TiddlyWiki Thesaurus Redesign Recommendations

TC 518
June 4, 2008

TiddlyWiki Thesaurus
Redesign Recommendations

TC 518
June 4, 2008

Report Contributors

Name
Michael Adcock
Khue Duong
Marisa Haberfelde
Ann Swearingen

Supporting Documents

Document title	Owner(s)	Date submitted
Preliminary User and Task Analysis (x3)	MA, KD, AS	4/09
User Profile	AS	4/16
Persona (x4)	MA, KD, MH, AS	4/16
Wants & Needs Analysis (in-class)	UCD Team	4/16
Interview with Trent Hill	MA	4/17
Use Scenario—Task & Context (x3)	MA, KD, AS	4/23
Redesign Proposal	UCD Team	4/30
Wants & Needs Analysis; Cognitive Walkthrough	UCD Team	5/7
Heuristic Evaluation	UCD Team	5/14
In-Class Prototyping	AS	5/19
Usability Evaluation	UCD Team	5/28
Findings by Theme and Activity	MA	6/2

Table of Contents

Table of Contents

Executive Summary

This report details the design, findings, and recommendation of a redesign project that focused on the TiddlyWiki Thesaurus web application. The project was carried out by Michael Adcock, Khue Duong, Marisa Haberfelde and Ann Swearingen for a course entitled "TC 518, User-Centered Design" in the Spring of 2008 under the guidance of Professor Mark Zachry.

Purpose

We primarily focused on collecting qualitative data to improve the overall user experience of the TiddlyWiki Thesaurus – a web application designed to assist graduate students in the understanding and construction of a subject classification system. With this goal in mind, we engaged users in a number of user-centered design research methods, including a wants and needs analysis, a heuristic evaluation and a usability study.

Key Findings

Our most significant findings indicated:

- Terminology used throughout is unclear to the users
- Navigation is confusing and inconsistent with expected behavior
- Users want more options for adding and manipulating terms
- Customizable views of the application were popular with users
- Users wanted more documentation and help
- Online collaboration needs to be improved

These findings are further detailed in the full report.

Key Recommendations

To address the discovered issues, we suggest the following recommendations:

- Rename and clarify the terminology
- Create documentation to support the users of the application
- Improve online collaboration through the addition of functions, such as "track changes"
- Locate the hierarchical schedule at the center of the application for ease of access, and provide options for viewing the schedule.
- Give users more control over the appearance and organization of the content.

Background

The TiddlyWiki Thesaurus (TWT) is a web application which can be used to create a thesaurus of subject terms used for indexing or searching a large collection of items.

Definition of a Thesaurus

Thesauri are subject-based classification systems which are governed by two standards set out by the International Organization for Standards. [ISO2788] is for monolingual thesauri and [ISO5964] for multilingual thesauri. They are hierarchically structured like taxonomies, but are extended to better able to describe the world by not only allowing subjects to be arranged in a hierarchy, but also allowing other statements to be made about the subjects.

These statements are set out in five properties as defined by [ISO2788]:

- **Broader Term (BT):** refers to the term above this one in the hierarchy; that term must have a wider or less specific meaning.
- **Narrower Term (NT)**: the inverse of a broader term.
- **Scope Note (SN):** a string attached to the term explaining its meaning within the thesaurus
- **Use/Use For:** refers to another term that is to be preferred instead of this term; implies that the terms are synonymous.
- **Related Term (RT):** refers to a term that is related to this term, without being a synonym of it or a broader/narrower term.

Thesauri are represented in both an Alphabetical Schedule (all terms arranged alphabetically) and a Classified Schedule (arranged hierarchically).

Example of a Classified Schedule:

A ACTIONS AND PROCESSES

Aa1 INVESTIGATION
- Aa1.2 AUDIO RECORDING (process)
- Aa1.3 VIDEO RECORDING (process)
- Aa1.4 DIVINATION
  - Aa1.4.1 DOWSING
- Aa1.5 GHOST HUNTING
- Aa1.6 GHOST HUNTS
- Aa1.7
  - Aa1.7.1 GHOST PHOTOGRAPHY
  - Aa1.7.2 INFRARED PHOTOGRAPHY
  - Aa1.7.3 KIRLIAN PHOTOGRAPHY
  - Aa1.7.4 AURA PHOTOGRAPHY
- Aa1.8 INTERVIEW

Notation is a numerical or alpha-numerical key to the hierarchical structure of the thesaurus. In the example above, Aa1 represents the term “audio recording”.

History

The TWT was originally created by MLIS students at the University of Washington while working on a course project in autumn 2007. This course, *LIS 537: Construction of Indexing Languages*, directs students to construct a thesaurus for a chosen user group and domain. The TWT was built as an aid to this thesaurus construction process, and an alternative to manual methods such as using index cards or spreadsheets to collect and organize terms.

The tool was built out of a standard TiddlyWiki[1], through code customization and additions. The TiddlyWiki technology has been described as a "reusable non-linear personal web notebook." Conceptually, it can be thought of as a collection of index cards ("tiddlers") with small chunks of content which are searchable, tagged, and linked to each other inside a single, self-contained web page. It's like a wiki because multiple people can edit it, but it's not page oriented – it is element oriented.

A test copy[2] of the TWT has been created for our evaluative testing, and is identical in functionality to the version used in the course project mentioned above.

Features and Strengths

The TWT supports online collaboration through a login system. Users are able to begin the thesaurus construction process by entering terms and related information (such as scope notes, etc). Users can also create relationships (hierarchical or relational) between the terms they have added. In situations where terms need to be added en masse, users can import terms via an Excel spreadsheet. There is an automated tool to check for broken term relationships and other errors as well as a simple function that tracks change history. The alphabetical schedule, classified schedule, and notation for preferred terms are automatically generated based on the terms and relationships the users have created. Due to the wiki-like nature of a TiddlyWiki, user's can add documentation for their finished thesaurus. In addition to the alphabetical and classified schedules, hyperlinks are provided to allow for navigation between terms. A simple search box allows the user to find terms, or content (definitions, scope notes, etc.) associated with the terms.

Several strengths of this application were identified to support its potential use as an educational tool:

- provides a framework to manage terms and their relationships
- generates reports (alphabetical and classified schedules)
- supports a distributed work environment with concurrent editing

[1] The basic TiddlyWiki can be found here: http://www.tiddlywiki.com/
[2] The test version of TWT can be found here: http://students.washington.edu/adcockm/UCD/

Context

The TiddlyWiki Thesaurus must be installed on a web server, and is accessed through the user's web browser. All user activities should take place within the TWT itself, and require no other software or tools, with the exception of importing terms from Excel. Since thesaurus construction in the LIS 537 class is a group project, it should be possible for multiple users to perform the tasks described in the preceding section concurrently. The system should warn of any conflicts when saving changes and not fail completely or delete content. Construction of a thesaurus is a time consuming process, and the work performed should be safeguarded by the application.

Criteria for Successful Interaction

The TiddlyWiki Thesaurus should be a helpful educational tool that aids a novice group of students in the construction of a thesaurus.

Successful interaction with the TWT can be assumed if:

- the learning curve is minimal; students should focus on thesaurus construction and not on learning the peculiarities of this (or any other) tool
- simultaneous modifications from different group members are permitted
- the users gain an appreciation and understanding of the process of thesaurus construction
- users can create a structurally valid thesaurus useful for their target domain

Redesign Proposal

This proposal focuses on a redesign effort to produce a version of the tool that can be used for educational purposes. In addition to general usability improvements, the intention is to redesign the application so it can be effectively used by students in future courses as a learning tool to aid them in the creation of their thesaurus projects. Because the tool was not designed with this audience and purpose in mind, many improvements were identified. Redesign recommendations were guided by several activities which will be described in this document.

Method and Procedure

The redesign of the TiddlyWiki Thesaurus went through a series of activities. The first few tasks aimed to cover the broader needs of different user populations as exemplified by the four personas we created. Starting from the Wants and Needs Analysis and Cognitive Walkthrough on May 7th, 2008, we were able to design our activities focusing on the user profile of LIS 537 graduate students in the Information School who would use the TiddlyWiki interface to build their own thesaurus. The heuristic evaluation and usability testing took into consideration immediate feedback from the Wants and Needs Analysis.

Please note that a brief summary of each activity will be included in this narrative. A more extensive analysis of the overall findings will appear following the Findings section

Timeline of activities in the TWT redesign

Date	Activities
4/09	Preliminary User and Task Analysis
4/16	User Profile and Personas
4/16	In-class Wants & Needs Analysis
4/17	Interview with Trent Hill, Instructor for MLIS 537, one of the primary stakeholders for the redesign
4/23	Use Scenario—Task & Context
4/30	Redesign Proposal
5/7	Wants & Needs Analysis & Cognitive Walkthrough
5/14	Heuristic Evaluation
5/19	In-class Prototyping
5/28	Usability Evaluation

User Profile and Persona

We first created the user profile and personas to better understand the TWT user population. We defined the primary users of the TWT as students of the LIS 537 "Construction of Index Languages" class who have a basic understanding of the thesaurus building process as well Web 2.0 technology. The four personas varied in their familiarity with the TWT interface.

They are:

- the developer of the TWT
- the instructor of the course
- a first time user of the technology
- an experienced user of the tool

Full descriptions of the personas are included in Appendix C.

The in-class Wants & Needs Analysis and the interview with one of the stakeholders helped the UCD team narrow down the scope of the project. Instead of including the developer of the tool and the course instructor personas, we decided to streamline our testing focusing on novice and experienced TWT users.

Wants & Needs Analysis

The Wants and Needs Analysis conducted on May 7th consisted of three participants, a facilitator, a scribe and two other members of the User-Centered Design (UCD) team who took additional notes. Marisa, the facilitator asked questions as Khue, the scribe recorded the discussion on the white board. Ann and Michael recorded their observations and kept track of other ideas expressed in the session. We posed the following question to the participants: "Imagine an ideal software-based thesaurus building tool. What would it look like, and what would it do?" The following recommendations were suggested by our participants:

- Search and browse: by category
- Maintain a history (recent searches)
- Different ways to view and display the terms: hierarchical, associative (similar to tag clouds displayed in search engines)
- Sort and manipulate terms: graphical representation of sorting (drag and drop terms into buckets), visual relationships among the terms
- Minimize tedium of data entry: reduce typing, include auto-completion, variant spellings, making relationships during term harvesting, tag terms with source document

Cognitive Walkthrough

With the same three Wants and Needs volunteers, Marisa and Michael paired up with one participant where as Ann and Khue individually worked with the two remaining participants. The three subjects worked at different computers in two different rooms. They were asked them to perform a series of exploratory tasks, as follows:

- "Take a few minutes to explore and tell us what you find/think."
- "Search for the term **eclipse** as many ways as you can."
- "A new planet called **Goofy** was found:"
    - "Tell/show us how you would add the term."
    - "Why did you do it that way?"
- "Use the classified schedule to find **coordinate systems** and tell us the relationships you find."
- "Find **astronomical seeing** and tell us about it."

The participants were encouraged to verbalize their search strategies using the think-aloud protocol. The UCD facilitators verified their observations with the user, making sure that our understanding of the users' information-seeking behaviors was accurate.

Several themes emerged during the May 7th Wants and Needs Analysis and Cognitive Walkthrough.

- First, the subjects commented that the TWT did not match their expectation of a typical website: TWT does not look like a website, nor does it function like a website.
- Second, the names of tools and features such as the "Delete" or "PermaLink" buttons confused the participants. There seemed to be hidden features that were not evident to the users.
- Third, there existed no help or guidance to clarify the concepts behind the thesaurus construction process.

Heuristic Evaluation

We recruited two second-year MLIS graduate students who had used the TiddlyWiki Thesaurus for their class project. These two subjects fit our heuristic evaluation study because they were the experts, being familiar with both the TWT application and the principles of thesaurus construction.

Marisa and Michael from the UCD team accompanied one expert volunteer while Ann and Khue conducted the evaluation with the other subject. Each group of three conducted its session in separate rooms to minimize distractions. The evaluators were encouraged to spend a brief period re-orienting themselves to the thesaurus, and were asked to perform the same simple tasks we had used with the participants in the

cognitive walkthrough on April 28th, 2008. For the remainder of the two-hour sessions the evaluators worked through the heuristic evaluation checklist item by item, while sharing their thoughts and observations with the investigators. The team members wrote down their comments, took notes, and asked questions. Both investigators in each pair took notes for the sake of consistency, to gather as much information as possible and to triangulate results.

Similar to the Wants and Needs Analysis and the Cognitive Walkthrough, the expert users expressed the same suggestions with respect to the TWT functionality:

- The TWT terminology is unclear. The confusing terminology includes "permalink," "close others," "done," "view," "jump," or "orphans."

- The lack of documentation impedes the user's understanding of features. Important information is hidden and hard to keep track of. Some is buried in chunks of written content, with no clear demarcation. Detailed documentation for two sets of users, administrators and thesaurus builders would be helpful

- Focus on the overall layout of terms such as the redesign of side navigation and toolbars, the inclusion of collapsible term lists, and the ability to open terms in new windows.

- Improve search by making changes to the sorting/display of search results or

- Decrease the load time for the alphabetical schedule.

Usability Evaluation

We were able to recruit four other second-year MLIS students for the usability evaluation. Two are currently involved in building a thesaurus for LIS 537 and the other two have completed the project in previous quarters. The sessions were run by two team members, who coordinated taking notes, managing the paper prototypes, and facilitating the interviews and conversations.

The evaluation consisted of five segments:

1. After introductions were made, the participant was asked to work through a series of four simple tasks with each of the paper prototypes, using a think-aloud protocol.

2. After testing each prototype, the participant was asked to complete a short evaluation survey in which they ranked the features involved in each task on a seven-point Likert scale.

3. Next, they were asked to draw a picture of their ideal thesaurus building tool using pen and paper, with no time limits given.

4. In a final interview, they were asked to explain the features and functionalities of their sketch.

5. Finally, they were asked to verbally assess the prototypes and add any other comments, suggestions or questions.

We chose to use low-fidelity paper prototyping for several reasons. It was the most practical evaluative tool in this context: it is portable, inexpensive, and relatively easy to reproduce and modify. Because it was a low-fidelity representation, it let us focus on the essential features of the thesaurus application In this case issues which emerged as priorities from the earlier investigations were navigation and terminology. This method helped highlight these problem areas, by permitting both investigators and participants to see past any design “clutter” to questions of function and basic features.

