report provides a foundation for the redesign of the interface to the Portal to Texas History. It documents the functional requirements identified in focus group discussions with genealogists and includes their issues related to usability and terminology. In the near term, the requirements will be further classified for development into one of four development priorities:

1. Portal Interface Release 1: Planned availability October 1, 2008
2. Portal Interface Release 2: Planned availability December 31, 2008
3. Consider for Future Releases (2009 and beyond)
4. No Development Planned

Analysis of Portal users' comments both echoes issues raised by focus group participants and demonstrates users' interests in contributing to the Portal. Planned features to enable error reporting and commenting are expected to match the interests of many users. These features will help promote the exchange of information related to identifying people, places, and events, as well as provide the opportunity for users to share their personal stories.

Because of their early participation in the Portal redesign effort, it is anticipated that family history researchers will enjoy increased benefits when using the Portal in the future. It is hoped that the Portal's resources will be more discoverable and that users will interact more easily with them. In turn, it is hoped that the Portal user community will discover increased value from the Portal's content by contributing their own comments and connecting to other users who share common ancestors or common historical interests.

Appendix A Participant Questionnaire

1. What is your gender? _____ Female _____ Male

2. What is your age group? (*check one*)

<input type="checkbox"/>	21 - 30	<input type="checkbox"/>	41 - 50	<input type="checkbox"/>	51 - 60	<input type="checkbox"/>	71 - 80
<input type="checkbox"/>	31 - 40	<input type="checkbox"/>	51 - 60	<input type="checkbox"/>	61 - 70	<input type="checkbox"/>	81 - 90

3. How many years have you been doing genealogical research? _____

4. Please indicate if you hold any of the following professional genealogical credentials.

	Yes	No
Membership in the Association of Professional Genealogists (APG)	<input type="checkbox"/>	<input type="checkbox"/>
Certification by the Board For Certification Of Genealogists (BCG)	<input type="checkbox"/>	<input type="checkbox"/>
Accreditation from The International Commission for the Accreditation of Professional Genealogists (ICAPGen SM)	<input type="checkbox"/>	<input type="checkbox"/>

5. List any other genealogical credentials or affiliations that you have:

6. Please indicate if you would like the Portal to Texas History to allow users to:

	Yes	No	Don't Know
Save search results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receive RSS feeds of search results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access personal search history for an active session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Save items (images, maps, letters, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Add items to personal "favorites"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rate items on a historically significant scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Annotate images (like Flickr)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Build and maintain lists of objects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comment on items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comment on comments written by others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Please indicate if your browser has:

	Yes	No	Don't Know
Flash installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JavaScript enabled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Your additional comments are welcomed. (*Please use back if more space is needed.*)