Findings

The complex nature of the TiddlyWiki Thesaurus, in combination with the assorted user-centered design methods employed, led to a rich collection of findings. The findings from each activity were placed in a table [see Appendix L], grouped, and then organized by theme. Four major theme groupings became apparent: term editing, term relationships, layout and navigation, and group work.

Term Editing

These results came from all UCD methods employed, except the Cognitive Walkthrough.

- **Enter terms**
  - Users expressed the desire to both enter new terms one at a time, as a group through a "quick add" feature was desired.
  - The ability to import a large number of terms from a spreadsheet.
  - Other suggestions included a need to reduce typing, auto-completion, spelling suggestions, and to specify relationships when term harvesting.

- **Delete terms**
  - It was clear that both single term deletion, and mass deletion should be supported. One user commented "The delete button is scary!" She said that it was not clear to her what the results would be if she used it.

- **Term properties**
  - The ability to capture data about the terms, including: several things besides the terms themselves included
    - the number of times the term was found in documents
    - scope notes
    - definitions

- **Apply tags to terms**
  - Tagging was mentioned several times, as a way to categorize terms into concepts and also to allow a term to be tagged with its source document.

Term Relationships

Again, results found in this category were gained from all UCD methods used, except the Cognitive Walkthrough.

- **Search and browse**
  - There was some confusion over how search in the TWT currently works, and there were requests for more search methods. The ability to search

and browse by category (or facet), as well as a way to show search history and popular search terms was desired.
    - Participants also expressed a desire to browse for duplicate terms.

- **Term sorting**
    - Various sorting methods were suggested including:
        - alphabetically
        - geographically
        - by time
        - by popularity
        - by facet
    - Custom sorting and display methods were desired, including the ability to use colors to visually "code" terms.

- **Graphical sorting**
    - Users expressed the desire to manipulate terms by dragging and dropping them into category "buckets".
    - The "drag and drop" technique was also mentioned as desired way to move terms in the hierarchy.

- **Customized user views**
    - Participants were quite vocal in their desire to customize the view of the term collection and workspace area in many ways. Suggestions included:
        - tag clouds
        - word maps
        - collapsible term lists
        - use of multiple windows during editing
        - a modifiable interface controlled by admin options
    - Flexibility in the application's workspace was desired. Participants wanted to be able to apply their own view or context needs while working.

- **Schedules**
    - The classified schedule was viewed as most important by users. In the usability evaluation, all participants seemed to lay out other functionality around the hierarchical view and regarded it as a focal point of the application.
    - The alphabetical schedule was of less value during the thesaurus construction process, and was only accessed to find duplicate terms. Several users suggested that sorting terms within the schedules would be useful, It was also suggested that the schedule be separate links on the top navigation.

Layout and Navigation

Results found in this category were gained from all UCD methods used, except the Wants and Needs Analysis performed on May 7th.

- **Inconsistent with expected behavior**
  - The TiddlyWiki Thesaurus web application didn't follow all web conventions:
    - The browser back button did not function as expected.
    - The alphabetical schedule took an unacceptable amount of time to load and display.
    - An "undo" feature was missing and requested by participants.
    - Feedback and confirmation after tasks was also requested.

- **Confusing terminology**
  - The names of tools and features were unclear including:
    - "close all", "close others",
    - "permalink", "permaview", "view", "jump",
    - "backstage", "build", "orphans", "tiddler",
    - "error checking", "track changes", and "delete". "save locally" vs "save to server", "done"

- **Location of functions**
  - Several options seemed to be in bad locations including: "close all", the sidebars and toolbars, "close", "jump", "logout", and "status".
  - A separate toolbar was suggested, to group all term modifying functions.

- **Hidden features**
  - The minimalist color scheme obscured functionality because the colors of the toolbars and other items on the page blended together too well.

- **Lack of help**
  - The lack of documentation was a problem. A suggestion was made to create two type of documentation – one for the administrator and one for the thesaurus builders.
  - It was suggested that the glossary be moved to the side navigation.
  - Several external resources were identified as good items to link to, and a general need to link to external information was apparent.

Group Work

These findings relate directly to how the TWT provides support for online collaborative group work. Results found in this category were gained primarily from the Usability Evaluation.

- **Tracking changes**
  - Several suggestions were made, including the ability to annotate terms with comments, and the ability to accept and modify changes made by other team members.
- **Error checking**
  - A clear need to check their work after making changes was expressed by participants.
- **Saving work**
  - The desire to save frequently was expressed, and participants expected the “save to server” option to be more reliable. An automatic backup/save feature was recommended as well.

Recommendations for Redesign

During our study, several themes emerged for the redesign of the TiddlyWiki Thesaurus. These themes broke out roughly into three areas: new features, terminology and navigation.

Top Recommendations

- Rename terms and clarify their functions.
- Create tutorials and FAQ's for user. Provide documentation to address the needs of different user groups.
- Support improved collaboration by users by improving the history and editing tracking functions, and providing a way to annotate thesaurus terms.
- Locate the hierarchical schedule at the center of the application for ease of access, and provide options for viewing the schedule.
- Give users more control over the appearance and organization of the content.

Feature Requests

- A hierarchical schedule that is expandable and collapsible for better space-saving as well as for better viewing of the relationships between terms.
- Drag and drop capability for manipulating the placement of terms in the hierarchy as well as the alphabetical schedule.
- Improved collaborative capabilities.
- Automatic data back-up
- The use of color to visually represent organizational concepts and groupings as well as to display hierarchical and associative relationships.
- Documentation to serve the different user groups of the TWT: thesaurus builders, instructors, new users.
- Different forms of documentation, such as an introduction, glossary and FAQs to assist users with different kinds of needs.
- Feedback and confirmation for completed tasks.
- A "sort by" function which allows users to manipulate the order of their displayed terms.

Terminology

- Edit the names for specific functions:
    - "Track changes" should be modified to "edit history."
    - "Save locally" should be modified to "download."
    - The "error checking" and "build" controls need to be renamed or explained more clearly, because their functions are ambiguous to some users.
- The results of using of functions such as "edit", "add", "delete", and "save" should be made more explicit because how they work is unclear to some users, and creates anxiety.
    - Offer the user more deletion options and build out functions, such as "delete all" or "delete term".
    - Make it clear how to select a term for editing. The placement and the wording of the current edit button are ambiguous.

Navigation and Layout

- Give users the ability to change their view of the TWT
    - Zoom in on a specific term
    - Pull back and view the entire structure of the thesaurus
- Place the hierarchical schedule at the center of the application for ease of reference.
- Bring out "glossary" from under "help" and place it in the side navigation. Bring the glossary out of the dropdown menu under help and move it to the side navigation bar.
- Create a separate "edit terms" toolbar on the term, containing functions such as "edit", "save", "quick add", and "undo" for when users are editing a term.

Lessons Learned

At each stage of the project, issues emerged which indicate ways we could modify future investigation.

- Findings from our earlier investigations about the ambiguity of basic functions (such as “edit,” “add” and “save”) should be incorporated into the usability evaluation. More refined terms for these actions would yield more specific data about the usability of the application.

- We should have accentuated feature differences between the paper prototypes. Instead of highlighting differences between the features or functions, we instead emphasized layout differences between the two prototypes. An additional mockup using more visual/less text-based design should also be considered for future usability testing.

- The heuristic evaluation should be designed with a focus on the usability of the TWT. While our heuristic evaluation probed further at specific issues we had discovered in earlier investigations, its content and structure were limited by strict adherence to the Xerox model checklist and Nielsen’s principles of design. In the future, we would tailor our heuristic evaluation more to features of the technology.

- More pilot studies should be devoted to the cognitive walkthrough and the usability evaluations. We found that practicing our usability interviews even with each other resulted in more consistently run sessions. We also noted that had we run a pilot usability session, some of the issues we encountered with the prototypes would have been avoided.

- In spite of our effort to adhere to consistent methods and procedures, the UCD team should further normalize protocols for each session. Since we frequently conducted our investigations in separate rooms or in pairs on different days, some coordination in advance would have improved the testing efficiency.

- Inasmuch as we all tried to allocate tasks equitably among team members, we did not prioritize or define the tasks clearly. For future UCD studies we need to spend more time communicating about the team members’ backgrounds, skills and goals at the beginning of the research process. We also need to refine the project scope earlier in the process, so that we can come up with a manageable

schedule with clear designations of responsibility. With more efficient project management, we could save time otherwise lost to redefining roles, tasks and priorities.

Appendix A:

Preliminary User and Task Analyses

Michael Adcock – [adcockm@u.washington.edu] April 9, 2008
TC 518

Preliminary User and Task Analysis: "TiddlyThesaurus"

Product Description

The TiddlyThesaurus is a web application which provides support for the creation of a thesaurus, and for use of the created thesaurus for indexing or searching. The tool was built out of a standard TiddlyWiki, through code customization and additions. It supports collaboration through a login system. It is primarily text based, and allows users to enter terms and related information, and indicate relationships between terms. Automated checks for broken links and other errors are provided. Simple change tracking history is available. The alphabetical schedule, classified schedule, and notation for preferred terms are automatically generated. Documentation can be added through the standard TiddlyWiki interface. In addition to the alphabetical and classified schedules, hyperlinks are provided to allow for navigation between terms. A simple search box allows the user to find terms, or content (definitions, scope notes, etc.) associated with terms.

Users and Their Goals

The primary user group is iSchool students at the UW, specifically graduate students.

They are likely to have the following characteristics:

- enrolled in the MLIS or MSIM program and meet requirements for LIS 537
- no prior experience with thesaurus construction or TiddlyWikis
- familiarity with web browsers
- working with a small group (3-4 people) to construct a thesaurus

Their goals in using the tool are:

- follow and learn the recommended procedure for creating a thesaurus
- focus less on the monotonous/repetitive tasks, and more on the difficult decisions to be made and problems encountered when constructing a thesaurus
- use the tool simultaneously with other group members, when communication between group members may be limited (in a distance/online class setting)
- simplify the managing of terms when compared with more manual methods like using Excel or creating and sorting Soergel cards

User Tasks and Procedures

The following tasks should be supported by the tool:

- setup and configure a "clean" (no terms) TiddlyWiki on a web server
- import a list of harvested terms from Excel
- specify term content (definition, scope note) and relationships (broader term, narrower term, related term, use, use for)
- identify/mark preferred terms and lead-in terms

- add/delete/modify terms as necessary
- identify facet structure; create node labels for classified schedule
- identify broken links or other structural errors in the thesaurus
- generate the notation for preferred terms
- write usage documentation for the thesaurus (audience, purpose, features, etc.)
- browse the classified and alphabetical schedules
- search for relevant terms
- print completed thesaurus (including both schedules and the documentation)

Context and Circumstances

The TiddlyThesaurus is accessed on a server through the user's web browser. All of the above listed actions should take place within the TiddlyThesaurus itself, and require no other software or tools, with the exception of the initial import from Excel. Since thesaurus construction in this context is a group project, it should be possible to perform these tasks at the same time that other group members are performing similar tasks. Care should be taken to discourage group members from editing the same term simultaneously, but the system should warn of such conflicts and not fail completely or delete content.

Criteria for Successful Interaction

The TiddlyThesaurus should be a helpful educational tool that aids a novice group of students wishing to construct a thesaurus.

Successful interaction could be assumed if:

- the learning curve is minimal – the students should focus on thesaurus construction and not on learning peculiarities of this (or any other) tool
- simultaneous modifications from different group members are permitted
- the users gain an appreciation and understanding of the approach to thesaurus construction
- the users create a structurally valid thesaurus useful for their target domain

Ann Swearingen
TC 518
April 8, 2008
Exercise 1

Preliminary User and Task Analysis: Pacific Northwest Amateur Astronomy Thesaurus

I. Users

Users of the tiddlywiki-based Astronomy Thesaurus may share certain characteristics:

- Interest in astronomy and astronomical terminology
- Interest in semantic structures and knowledge organization
- Intrigued by new technologies
- Accustomed to using web 2.0 applications
- Early adopters of these applications.
- Fairly extensive computer experience
- Domain knowledge
- Familiarity with reference tools (online and traditional)

This tool will probably appeal to a somewhat narrow audience, at least initially. In addition to appealing to users who use or enjoy thesauruses and/or their logical construction, it may be most interesting to users who are technically adept, "fluent" in wikis and their design. The tiddlywiki application in general also carries a cachet of novelty which may attract some users to the thesaurus as much as its functionalities.

II. User goals

Common goals of users might include any of the following:

- Searching for specific domain vocabulary and related terms
- Browsing terms and relationships among them
- Locating preferred terms in the field of astronomy
- Visually engaging the semantics of a thesaurus
- Studying the logical workings of a thesaurus and faceted classification systems
- Identifying thesaurus contributors; tracking changes
- Adding to the contents of the thesaurus
- Pleasure or entertainment

III. Use context

This tool would most likely be used in academic or classroom settings. Users would need access to the internet and a web browser which supports the tiddlywiki application. They would interact with the thesaurus by browing or by entering terms in the search box, and clicking on terms to follow hyperlinks and definitions. They can choose options from the menu and links from across the top of the page which will correspond with connections further down the page. When selected, a term rotates to display at the top of the page, which results in a fluid sense of movement. The user would be able to visually and dynamically demonstrate meaning relationships among this particular set of terms (broader than, narrower than, etc).

IV. **Use Requirements**

Successful interaction with this system would require:

- Consistent technical functionality (no broken links, etc)
- Accurate thesaurus construction
- Clear directions for use , faqs, or help resources

Appendix B:

User Profile

LIS 518

TiddlyThesaurus User Profile

Michael Adcock, Khue Duong, Marisa Haberfelde, Ann Swearingen

The TiddlyThesaurus is a web application which provides support for the creation of a thesaurus, and for the use of the created thesaurus for indexing or searching. For the purposes of this project we will limit our scope to the users who will actually use the tool to construct a thesaurus, rather than the needs of individuals who will use the completed thesaurus as a web-based reference resource.

The users studied here belong to two groups. The primary user is the student thesaurus builder, who can range in experience from novice to expert or developer in re: the TiddlyThesaurus. This user is a graduate student in the UW Information School, enrolled in either the MLIS or MSIM program. He or she is accustomed to web-based technologies and desktop applications, and will have at least a B.A. or B.S. He will also be familiar with print and online thesauruses, and will have met the prerequisites for LIS 537 (LIS or IMT 530). The user will be working with a small group of classmates, who may have different levels of experience with tiddlywikis or the TiddlyThesaurus. The group members will need to work closely together--in the case of distance students, entirely online—and will need a variety of tools to collaborate. The secondary user is the instructor of the course, who will use the thesaurus as a pedagogical tool to supplement student projects and to demonstrate the workings of a thesaurus. His or her deployment of the TiddlyThesaurus will teach students to use it a means to an end—creating a thesaurus—rather than necessarily mastering it. Tertiary users could be considered at a future point but for now the focus is on its use as an implementation tool.

User Profile: TiddlyThesaurus

	Primary User: Student	Secondary User: Instructor
Age	22+	
Gender	Male or female	
Work Title	UW iSchool Student MLIS OR MSIM	UW iSchool Faculty
Work Hours	Part time employment/full time enrollment OR Full time employment/part time enrollment	Part time or full time
Education	Post-baccalaureate at minimum	
Technology	- Comfortable with Microsoft Suite applications and other web-driven technology - Access to high speed internet connection at home and/or at school	
Experience level	Novice to experienced user Required to have taken LIS 530 or IMT 530, and ideally one other class in this decade	Experienced user; familiar with thesaurus, theory, etc. Also has twenty years of teaching experience
Location	Residential and distance students	Pacific Northwest
Income	Varies	
Limitation(s)	-Culture/language as some users may be non-native speakers -Inability to type	
Family status	Varies	

Appendix C:

Personas

Michael Adcock – [adcockm@u.washington.edu] April 16, 2008
TC 518

Persona: "TiddlyThesaurus"

Name:	Brent Hill
Age:	46
Job:	Senior Lecturer at the University of Washington Information School, since 2002
Work hours:	8 am to 6 pm (Mon–Fri), weekends
Education:	Ph.D. in English literature, MLIS
Birthplace:	Kannapolis, North Carolina
Location:	Seattle, Washington
Income:	$ 46,305/yr
Technology:	Laptop, T1 line
Family:	Married with several dogs
Hobbies:	Loves music, plays guitar, travel to Europe, bicycling
Goals:	Have a successful band and own an alpaca farm.

Brent has a history rooted in academia, and has discovered over the years that the only thing he enjoys more than learning is teaching students who are eager to learn. He has been married to his wife Belinda since 1999. While teaching at a university isn't lucrative, they enjoy the free time he has during the summer to travel. Brent enjoys travel to Europe, and especially likes to visit The Netherlands, which he considers his "spiritual home."

Before enrolling in the iSchool, Brent taught as a graduate student in the early '90s at Duke University. This led to a post-doctoral teaching position at Clemson University in South Carolina until 2000. (Brent still strongly identifies with his Southern roots: "I couldn't be more southern if I was dipped in lard and deep-fried.") He then pursued and earned his MLIS degree at the UW iSchool. For the past six years, he has earned the respect of his colleagues through his effective teaching style, and his passion for teaching. This was confirmed by his promotion to Senior Lecturer in the past year. He has also earned the admiration of students for his ability to make learning even the most boring of topics fun and interesting. Brent considers his co-workers and students as colleagues, and many of his former students consider him a trusted friend.

During his time at the iSchool, he has taught many courses on information organization, information behavior, and courses related to teaching and instruction methods. While he is perhaps better known for his instruction on cataloging, he has a special interest in LIS 537 Construction of Indexing Languages. The main focus of this course is for students to work as a group to produce a complete thesaurus based on the processes, techniques, and feedback they receive in the class. When asked about LIS 537, Brent says it is "very do-it-yourself, and you develop an appreciation for the tools."

Although he has evaluated many software tools that could be used for thesaurus construction, none of them would work well for LIS 537. All of them have been either too complex (with unnecessary features), too difficult to understand, or simply unreliable. He wishes there was a software solution that he could use as a learning tool in the class.

Name:	Jean Michel Saratoni
Age:	32
Job:	Interface Designer at GreenNet.org (previous) Graduate Assistant at the iSchool, University of Washington (current)
Work hours:	8 am to 10 pm (Sunday-Friday)
Education:	BS Computer Science MLIS Library and Information Science (6/2009)
Location:	Seattle, Washington
Income:	$82,000/year (previous) $16,000/year (current)
Technology:	Mac and PC laptop with Wi-Fi access
Limitation:	Lon commute to school/work
Family:	Married with a two-year-old son
Hobbies:	Second-life gaming, opera, cooking, karate and meditation
Goals:	Complete the MLIS degree; Work as a Systems Librarian or System Designer/Analyst

Jean Michel describes himself as "information-overloaded, overworked, zen tech guy." He finds it a challenge to juggle his school, work and life commitments. Taking three or four classes each quarter, plus working twenty hours per week as Graduate Assistant as well as organizing activities for many professional organizations, Jean Michel struggles to get five hours of sleep each night, keep his wife Francine happy as well as find time to take his two-year-old boy Ludovic to the park.

Jean Michel is interested in design and do-it-yourself philosophy. He is a gifted paper-and-pencil drawer. He prefers to fix things rather than having someone fix things for him. He has a solid grasp of computer hardware and software. He likes open-source technology. Though a die-hard advocate for Linux-based system, he understands the need to work within Microsoft-run environment.

Jean Michel builds the TiddlyWikki Thesaurus interface to construct an amateur astronomy thesaurus for his MLIS 537 Indexing class. He was able to evangelize other group members to build thesaurus using the TiddlyWikki. They all went through the user-centered design process and showcased their accomplishment to the class. The product was impressive enough that the instructor for the course is working with Jean Michel to improve the TiddlyWikki Thesaurus for future thesaurus-building activities for MLIS 537.

▪Lucy▪

Age: 26
Gender: Female
Work Title: Student
Experience: Intermediate
Work hours: Intern at a non-profit
Education: B.A. in Art History
Location: Seattle
Income: 650/month from internship; student loans
Technology:

- Very comfortable with Microsoft Suite applications and other web-driven technology
- Comfortable with Web 2.0 applications: Huge Facebook user, uses social networking, wikis, blogs, etc for coursework and pleasure
- High speed internet connection access at home and at school

Limitations: none
Family: single

Lucy is in her second year in the UW MLIS program. She has taken LIS 531 (cataloguing), LIS 535 (classification theory) and 537 (thesaurus construction). She is currently building a nursing taxonomy for her internship.

Lucy used the TiddlyThesaurus in her LIS 537 class and became quite comfortable with the application. However, for her internship, the taxonomy she is building is considerably larger than the thesaurus she built for class. Because the TiddlyThesaurus is open source and able to be modified by anyone, she is looking to customize it to suit her needs. More specifically, she would like to add photos to many of the terms. She has built a basic website for her MLIS portfolio, and knows HTML and some XML.

She enjoys windsurfing, baseball and cooking. On weekends she can often be found either hanging out at the local pub with her friends or curled up with a Calvin and Hobbes comic book.

LIS 518

Ann Swearingen

User Study: TiddlyThesaurus

USER PERSONA

Name: Sylvan Douglas
Age: 28
Gender: Female
Work Title: Student Assistant
Experience with Tiddlywiki Thesaurus: Novice level
Work hours: Part time work at campus library
Education: B.A. in History
Location: Seattle
Income: $800/month from library job; student loans
Technology:

- Very comfortable with Microsoft Suite applications
- Comfortable with web driven applications and Web 2.0 programs: uses social networking, wikis, blogs, etc for coursework and pleasure
- High speed internet connection access at home and at school

Limitations: none (but she is a poor typist).
Family: single. Parents and brother live in Eugene, OR.

Sylvan is originally from Oregon (Eugene), where she also went to college. Her parents still live there, as does her younger brother. She was raised in a very liberal household that was sometimes rather chaotic. Her parents were hippies who had toured with the Grateful Dead and frequently had artists and musicians staying at their house for extended periods of time. She enjoyed this a lot: she was encouraged in her own interests, and would have majored in art had she had more confidence that she had sufficient talent. You'd never guess at her background from her appearance, however: she dresses much like everyone else, and doesn't seem particularly "alternative" in her manner.

At the U of O she majored in history and minored in art. After graduation she took time off to travel, and then spent a couple of years working at the University of Oregon library. She also made money tutoring and waiting tables. On the advice of her supervisor at the library, she began thinking seriously about pursuing a professional career in the information sciences. After applying and being accepted to the UW Information School, she moved to Seattle.

Sylvan is now in her second year at the UW, currently undecided as to whether she wants to go into cataloging or become a special librarian, most likely in the arts. She works part time at the Art Library, and on the information desk at Suzallo. Recently she has also become interested in working as a taxonomist, as there seems to be a slightly better possibility of local employment in that area and she loves the concepts involved. “It would be amazing to get paid for something I love to do anyway!” Additionally she would prefer to stay in Seattle. In her small amount of free time she has gotten involved with a local theatre arts group, and made some friends in the larger arts community. She feels like she is really starting to put down roots here.

Sylvan is fairly comfortable with most computer technologies and web-based applications, and uses many of them regularly. She follows online innovations rather passively—her classmates tend to send around links to Web 2.0 sites, blogs, etc, but she doesn’t spend a lot of time chasing new things down . She is a quick learner, but prefers to acquire new skills or knowledge through actual use; overly abstract explanations are frustrating.

She has enrolled in a course called Construction of Indexing Languages, so she can learn more about taxonomies through thesaurus construction. She thinks she is relatively well-prepared, having taken more than one previous course in cataloging. The central class requirement is the actual building of thesaurus as a group project, which will extend through the quarter. Apart from having used various print thesauruses as reference tools, and more recently having explored online thesauruses such as the Getty, she is completely unfamiliar with the process of building one—she knows how one works, but it’s a bit difficult to envision putting one together. Her group has chosen Japanese cuisine, and sushi in particular, as its thesaurus topic. If possible, they would like to introduce a visual element to their thesaurus, but this may be overly ambitious. They will need to be in relatively close contact because the process of building the thesaurus will involve so many documents. They plan to communicate via email and catalyst Go Post forums, and share spreadsheet files via Google docs.

.

Appendix D:

Wants and Needs Analysis (in-class)

The following is a summary of the Wants & Needs Analysis exercise we performed on Wednesday, April 16th, 2008 in class. The participants had no domain knowledge, so we constructed a question that was general enough to be understood, but which might apply to our project.

This question was posed:

In an ideal world, what[1] would you want or need to organize 500 terms in a meaningful way?

terms = words, concepts

1. Sort terms by whatever parameter
    a. alphabetical, geographically, time, etc.
2. Familiar/more common terms on top
    a. # of hits
3. Associate other terms with them
    a. a given term
    b. a concept (TAGS)
4. Link to more information
5. Advanced searching to combine
    a. Facets / pivot table
6. Left to right, directional
7. Apply own view or context to the terms

[1] Partway through the process, a note was added referring to **software**, to help focus the responses.

Appendix E:

Interview with Trent Hill

The following notes were taken from an ad-hoc interview **Michael Adcock** had with **Trent Hill** on **April 17th, 2008**. Michael reminded Trent that the TiddlyThesaurus project that they had discussed as an independent study for the summer was a focus for a group redesign project in **TC518**. These notes are not meant to be a transcription for the interview, but are an attempt to capture the ideas and issues Trent discussed. The conversation started by asking Trent to imagine a perfect tool, and to describe it…

- Students need to be able to:
    - enter raw terms when term harvesting (unmodified, pre-coordinated terms)
    - edit the terms
    - identify relationships between the terms
    - specify relationships between the terms
        - higher level: associative, hierarchical, equivalence
        - more detailed: BT, NT, RT, Use, Used For
        - configurable, add as needed [not sure what I was noting here: I think he wanted the relationships to be configurable…]
    - specify scope notes (SN) and definitions
    - generate reports
        - alphabetical schedule
        - classified schedule
        - these should be available at any stage in the process
    - link outward to resources
        - directly link to Guidelines for the Construction, Format, and Management of Monolingual Controlled Vocabularies, (ANSI/NISO Z39.19-2005)
        - directly link to Thesaurus Construction and Use A Practical Manual, (Aitchison, Gilchrist, Bawden)
    - link to related terms
    - generate output as
        - Microsoft Word reports
        - Web pages (like the Art and Architecture Thesaurus often cited as an example)

- Keep it simple
    - this is a learning tool
    - maybe professional use too

- Distributed work environment
    - server based
    - distributed/concurrent editing

Appendix F:

Use Scenarios – Task & Context

Michael Adcock

TiddlyWiki Thesaurus Walkthrough

We are supposed to place one of our personas into a situation and imagine how they would try to use the "product". We need to each write up a document that chronicles our imagined user in an imagined situation, presumably to identify problems we might see and areas that should be addressed.

Since I'm the only one who really has any experience with the current TiddlyThesaurus, I'm providing a walkthrough, based on a conversation Ann and I had last night. This walkthrough is purely task based, and I'm not thinking about any persona as I write this. It's pretty much going to be a list of steps needed to accomplish a goal. I'd recommend reading through this once, and then bringing up the website (http://students.washington.edu/adcockm/UCD/) and actually following along and trying it yourself. The point of all this is so you have some information/experience to use when constructing your scenario, and hopefully all our scenarios will match up, at least in terms of what the user is trying to do…

User Goal

A new planet has been discovered in our solar system, and needs to be added into the Amateur Astronomy Thesaurus. Its name is Mickey. (Get it? Pluto… Mickey? Oh, nevermind! ☺) The user needs to figure out how to log in, where and how to enter "Mickey", how to verify the thesaurus isn't broken, and then save the changes.