Appendix B Object Navigation Options

6.1 Navigation Options: Tabs



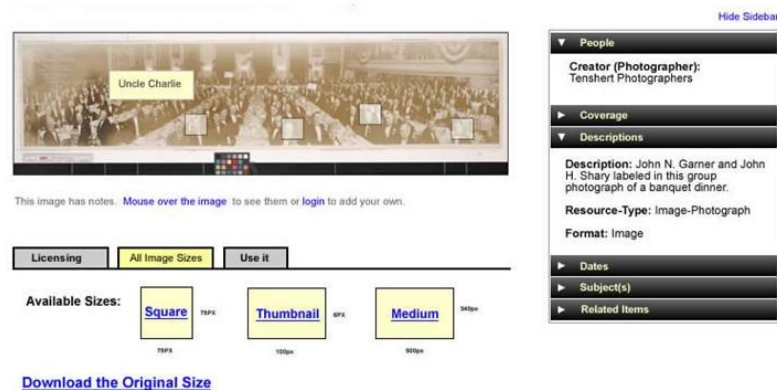
6.2 Navigation Options: Collapsed Menu



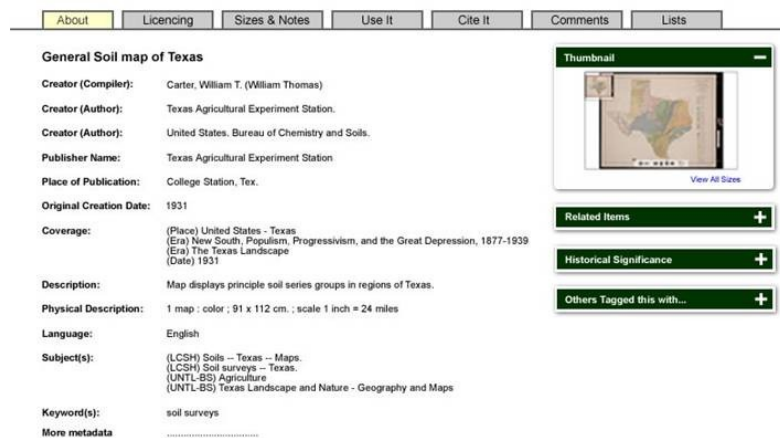
6.3 Navigation Options: Widgets



6.4 Navigation Options: Tabs & Collapsed Menu



6.5 Navigation Options: Tabs & Widgets



Appendix C Websites Referenced

Participants referenced several websites during their discussions. The websites and the specific features referenced are listed below.

Amazon.com

- Includes thumbnails in search results

Ancestry.com

- “Wildcard” searches require at least 3 letters in first name and surname fields
- Shoebox feature for saving objects for later use
- Source documentation (citation) presented prior to object display can be easily copied and pasted
- Highlights search terms where they appear on pages
- Users can communicate with one another by electing to provide their email to other registered users or to use ancestry’s server
- Does not join surname and given name and perform only a phrase search; many extraneous results
- Allows users to select number of results to display

Ebay

- Includes thumbnails in search results

FamilySearch.org

- Offers searching by place or name and provides examples of searches below the search boxes
- Allows searching of their catalog by 'place' and returns results organized in a list by state, county, township

Note: This is an option if you search the Family History Library Catalog:

http://www.familysearch.org/Eng/Library/FHLC/frameset_fhlc.asp

Footnote.com

- All digitized objects have both a black border and a gray background
- Allows adding comments that others can choose to read
- Allows users to 'box in' text that is hard to read and add their transcription; these annotations appear on mouse-over
- Users don't have to be members but do have to register to add comments
- Uses a ribbon navigation at the bottom of a document; the ribbon contains thumbnails of the pages in the document in sequence; enables movement between a group of pages; examples might include a multipage letter, a set of photographs, a series of pension applications

Google

- Allows advanced searching features within their simple search
<http://www.google.com/support/bin/static.py?page=searchguides.html&ctx=basics>
 - For example: +, -, ""
- Highlights search terms in results list
- Page number placement at bottom and top of a multi-page object

Google Books

- Google books includes thumbnails in search results
- Clicking on either the title or the thumbnail in search results displays the page where the search term or phrase is located and highlights the term or phrase
- Includes navigable Contents, including the Table of Contents and the Copyright pages
- Allows for a search within the book from its display

Handbook of Texas

- Their “communities” lists include ghost towns:
<http://www.tshaonline.org/handbook/online/browse/we.html>

HeritageQuest

- Ability to browse through the entire document, jump to a particular location (TOC or Index or page), or navigate among hits (first, next, last)
- One person who teaches using Heritage Quest reported that people find their navigation confusing
- Table display of census results
- Census image display allows zooming in to read details; printing is different, get the entire image because it prints the PDF format
- In the absence of using quotation marks for a search, the search results are listed by relevance according to the number of search terms occurring in objects
- Offers downloads in either TIF or PDF formats

JSTOR

- Offers Browse ability for easy navigation between:
 - Viewing of all volumes of a journal
 - Viewing article titles within a volume
 - Viewing an article
- Searching within a journal
- User profiles including notification of new materials that match user parameters

Library of Congress – OCLC

- Ability to do multiple phrase searching: Advanced Search
<http://www.loc.gov/coll/nucmc/oclcsearch.html>

Name Thesaurus

- One participant identified this site as having a ‘better than Soundex’ feature for name searches: Name Thesaurus – site includes a demo for surnames
<http://www.namethesaurus.com>

Rootsweb (owned by Ancestry.com)

- Might be a source for a list of defunct Texas towns
- Post-em notes are an example of sharing comments among users
- Post-em notes require users to have an account