Walkthrough

Note: Since I have no idea how long we are supposed to make this, we can trim off some stuff from the start or end to shorten as necessary. Hopefully we can all talk tonight…

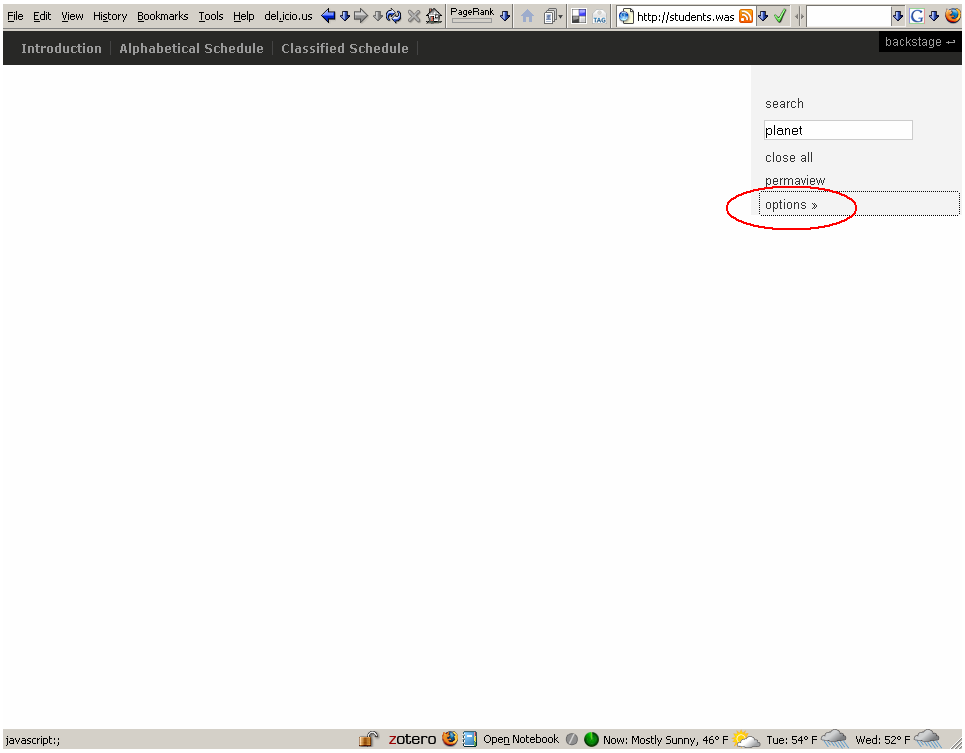
Navigate to the page…

Open a browser window and navigate to the Amateur Astronomy Thesaurus at:
http://students.washington.edu/adcockm/amateurastronomythesaurus/

Log in…

Once the page has loaded, click the options link on the right side of the page.

Michael Adcock



This will reveal the login area, among other things.

Enter your username and password in the boxes, and click login. Note that you don't have to do this step every time if you select the AutoLogin checkbox. This will save your username/password in your cookies on your current browser, and the next time you connect from your current computer, you will automatically be logged in.

If you username/password is correct, you will get a "Login Successful" message at the top right of the screen. (Other messages may also appear here from time to time.)

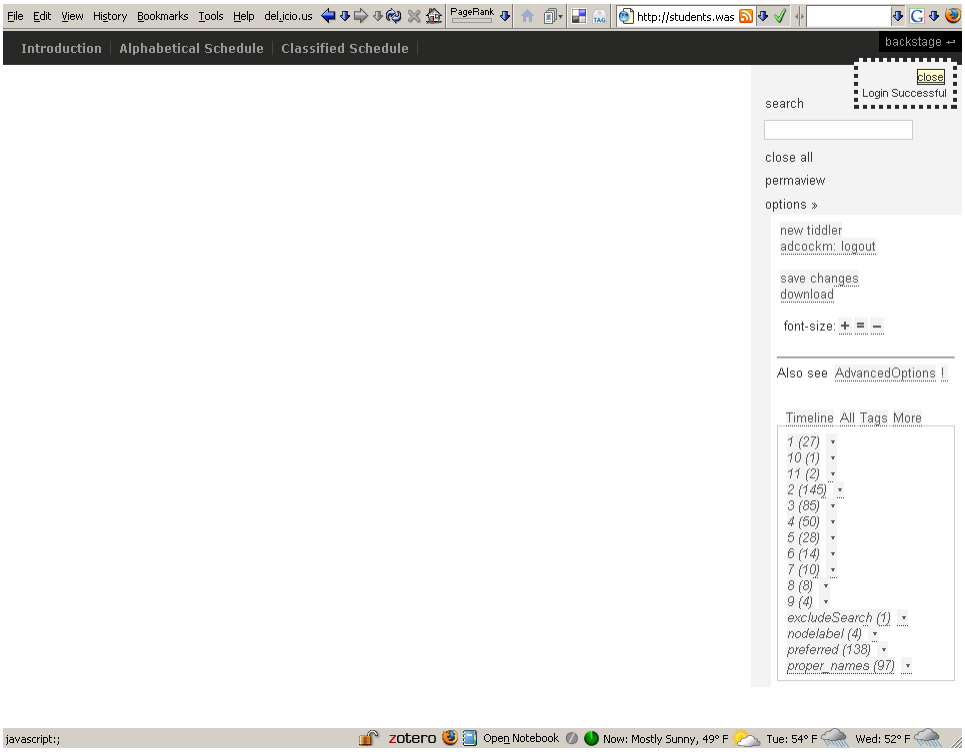
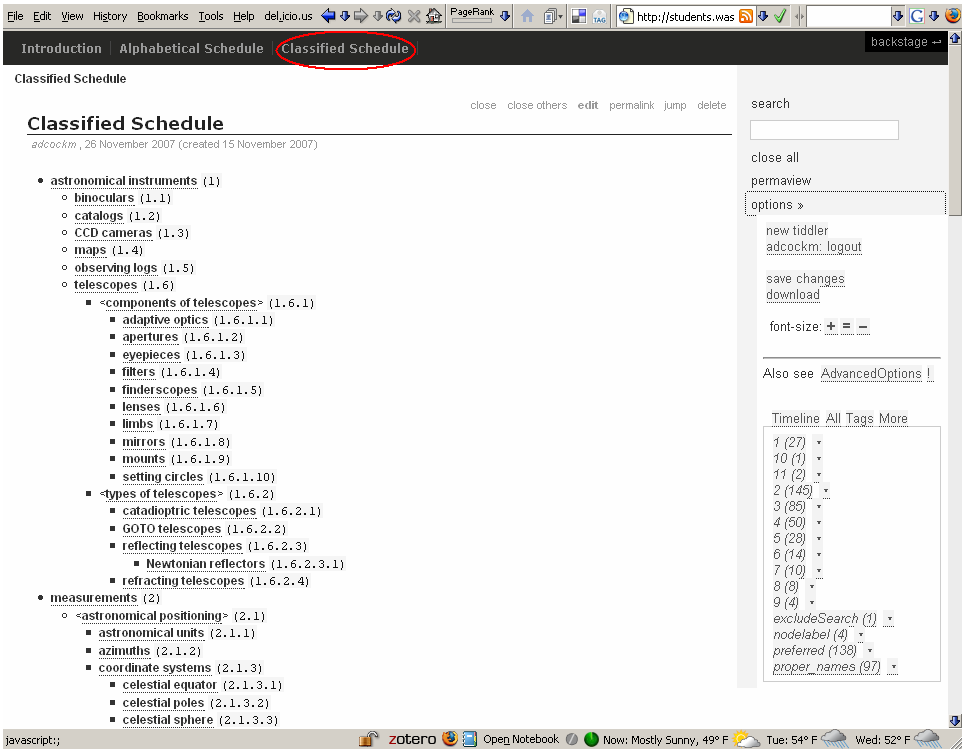


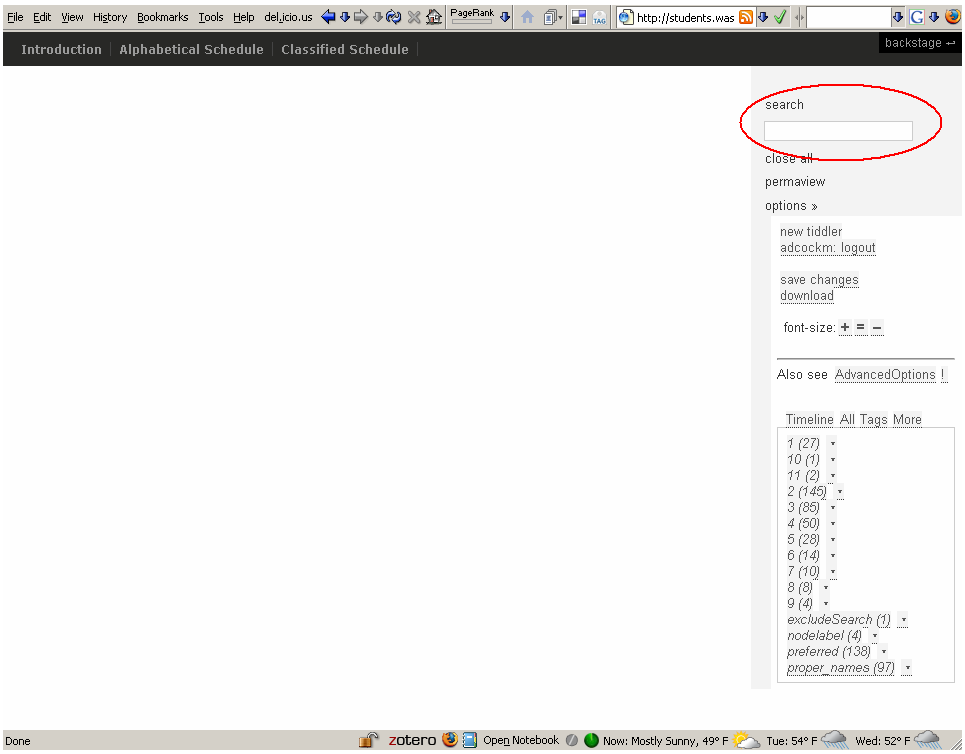
Figure out where the new planet should go…

There are several ways to do this. Clicking on the "Classified Schedule" link in the top toolbar area will bring up the Classified Schedule. You can search through this to find an appropriate place to put the new planet entry.

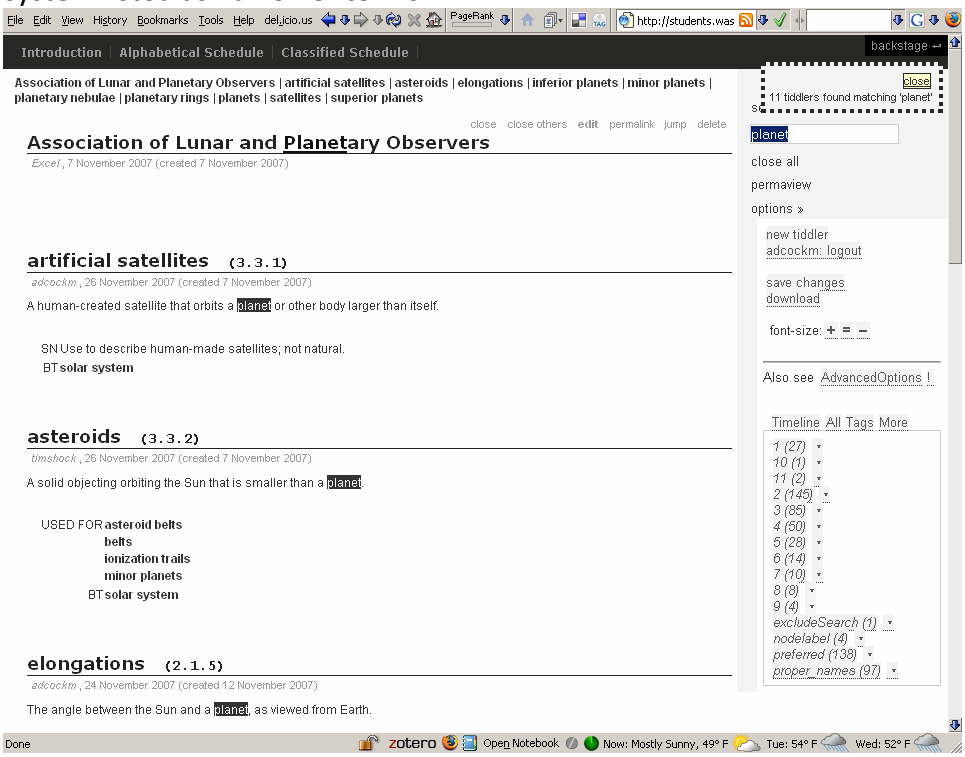
Michael Adcock



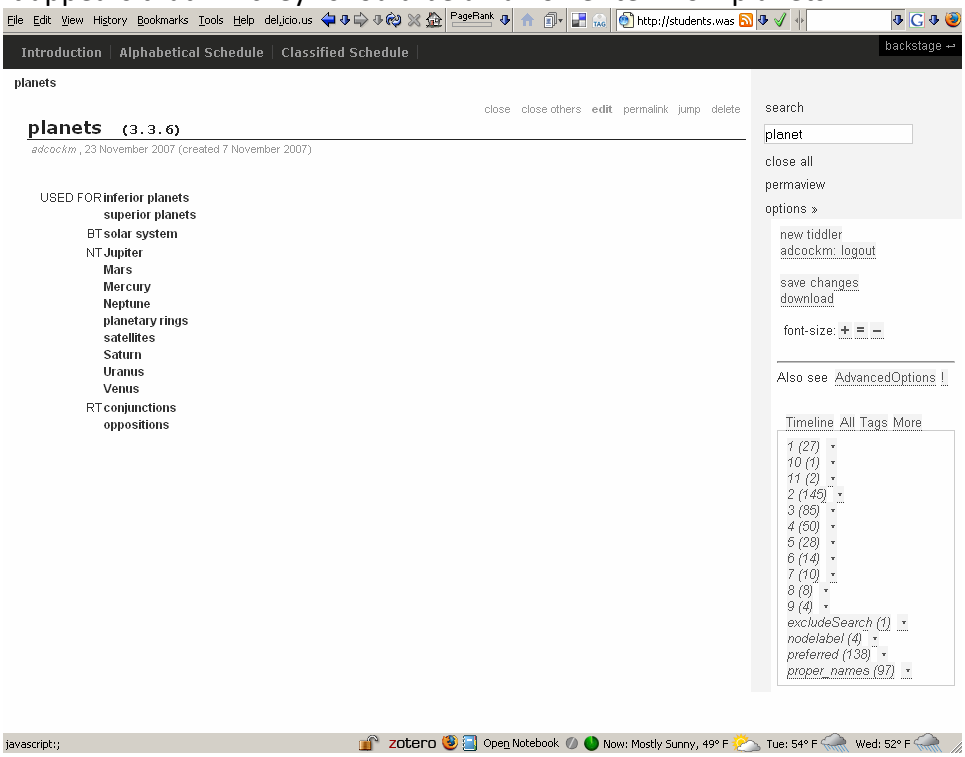
Another option would be to use the search box, on the right side of the screen, and perhaps search for “planet”.



This results in 11 matches, but if we scan through them we find that an entry exists for “planets” and it has “Jupiter”, “Mars”, “Mercury”, and the other planets in our solar system listed as narrower terms.



However you do it (and perhaps there are other ways – see if you can find any others!), it appears that “Mickey” should be a narrower term of “planets”.

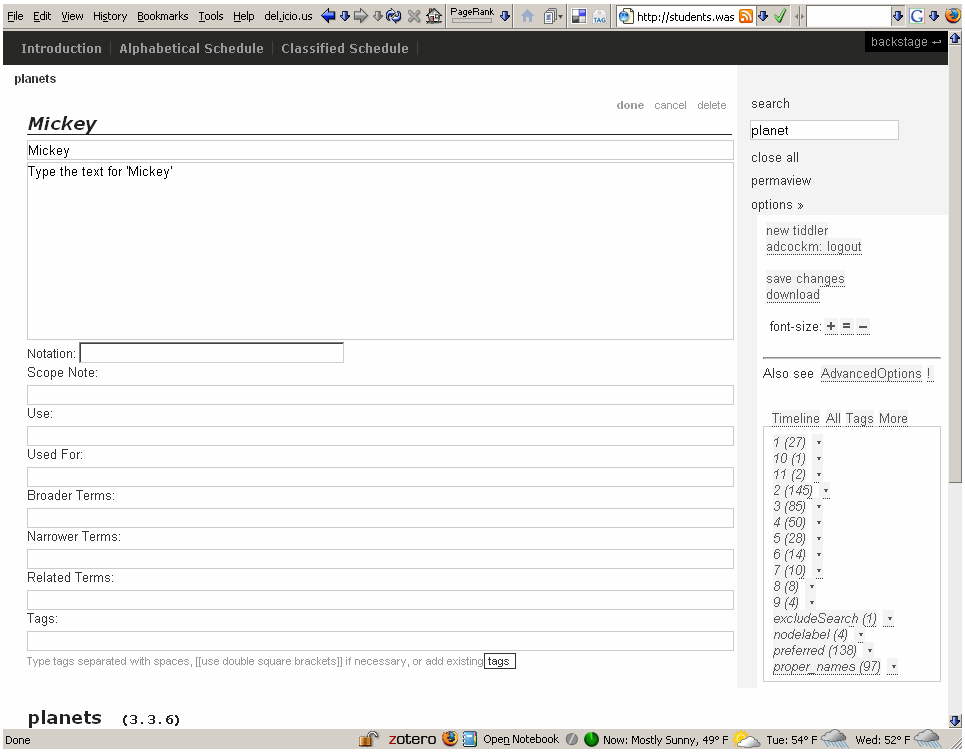


Add the new term…

There are several ways to add a new term. I provide details on one of them below. (The "new tiddler" link under "options" can be used to create a term as well.)

Double click on the content area of the "planets" entry. (Alternatively, you can click the "edit" link after the title.) This will put you in edit mode for the term.

In the "Narrower Terms" text box, put "[[Mickey]]" (no quotes) at the end of the line, with a space after the current last term ("Uranus"). Click "done" at the top. Now you will see *Mickey* in the list of narrower terms, but the term itself doesn't yet exist! Click *Mickey* to view the term, and go into edit mode.



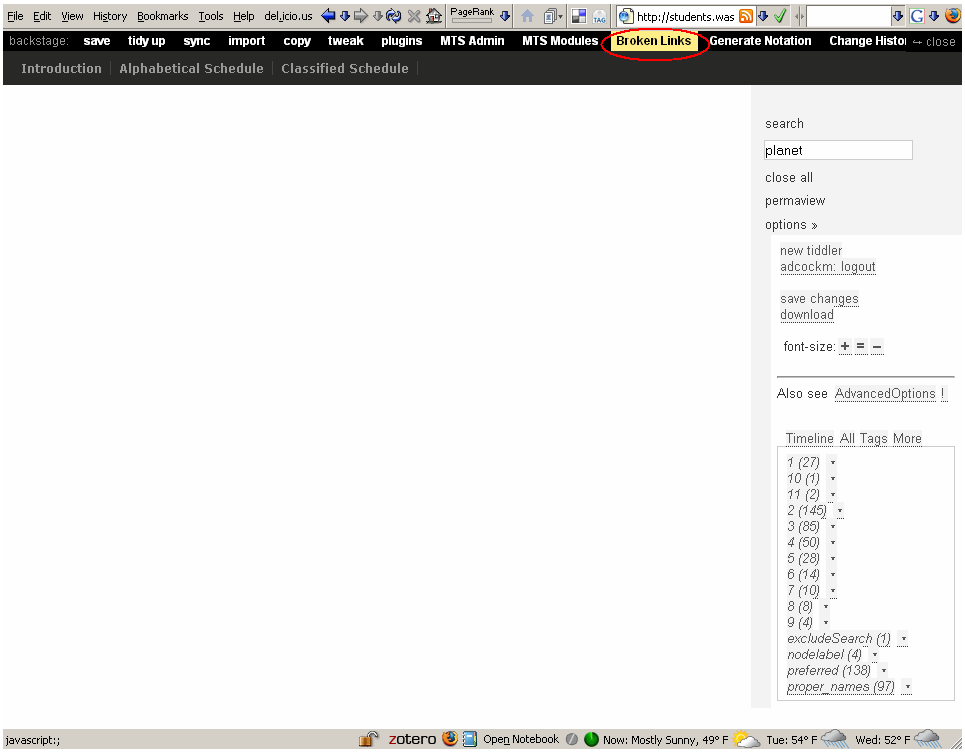
Remove the “Type the text for ‘Mickey’” text. If you have a definition for this term you can enter it here. Otherwise, leave it blank. To get this term to show up in the Classified Schedule, it needs to be marked as preferred. Add “preferred” (no quotes) in the “Tags” text box at the bottom, and click “done”.

Verify nothing is broken…

Now the term has been entered, we should always check that something hasn’t been forgotten, and nothing is broken before we save changes. Click the “backstage” link at the top right of the page.

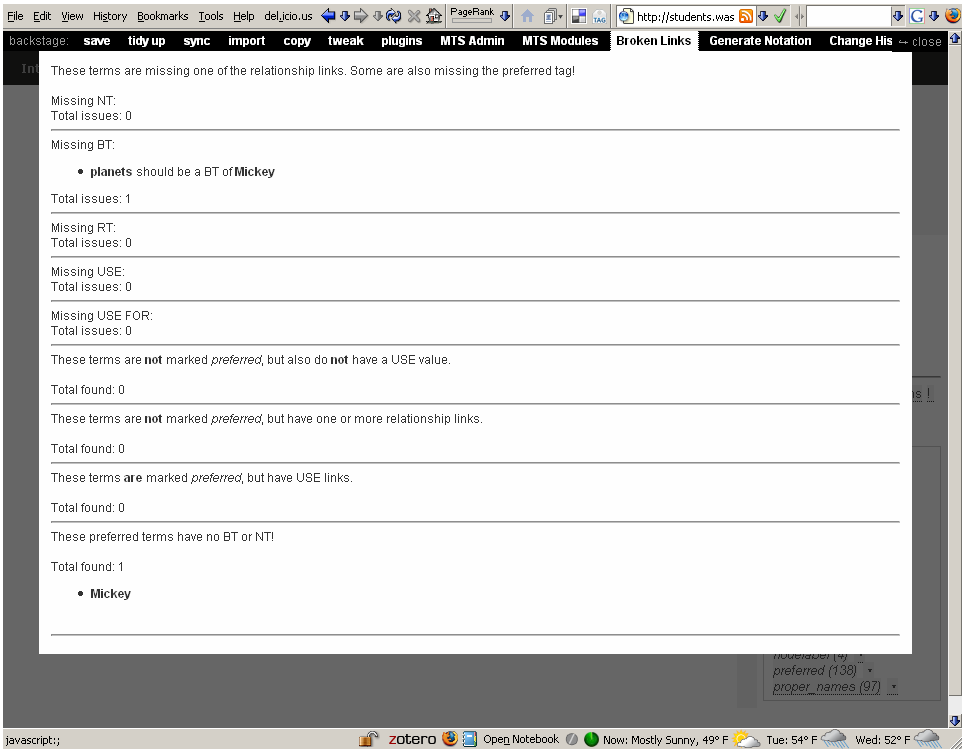
Michael Adcock

Now click “Broken Links”.

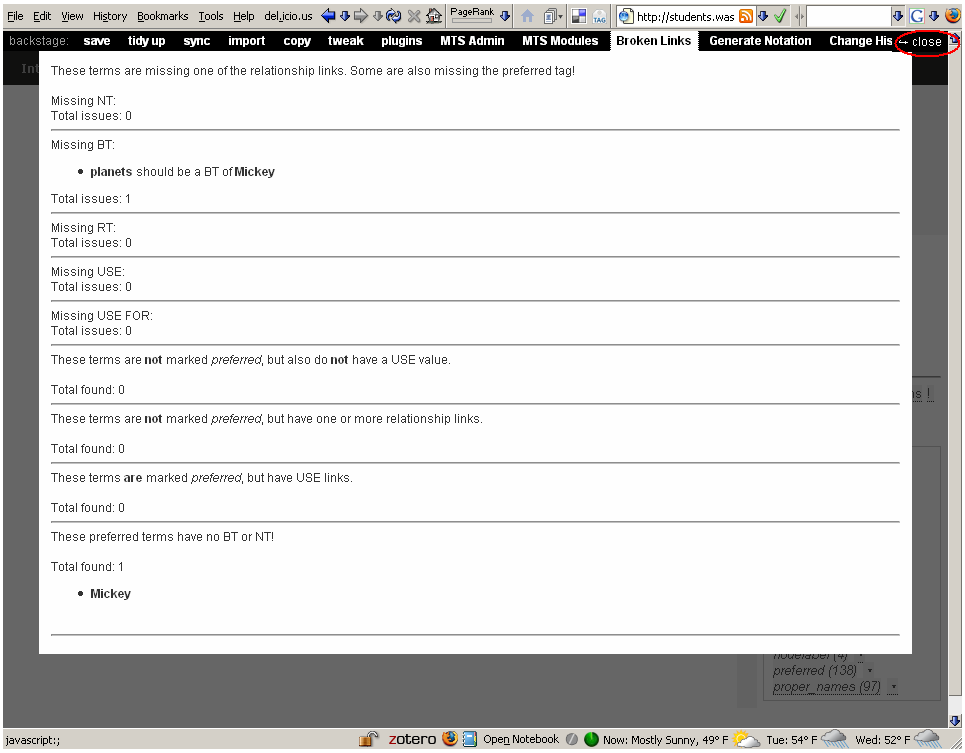


In a few seconds, a report will be generated that shows any problems. Oh no! We forgot to make “planets” a BT of “Mickey”! (Remember, in thesauruses all the links

need to match up, so if Mickey is a narrower term of planets, then planets must be marked a broader term of Mickey.)



Click “close” to get rid of the report window.



Go back to the entry for Mickey. (This can be done by searching for the name with the search box, or going to the classified schedule, or linking from “planets”, whatever.) Open it for editing, and add “[[planets]]” (case matters!) in the “Broader Terms” box. When you click “done”, you should see “planets” listed as a broader term.

Just to make sure things are good, go back and check the “Broken Links” again. It should find no problems.

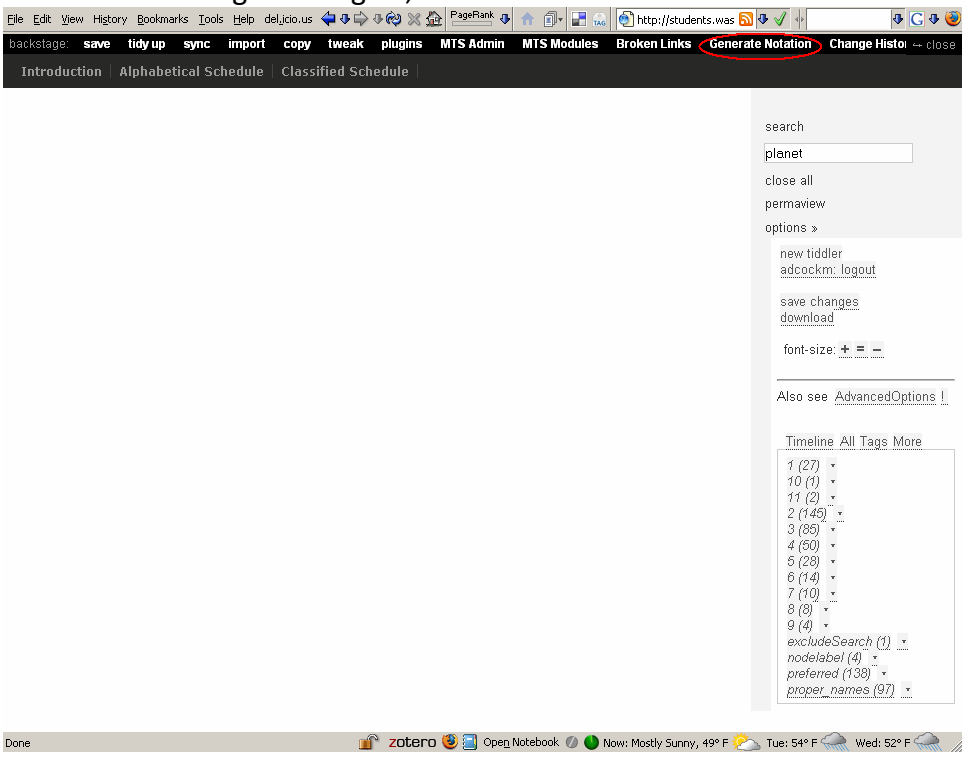
Generate notation…

Although we’ve added the new term, if you check the Classified Schedule, you’ll notice that it doesn’t have a notation value associated with it. (Those are the values in parentheses that indicate a unique identifier associated with the term, which also identifies it’s position in the hierarchy.)

- comas (3.3.3.1)
- comet tails (3.3.3.2)
- meteors (3.3.4)
- Moon (3.3.5)
  - lunar craters (3.3.5.1)
  - lunar maria (3.3.5.2)
- planets (3.3.6)
  - Jupiter (3.3.6.1)
  - Mars (3.3.6.2)
  - Mercury (3.3.6.3)
  - Mickey ()
  - Neptune (3.3.6.4)
  - planetary rings (3.3.6.5)
  - satellites (3.3.6.6)
  - Saturn (3.3.6.7)
  - Uranus (3.3.6.8)
  - Venus (3.3.6.9)
- Sun (3.3.7)
  - chromosphere (3.3.7.1)
  - corona (3.3.7.2)

If we had added lots of terms, or we had inserted a term between two existing terms, creating a deeper branch in the hierarchy, re-labeling all the notation values for each term would be a difficult manual task.

Go to the backstage area again, and click on “Generate Notation”.

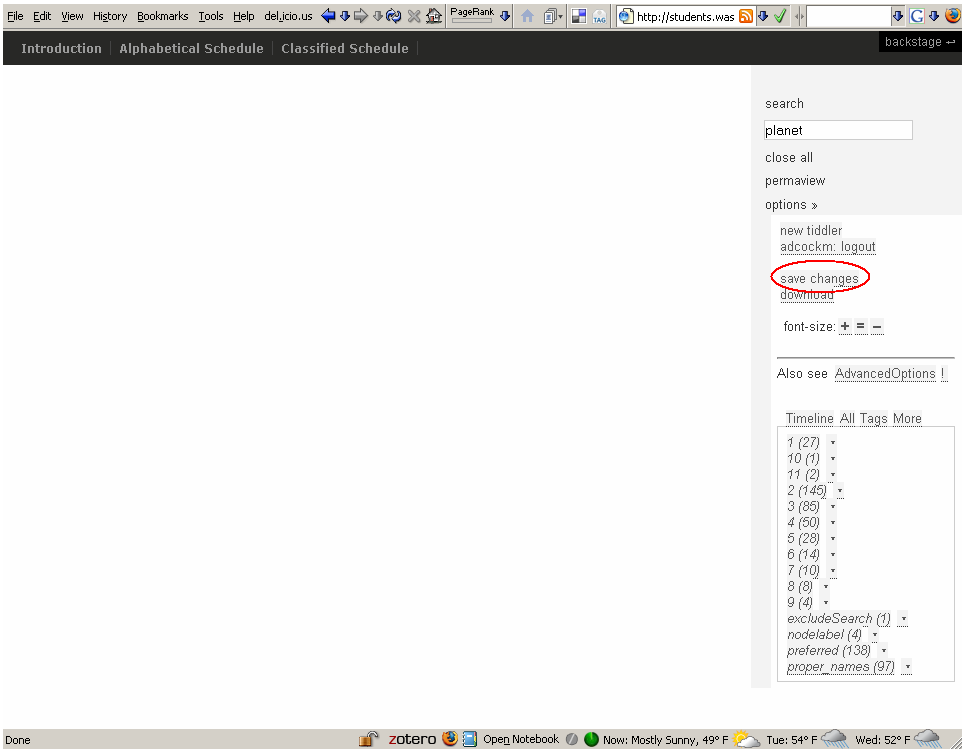


In a few seconds, the notation on all terms in the system will have been refreshed, and the new term, “Mickey”, will have a value.

Save…

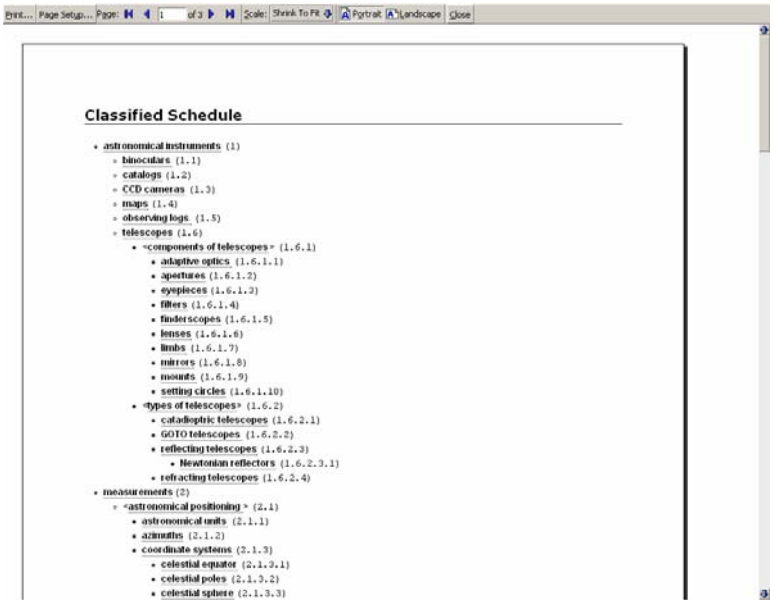
Under the options link, click “save changes” to commit your changes to the server.

Michael Adcock



Print...

The Alphabetical Schedule and Classified Schedule can be viewed and printed as necessary. To print, just make sure you are viewing what you want to print, and then issue the print command from your browser. Only the content you are viewing will be printed, and none of the links/buttons/features of the website will appear in the final document.



Michael Adcock – [adcockm@u.washington.edu] April 23, 2008

TC 518

Use Scenario – Task & Context: "TiddlyThesaurus"

Title: Instructor evaluates product as a learning tool

Situation: Brent decides to "try out" the TiddlyThesaurus to determine if it would be a useful tool for his class to use in LIS 537 Construction of Indexing Languages. Since adding terms to a thesaurus is a common activity for his students, he decides to try to add a new term to an existing TiddlyThesaurus example. He begins this task with his students in mind…

Method to address the situation:

- Read the documentation
- Review the example thesaurus
- Decide on a term to add
- Navigate to the page
- Log in
- Decide where the new term should go
  - Use the Classified Schedule
  - (OR) Use the search box
- Add the new term
  - Create new term from existing term
  - (OR) Create new term from scratch
- Verify that term relationships are correct
  - Yes, they are correct → move on to generate notation
  - No, they are broken → fix the problem and verify again
- Generate notation
- Save the updated thesaurus
- Produce output (ie. print)

Execution path:

Step 1: Read the documentation
Because he is methodical, Brent is one of those rare people who actually reads documentation before starting to use something new. When evaluating a resource for students to use, this is even more important. While the TiddlyThesaurus appears to have some minimal amount of documentation, he was hoping for a lot more. Since this is to be a learning tool for students, he would have liked separate documentation for instructors and for students. Having such targeted documentation would have helped him evaluate this tool even faster, because he could have easily dismissed it if it appeared not to support his teaching goals. Instead, what he found was the typical, and slightly cryptic "nuts and bolts" documentation often found with software.

Step 2: Review the example thesaurus[1]
Brent realizes that in order for him to come up with a realistic term to add to the example thesaurus, he needs to become familiar with its content and structure. (In the case of the student project, his students would select a topic for their thesaurus and make decisions about which terms to include relative to that topic.) After a quick look he discovers the example thesaurus domain is "amateur astronomy." He reads the integrated documentation about the domain and potential users of this thesaurus[2], and likes the fact that this is the first thing you see when you open the example. He also likes that example terms in the documentation are linked to the actual terms in the thesaurus. In addition to reading about the functionality available, the links make it easy to jump to a term and actually "play" with the functionality to better understand the features of a thesaurus.

Step 3: Decide on a term to add
Since the topic of the example is amateur astronomy, Brent decides to invent a new planet. Because he has a slight obsession for alpacas, he decides to name the new planet "Alpaca." Armed with a term to add, he is ready to add this term to the example thesaurus.

Step 4: Navigate to the page
Brent realizes the TiddlyThesaurus is web-based, and locates the URL of the example in the TiddlyThesaurus documentation. According to the documentation, this should work in all commonly used web browsers like Firefox, Internet Explorer, Safari, and Opera. This is comforting to Brent, because he knows his students have a variety of different PCs and Macs. While the iSchool tends to encourage use of one or two of the main browsers, he knows that some student will try to use a different one anyway, and he's glad that the tool will work with these.

Step 5: Log in
Since the TiddlyThesaurus supports concurrent, collaborative editing, Brent understands that he needs to log in to use the tool. With little effort, he finds the username and password in the documentation for the account to use while editing the example. When he attempts to use the account information to log in, he is slightly annoyed by the fact that the area to enter this information on the page is hidden under an "options" link. If he hadn't read the documentation, he would have had trouble finding it. Since he knows some students aren't

---

[1] This "step" could easily be broken out into a complete and separate scenario, and could point to such a scenario. This new scenario would describe the steps required to review and use a thesaurus, including navigating to the example, reviewing the documentation for that thesaurus (separate from the TiddlyThesaurus user documentation) to become familiar with the domain, searching for terms, looking at relationships between terms, etc. In this assignment, *the step is rather vague because the focus here is on the steps required to add a term*.

[2] This is NOT the same as the usage documentation for the TiddlyThesaurus. This documentation is specifically about the thesaurus content and users, and should be created as part of the thesaurus construction process when using the tool. It's an introduction/preface to the example, not documentation about the tool itself!

going to read the documentation, he realizes this could be an issue. However, he does like the AutoLogin feature, which remembers the username/password entered and automatically logs you in when coming from the same browser on the same machine. Although this feature is off by default, Brent wonders if this could cause an issue for students if several of them share the same machine. While he saw a message that told him his login was successful, he also doesn't see a clear indication on the page of who is actually logged in at the moment. This could also be a source of confusion.

Step 6: Decide where the new term should go

Brent reminds himself that he wants to add "Alpaca" as a new planet in the thesaurus, so he needs to find an appropriate location to place it. He assumes that since the example thesaurus is on amateur astronomy, it will contain a list of planets visible with the naked eye or amateur telescopes. Because he has spent years teaching LIS 537, he is familiar with the terminology and he decides to view the Classified Schedule. Although it takes a few seconds to display, he likes the fact that it is seemingly generated "on the fly" from the terms that have been entered in the system. He'd much rather his students spend time thinking about how to construct a proper thesaurus by effective use of relationships between terms, than have to worry about spending much time on the "grunt work" of formatting and editing a Classified Schedule. In any case, he reviews the schedule and locates an entry for "planets" that lists "Jupiter", "Mars", "Mercury", and others as narrower terms. This seems to be the appropriate place to add the new planet!

Step 7: Add the new term

Although Brent remembers reading that there are several ways to add a term into the thesaurus, he decides to choose the easiest from where he is currently located. He also wants to try this idea of creating a term "on the fly" from an existing term. He clicks on the "planets" link to view that term. Once it is open, he goes into edit mode and adds "[[Alpaca]]" to the list of narrower terms on "planets". He's not thrilled that he has to type the extra brackets around each term, but he figures it is just a property of the system and shouldn't really hamper students' ability to learn. It sure would be nice to not have to enter them, as it could add up to a lot of extra keystrokes when hundreds of new terms are entered… Since he doesn't want to spend a lot of time thinking about related terms and other properties, he leaves those boxes blank. He also remembers reading from the documentation that all new terms in the system must be tagged "preferred" to have them appear in the classified schedule. While this might serve as a reminder to students that only preferred terms appear in the classified schedule, it seems like this is an extra step that isn't required. While there should be some indication of whether the term is preferred or not, it seems silly to have to type the word in as a tag, for every preferred term entered into the system. Even for a small project with about 100 preferred terms, this would be cumbersome and annoying.

Step 8: Verify that term relationships are correct

Brent decides to verify that the new term is hooked up properly. He runs the check for Broken Links and feels embarrassed and slightly annoyed with himself because he forgot to add "planets" as a broader term of "Alpaca." While forgetting to add links in both directions is a

common mistake made by students, and a good lesson to learn, Brent thinks the TiddlyThesaurus should make life a bit easier on everyone. Adding the companion links automatically would hide the problem, and might detract from learning. But perhaps the tool could ask the user when adding a new link if they would also like to add its partner link. This sort of thing would be nice for broader/narrower, related/related, use/use for, and basically all relationships where it made sense. In any case, he goes back and manually adds the missing link, reruns the verification process, and proceeds now that the problem is fixed.

Step 9: Generate notation

Because he's been dealing with thesauruses for a while, Brent knows that creating the notation scheme is one of the last steps you do when creating a thesaurus. One of the strengths of using this TiddlyThesaurus seems to be the fact that you can add a new term and then generate the notation automatically. It should make updates a lot less painful because assigning notation to terms (one by one) is not the slow, manual process it used to be. However, one of the interesting things he'd like his students to think about in the class is what sort of notation scheme to assign to terms. He can't find a way to actually change the format of the notation in the TiddlyThesaurus, and it seems to only support a simple numbering scheme that applies to the levels in the hierarchy. This is unfortunate, and he wishes there was a way to specify the syntax/format of the notation and still allow the system to generate the values automatically. However, he does note that it is possible to edit the notation on each term in the system manually. It's just that by doing so, you end up ignoring the great time saving feature of automatic notation generation.

Step 10: Save the updated thesaurus

After a quick review of the classified and alphabetical schedules, Brent feels confident that his term has been added successfully and the changes are ready to be saved. Again, he finds it somewhat annoying that the "save changes" button is hidden under an options menu. He'd encourage his students and anyone else using the TiddlyThesaurus to save frequently so as not to lose any changes, so this should be an easy feature to find and use repeatedly.

Step 11: Produce output (ie. print)

Since the LIST 537 thesaurus construction assignment he has been giving his students has required a printed copy of the thesaurus to be turned in, Brent decides to print this example thesaurus and inspect it. The output appears clean, and clear. He does note that there is no obvious way to automatically show student names, the course number, and date on the printout. He also thinks it would be useful to be able to produce a Word document so he could use the commenting feature in that application and return the graded assignment to students.

Khue Duong
4/22/2008

Title: Astronomy hobbyist searches for information on eclipses

Situation: Lucie, an astronomy hobbyist, wants to find out how much information on eclipses has been created in the Tiddly thesaurus. She goes in the system and tries to figure out different ways of getting the information she wants.

Method to address the situation:

Being a first-time user of the Tiddly thesaurus, she first reads up the introduction about the Pacific Northwest Amateur Astronomy Thesaurus to find out the scope of the thesaurus, its intended audience, features of the online interface and how the terms are organized. She pokes around a bit at different corner of the page, clicking on the login section, getting a feel for how the "alphabetical schedule" and the "classified schedule" are different in its information organization.

She then types in the search box with the tem "eclipses." What she finds is a short explanation about the term, where it is used for and the shorter, narrow and equivalent terms. Although the terms are listed in alphabetical order, she is surprised to see the term "annular eclipses" occurs before the broader term "eclipses." In her mind, she thought that "eclipses" should come first and that the "tree structure" nested relationship in a typical classification system is not fully realized in the thesaurus.

She sees many buttons on the right hand corner of the screen such as "close," "close others," "view," "permalink." She clicks on the "jump" option and sees the pull-down option to drill down to all the terms related to the concept of eclipses. She likes this feature.

She clicks on the "alphabetical schedule" and finds that the terms are indeed in alphabetical order. Since there are many terms, she dreads scrolling down to the end of the list to see the term "zoadical light." She thinks that having a list of alphabets on the top of the page where she can click on, say, the letter U and get all the terms under U would make her search less hectic.

Remembering vaguely the faceted classification schema she learns in her library and information science classes, she clicks on the "classified schedule." She admires the neat set of descriptors, all organized in "umbrella" facets such as "astronomical instruments," "measurements," "observable objects," and "observable occurrences," plus "observation" and "time."

At 11 pm, she goes to bed and plans to share what she learns about "eclipses" terms with her husband.

Ann Swearingen

April 22, 2008

Use Scenario: Add Concept to TiddlyThesaurus **User Persona: Sylvan Douglas**

Task: Add one or more new terms to existing TiddlyThesaurus.

Situation and Introduction:

At the course residency for LIS 537 (Constructing an Index Language), as an introduction to the quarter-long thesaurus building project, the students are given a homework assignment. They are asked to add several terms to an online thesaurus built from what is called a Tiddlywiki . The TiddlyThesaurus (http://students.washington.edu/adcockm/amateurastronomythesaurus/) is a web application which provides support for the creation of a thesaurus, and for use of the created thesaurus for indexing or searching.

This task is assigned after the lecture, so several of the thesaurus-related terms used by the instructor are not completely unfamiliar (broader term, narrower term, hierarchy, etc). The instructor intends for the students a) to practice analyzing the relationships among terms (e.g. narrower or broader concept, etc) and b) to familiarize themselves with this online tool, which they will use in creating their own thesauruses. The first introductory task is to add the name of a theoretically newly discovered planet to an existing TiddlyThesaurus –the Astronomy Thesaurus. It is expected to take no more than an hour—it is an ungraded exercise that will not be turned in, assigned more for exploratory purposes than anything else.

Sylvan is a student in the class, who is familiar with organizational structures such as thesauruses after taking LIS530, which is a prequisite for LIS537. She has also used wikis and other online applications, so she is accustomed to these types of Web 2.0 interfaces, as well as (of course) the structure of traditional webpages. However, she has never seen a TiddlyThesaurus before.

Assigned Procedure: [Process LifeCycle] [This could be broken into smaller segments, using a flowchart.]

Sylvan's first goal is to add the name of a newly discovered planet ("Mickey") to the thesaurus. According to the instructions she must ideally:

- Open web browser, and type URL of thesaurus into navigation bar
- Select options on right side of page.
- Login using u/p provided by instructor
- Figure out where the term belongs, structurally and semantically

["Figure out where the new planet will go."how do you decide where to look? This decision encapsulates a whole host of other decisions which are much less quantifiable]

- A: Select classified schedule [here's a place where things could go awry] option at top of page. Browse until

  OR

- B: Search using search box
- Locate the related term identified in the previous steps (e.g. another planet)
- Add term to thesaurus in the appropriate location
- Indicate relationship(s) of added term to others in the schedule
- Run link checker to make sure there are no "breaks" in the indicated relationships
- Correct errors

Optional: print out schedule by following the directions for generating notation.

Execution: [Audience Segment: inexperienced user accomplishing task , not using directions]

Sylvan navigates to the TiddlyThesaurus URL: she's in a hurry, so she doesn't bother with the directions—it's just a website after all. She examines the interface to orient herself and locate the program's commands. In design terms, the layout of the right hand navigation bar is familiar from many websites, as are the search box and the tabs at the top of the page. It takes some time to get accustomed to one of the site's odder features—when she clicks on a term, it doesn't open a new page. Instead, a type of "rotation" takes a box to the top of the page whenever a term on the right bar is selected. Is there a thesaurus style "meaning relationship" between the boxes when they rotate to the top of the page, or is that simply a way of prioritizing or tracking what you're looking at? On the tabs at the top of the page, she recognizes the term classified schedule from the lecture (though she is not sure what precisely it means) and the meaning of "alphabetical schedule" is obvious. Selecting either takes her to lists of astronomy-related terms which clearly have relationships to one another, indicated by their arrangement on the page-- recognizably a thesaurus. (One term in a list is more broad in meaning, another means something more specific, or is an example/illustration of the term above it in the list).

As she moves the mouse across the screen she notices some pieces of text appearing and disappearing. Clicking on one of the buttons at the top("close all") causes the whole screen to go white—to close--and she has to try a couple of things to bring the screen back—clicking on "introduction"ann works. This page gives information about the origins and function of the application, but no clear directions on how to add a term (or where). In the interests of time, she decides to use the assignment handout, but first investigates other areas. The "schedules" make perfect sense, and it is cool to click on terms on the side bar and be hyperlinked to their location, so she tries that a few times. She tries to open up information about the term planet by clicking on it, but that doesn't work. After a bit of trial and error she opens up the content space by clicking "view" when it is highlighted in the area around "planet." She sees metadata fields, and how related terms are laid out—it's starting to make more sense, so she adds the

term to the list of other planets. The format of using brackets is familiar from contributing to wikis, and of course the concepts of broader and narrower terms are quite basic. She has to hunt around for a close button, which is at the top of the page.

She is a little discouraged at the thought of using this application in her indexing class if it is actually assigned as a tool. She enjoys the dynamics of the site, and of being able to “move around” semantically as well as “spatially” (insofar as you can move spatially in two-dimensional space. However, it seems like it could add to the workload, rather than lightening it, as has been suggested—it has taken her much longer than she expected. She rereads the directions and decides to talk to the professor about it in person.

Appendix G:

Redesign Proposal

Michael Adcock, Khue Duong, Marisa Haberfelde, Ann Swearingen
TC 518
April 30, 2008

Redesign Proposal: "TiddlyWiki Thesaurus"

Introduction and History

The TiddlyWiki Thesaurus (TWT) is a web application which can be used to create a thesaurus for indexing or searching. It was originally created by MLIS[1] students during a course on the construction of indexing languages, as an aid to their thesaurus construction process. The tool was built out of a standard TiddlyWiki[2], through code customization and additions. A test copy[3] of the TWT has been created for our evaluative testing.

The TWT supports collaboration through a login system. It is primarily text based, and allows users to enter terms and related information, and to indicate relationships between terms. Automated checks for broken links and other errors are provided. Simple change tracking history is available. The alphabetical schedule, classified schedule, and notation for preferred terms are automatically generated. Documentation can be added through the standard TiddlyWiki interface. In addition to the alphabetical and classified schedules, hyperlinks are provided to allow for navigation between terms. A simple search box allows the user to find terms, or content (definitions, scope notes, etc.) associated with terms.

Several strengths of this application were identified to support its potential use as an educational tool:

- provides a framework to manage terms and their relationships
- generates reports (alphabetical and classified schedules)
- supports a distributed work environment with concurrent editing

This proposal focuses on a redesign effort to produce a version of the tool that can be used for educational purposes. In addition to general usability improvements, the intention is to redesign the application so it can be effectively used by students in future courses as a learning tool to aid them in creation of their thesaurus projects. Because it was not designed with this audience and purpose in mind, many improvements are likely to be identified. To inform redesign recommendations, several activities will be described in this document.

---

[1] MLIS program at UW: http://www.ischool.washington.edu/mlis/default.aspx
[2] The basic, standard TiddlyWiki can be found here: http://www.tiddlywiki.com/
[3] The test version of TWT can be found here: http://students.washington.edu/adcockm/UCD/

Objectives

Wants and Needs Analysis

A wants and needs analysis is a brainstorming method used to gather data about user needs from multiple users simultaneously. An analysis of the ideas generated by the brainstorming session will help us identify and prioritize the most important wants and needs from the entire pool of ideas that were generated The users interviewed for the wants and needs analysis will fit the profile that we have created (please see the "User Profile" section for more information).

The wants and needs analysis has two objectives:

- To scope the features or information that will be included in the next release of the product.
- To rank or prioritize these features so as to prevent "feature creep" (the tendency to add in more and more features over time.)

Cognitive Walkthrough/Contextual Inquiry

A cognitive walkthrough involves asking the target user to describe all the thoughts, feelings, and ideas that come to mind when examining specific questions or messages, and to provide suggestions to clarify wording as needed.

A contextual inquiry is when the designer or researcher observes and interviews a user in context. This can mean watching a user interact with a system or product at work, home, school or anywhere else that would provide context to their actions. This form of research is much less passive than observation alone as the user becomes a partner in the researcher by helping the researcher to interpret his or her actions.

A contextual inquiry has two objectives:

- To provide context to the user's actions
- To provide a detailed account of the user's interaction with the product or system

Heuristic Analysis

A heuristic analysis is a step by step inspection of the product or system based on the principles of usability.

A heuristic analysis has two objectives:

- To ensure that a product or system adheres to the basic rules of principles of usability
- To bring to light any glaring usability issues to be explored during a full usability test

Once all of these activities have been conducted and a redesign of the TiddlyWiki Thesaurus has been carried out, we will conduct a usability test on that redesign. The usability test will be detailed at a later date when specifics about the redesign are known.

Method

We will first try to find out what would be useful or ideal features of a TiddlyWiki used to build a thesaurus. Since the participants in the wants and needs analysis study and the cognitive walkthrough/contextual inquiry have little or no experience using the product, we aim to gather a wish-list from the users, targeting essential functions that would aid users in achieving their task. The information gathered will be incorporated subsequently into the heuristic evaluation and usability study with two experienced users who have used the interface to build their Amateur Astronomy Thesaurus[4].

Procedure:

The study consists of three participants, a facilitator, a scribe and two other members of the User-Centered Design (UCD) team. The facilitator will ask questions as the scribe records the agreement on the white board. The other two members will record their observations and keep track of other ideas expressed in the session. Some of the questions include:

- If you have an ideal tool to look up a term in a thesaurus, what features should this system include?
- Consider your favorite search engine, what features does it have? What makes that system your favorite?
- What terminologies or terms would aid you in your searching?

After 15 minutes of gathering the wish-list, the three participants will search for a term in the test copy of the TiddlyWiki Thesaurus. They are encouraged to explore the interface and try different ways to search for a particular term. Three of the UCD team members will pair up with the participants as they explore the system. The participants are encouraged to verbalize their search strategies using the think-aloud protocol. Each UCD facilitator verifies his/her observation with the user, making sure that our understanding of users' information-searching behaviors is accurate. The think-aloud strategy will help the UCD team understand better the rationale behind the participants' navigation path and further fine-tune their preparation for the upcoming usability testing.

After the search exercise, the three volunteers will participate in a de-briefing session. The facilitator will ask for their assessment of the TiddlyWiki Thesaurus: what features they like, what features they find confusing, and any suggestions the participants might have. Comparing with the items in the wish-list, the volunteers will then confirm their opinions and provide a rationale for their judgments.

The UCD team will subsequently summarize their cognitive walkthrough/ contextual inquiry findings and plan out their usability testing with two

[4] http://students.washington.edu/adcockm/amateurastronomythesaurus/

experienced users of the TiddlyWiki Thesaurus during a heuristic evaluation. A prototype[5] embodying the redesign proposal will be created, and the usability test will be performed on this prototype. A final report and presentation will follow.

User Profile

The primary user of the Tiddlywiki Thesaurus (TWT) is a student thesaurus builder, who meets the following main criteria:

- Currently enrolled in the UW Information School as an MLIS or MSIM[6] student
- Currently or previously enrolled in LIS 537, Construction of Index Languages
- Familiar with Web 2.0 applications

Age	22+
Gender	Male or female
Work Title	UW iSchool Student MLIS OR MSIM
Work Hours	Part time employment/full time enrollment OR Full time employment/part time enrollment
Education	Baccalaureate at minimum
Technology	- Comfortable with Microsoft Suite applications and other web-driven technology - Access to high speed internet connection at home and/or at school
Experience level	Novice to experienced user of the TWT. Required to have taken LIS 530 or IMT 530, and ideally one other class in cataloging
Location	Residential and distance students
Income	Varies
Relevant Limitation(s)	-Culture/language as some users may be non-native speakers -Inability to type
Family status	Varies

[5] The actual form of the prototype is not yet determined. It may be working prototype of some sort on the computer, paper prototype, etc.
[6] MSIM program at UW: http://www.ischool.washington.edu/msim/default.aspx

Recruitment

Participants will be recruited by Ann Swearingen and Michael Adcock. Via email, Ann will contact three MLIS students currently enrolled in LIS 537, Construction of Indexing Languages. Michael will contact two MLIS students who previously took LIS 537, and who have some familiarity with the TWT. A total of five students will be scheduled, one of whom is included for attrition. The same participants will be used in the initial inquiries and the basic usability study

Compensation

Participants will be compensated with a social outing, at a time most convenient to them.

Proposed Schedule: Tiddlywiki Thesaurus Redesign

TASK	DATE FORECAST	STATUS
Preliminary User and Task Analysis	4/9	Completed 4/9
User Profile and Persona Descriptions	4/16	Completed 4/16
Use Scenario	4/23	Completed 4/23
Recruit participants	4/24	Completed 4/24
Draft initial proposal	4/23-4/27	Completed 4/28
Wants and Needs Analysis Cognitive Walkthrough/Contextual Inquiry Debriefing	4/28	Completed 4/28
Submit finalized proposal	4/30	Completed 4/29
Submit Cognitive Walkthrough/Contextual Inquiry Results	5/7	
Submit Heuristic Evaluation	5/13	
Usability Study	5/17-5/18	
Usability Evaluation	5/20	
TWT Redesign Presentation	6/4	
TWT Final Redesign Recommendations Report	6/4	

Appendix H:

Wants & Needs Analysis
and
Cognitive Walkthrough

Michael Adcock, Khue Duong, Marisa Haberfelde, Ann Swearingen
TC 518
May 7, 2008

Exercise 4 – Wants & Needs & Cognitive Walkthrough: "TiddlyWiki Thesaurus"

Introduction and Procedure

Due to the nature of our project, we decided a contextual inquiry was out of the question. The web application is not routinely used and there is not yet a well developed user population. We chose to run a wants and needs analysis session followed by a cognitive walkthrough, making use of the think-aloud protocol. Three Information School graduate students were recruited from the current LIS 537 course, Construction of Index Languages. They were familiar with principles of thesaurus construction, but were unfamiliar with TiddlyWiki applications in general and the TiddlyWiki Thesaurus in particular.

Wants and Needs Analysis

We met in small room in Mary Gates Hall. Marisa facilitated the session, and Khue acted as scribe, recording user comments on a whiteboard. Ann and Michael observed and took notes. We posed a question to the participants: "Imagine an ideal software-based thesaurus building tool. What would it look like, and what would it do?" The following ideas featured prominently:

- Search and browse: by category, maintain history (recent searches)
- Different ways to view and display the terms: hierarchical, associative, tag clouds
- Sort and manipulate terms: graphical representation of sorting (drag and drop terms into buckets), visual relationships (Soergel "card sort" of thesaurus terms)
- Minimize tedium of data entry: reduce typing, include auto-completion, variant spellings, display relationships during term harvesting, tag terms with source document

Cognitive Walkthrough

Each researcher accompanied a participant to a different computer, and asked them to perform a series of exploratory tasks. The participants were asked to:

- "Take a few minutes to explore and tell us what you find/think."
- "Search for the term **eclipse** as many ways as you can."
- "A new planet called **Goofy** was found:"
    - "Tell/show us how you would add the term."
    - "Why did you do it that way?"
- "Use the classified schedule to find **coordinate systems** and tell us the relationships you find."
- "Find **astronomical seeing** and tell us about it."

Several themes emerged from the two sessions:

- Functional expectations: the application didn't function like a normal website, and didn't follow website conventions)
- Unfamiliar/unclear names of tools and features
- Hidden features and controls
- No help or guidance documentation
- Seems disconnected from the thesaurus construction processes

Design Implications

- New documentation should be written that focuses on using the TWT to construct a thesaurus
    - Brief introduction
    - Context sensitive help.
    - Answers to Frequently Asked Questions
    - Wizards for commonly performed tasks.
- Look and feel should be consistent with standard web site conventions
    - Use of color, highlighting, and fonts.
    - Handle browser operations (back button, CTRL-F for find, etc.)
- Provide more advanced search features
    - Maintain search history.
    - Enable search by categories, facets, tags.
- Make data entry easier and more efficient
    - Auto-completion feature.
    - Anticipate relationships between terms.
    - Track source of harvested terms (cite documents).
- Visualize term relationships
    - Tag clouds
    - Trees
    - Buckets
    - Soergel card sort

Activity

Take a few minutes to explore and tell us what you find/think.

Search for the term ***eclipse*** as many ways as you can.

A new planet called ***Goofy*** was found:

- Tell/show us how you would add the term
- Why did you do it that way?

Use the classified schedule to find ***coordinate systems*** and tell us the relationships you find.

Find ***astronomical seeing*** and tell us about it.

- browse - search
- sort
by facets
- Reference point

hierarchical structure

word map

- Most recent search
- frequent / popular search terms
- Less cut/paste. Show facet available
- Drag/drop into a bucket *

less typing

CLOUD TAG

Show duplicates
Suggestion, truncation

did you mean this?

all the options in the same place

drop down menu

GRAPHIC/LINE visualization
for relationships

- automatic bibliography
function

search history

Dialog: show document count

VISIO BOARD

Appendix I:

Heuristic Evaluation

TC 518
May 14, 2008

Exercise 5 – Heuristic Evaluation: "TiddlyWiki Thesaurus"

Heuristic Evaluation

A set of criteria was designed to assess the TiddlyWiki Thesaurus (TWT) across the areas proposed by Nielsen and others, closely following the format of the Heuristic Evaluation System checklist credited to Deniese Pierotti at Xerox Corporation. While our assessment included some generic usability questions, it was also intended to investigate issues specific to the design of the TiddlyWiki Thesaurus. The goal was to create an evaluation that balanced standard questions of web interface design with an investigation of some of the TiddlyWiki Thesaurus's unique features. A future version of this checklist will be even more closely tailored to the TWT's functions, and may feature revised heuristic categories.

Approach and Procedure

We recruited two iSchool students who had used the TWT for a class project during the fall of 2007 to serve as evaluators for this investigation. They were thus quite familiar with both the TWT application and with the methods and principles of thesaurus construction. They had not participated in any of our previous exercises or evaluations. We met with them on May 10th, 2008 in the computer labs at Mary Gates Hall. Two investigators accompanied each student evaluator, and each group of three conducted its session in separate rooms to minimize distractions. Both investigators in each pair took notes for the sake of consistency, to gather as much information as possible and to triangulate results. The evaluators were encouraged to spend a brief period re-orienting to the thesaurus, and were asked to perform the same simple tasks we had used with the participants in the cognitive walkthrough on April 28th, 2008. For the remainder of the sessions (approximately two hours) the evaluators worked through the heuristic evaluation checklist item by item, while sharing their thoughts and observations with the investigators. The team members wrote down their comments, took notes, and asked questions.

Outcome

If participants made similar comments about the application's features or similar issues came up more than once in their responses, this became our basis for deciding what a significant problem was, and what was not. For example, problems with the meaning and location of the "close all "option were referred to several times by each evaluator, in the contexts of clarity, navigation and memory load. Other prominent issues include the following:

- There is **no "undo" button**.
- There is a **lack of documentation** or help.
- Important **information is hidden** or hard to keep track of. Some is buried in chunks of written content, as in the introduction. In other cases the minimalist style, absence of color, location of tabs and disappearing toolbars obscure terms.
- The alphabetical schedule has excessively **slow load time**.
- **Terminology is unclear**. In addition to confusion about the close/close all option, other confusing terminology includes "permalink,""close others," "done," "permaview," "view," "jump," "backstage," "orphans."
- The **position of some features/options** is unclear and/or illogical. This includes sidebars and toolbars, as well as options like "close," "jump," "logout," and "status."
- **Sorting of search results** is misleading; it presents results by alphabetical order rather than relevance.

The evaluators also made direct suggestions for revisions and additions to the thesaurus. These include:

- Collapsible terms lists
- Changes to the sorting/display of search results
- Providing more search methods of
- Linked A-Z list
- Mass deletion feature; otherwise terms must be deleted singly, by hand
- Detailed documentation for two sets of users, administrators and thesaurus builders
- The ability to open terms in new windows
- Revised names of specific functions ("tiddler" to "term"; "done" to "save"; etc)

Redesign Implications

A redesign of the TWT will need to address issues of navigation, documentation, clarity, error correction and skills. Based on the results of the heuristic evaluation, the highest priority items include the following:

- A set of user documentation will need to be created, for more than one type of user.
- Names of options (terminology) will need to be clarified and revised.
- Aesthetic and architectural changes to the interface will be required.
- Features may need to be added such as a mass deletion function, alternative search and display options, and collapsible terms lists.

Further Considerations

We would like to schedule additional heuristic evaluations with evaluators who have different areas of expertise. If possible, we would like to arrange for members of iSchool faculty to evaluate the TWT as a) a technical application, b) an interactive technology and c) a potential pedagogical instrument.

Heuristic Evaluation: TiddlyWiki Thesaurus

Clarity				
	Yes	No	N/A	comments
Does the interface make it clear when you have selected or deselected something?				
Are the phrases and word choice easy to understand?				
Are you able to easily locate the menus and selections you are looking for?				
Do the names of the commands indicate clearly what they will do?				
When you click on a tiddler or link, do response times seem appropriate?				
Is it clear what the sidebar features do?				
Are the "tiddlywiki" functions clear to you?				
Are the terms used in the menus consistent with terms used in thesaurus building?				
Please add any other comments not covered by these questions:				

Consistency				
	Yes	No	N/A	comments
Does the layout of the application make sense with your understanding of how a thesaurus functions?				
Is the language of thesaurus construction used consistently throughout the site?				
Is the use of fonts and color internally consistent within the TWT?				
Is the use of fonts and color consistent with web page conventions?				
Please add any other comments not covered by these questions:				

Help and Documentation				
	Yes	No	N/A	comments
Does the introduction to the TWT make sense?				
Does the intro information help you use the TWT?				
Please add any other comments not covered by these questions:				

Navigation				
	Yes	No	N/A	comments
Is it easy to manipulate elements of the tiddlywiki?				
Is there any sort of undo method if you make a mistake?				
Is it easy to find your way around?				
Is it obvious where and how to make selections?				
Please add any other comments not covered by these questions:				

Memory load				
	Yes	No	N/A	comments
Is the text broken up in a way that is easy to follow?				
Is the information you need placed where you are likely to be looking on the screen?				
Is it easy to remember the sequence of actions you must take to do something?				
Please add any other comments not covered by these questions:				

Errors and Error Prevention				
	Yes	No	N/A	comments
If something doesn't work, can you figure out why?				
Can you edit your work?				
Are there enough cues for how to accomplish goals or tasks with the TWT? (for example, adding a term, or looking up a term)				
Please add any other comments not covered by these questions:				

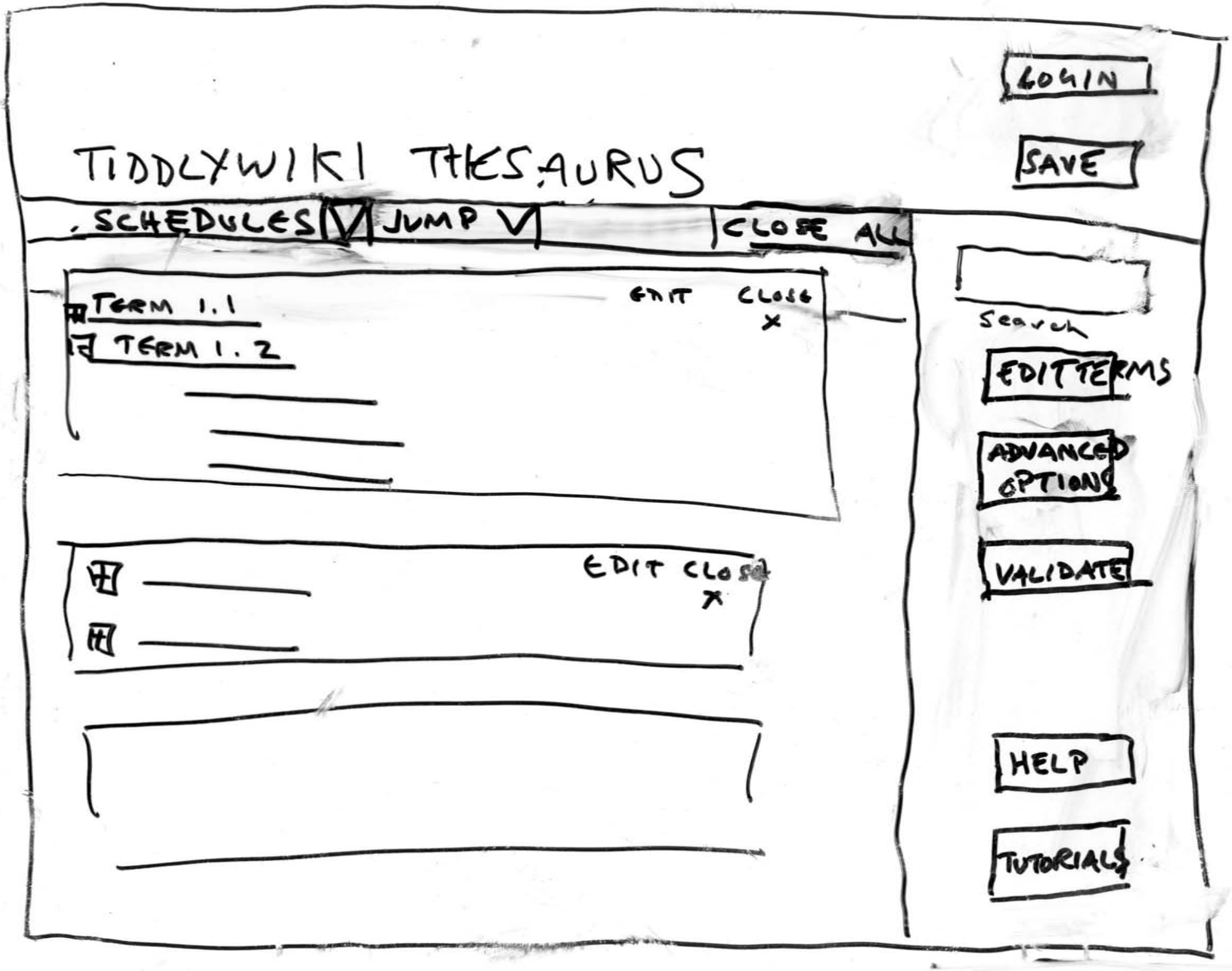
Aesthetics and Enjoyment				
Is only information essential to decision making displayed on the screen?	Yes	No	N/A	comments
Is the layout and design visually pleasing?				
Are the “tiddly” features of the application attractive?				
Overall do you enjoy using the thesaurus?				
Did you find using the “tiddlywiki” features enjoyable				
Please add any other comments not covered by these questions:				

Flexibility and Efficiency				
Do you think the TWT could be used by people with different levels of experience in building the thesaurus?	Yes	No	N/A	comments
Please add any other comments not covered by these questions:				

Skills				
	Yes	No	N/A	comments
Is the operation of the TWT easy to learn?				
Could you easily explain how to use the tiddlywiki to another person?				
Does the set up of the TWT let you see relationships among terms?				
Does using this tool—to look up terms or to enter terms— help you understand anything about how a thesaurus works conceptually? PLEASE COMMENT.				
Please add any other comments not covered by these questions:				

Appendix J:

In-Class Prototyping


TIDDLYWIKI THESAURUS
LOGIN
SAVE
SCHEDULES
JUMP
CLOSE ALL
TERM 1.1
TERM 1.2
EDIT
CLOSE
EDIT
CLOSE
Search
EDIT TERMS
ADVANCED OPTIONS
VALIDATE
HELP
TUTORIALS

Appendix K:

Usability Evaluation

Michael Adcock, Khue Duong, Marisa Haberfelde, Ann Swearingen
TC 518
May 28, 2008

Usability Evaluation: "TiddlyWiki Thesaurus"

Introduction

For this investigation we recruited four participants, all second-year UW Information School graduate students in the MLIS program. Two of them are currently engaged in building a thesaurus for LIS 537, Constructing an Index Language, and two of them completed the project in previous quarters (spring and fall 2007, respectively). They all have or had the same instructor, course materials/readings, and project requirements. Two of the participants were already somewhat acquainted with a current version of the TWT. One of the other participants has a degree in computer science, and all four were very computer- and internet-savvy.

We held the usability evaluations over a two day period (May 25-May 26, 2008), in a lab in Mary Gates Hall. The sessions were run by two team members, who coordinated taking notes, managing the paper prototypes, and facilitating the interviews and conversations. Each session took about an hour to complete. Refreshments were offered, and gift cards were provided as incentives. Each participant was fully briefed at the beginning of the sessions as to what would take place, and was asked to sign a consent form. The sessions were audio-taped for future reference.

Procedure

Each session was guided by a set of protocols laid out in an administrator script, to ensure consistency in the proceedings of each team.

The evaluation consisted of five segments:

1. After introductions were made, the participant was asked to work through a series of four simple tasks with each of the paper prototypes, using a think-aloud protocol.
2. After testing each prototype, they were asked to complete a short evaluation survey in which they ranked the features involved in each task on a seven-point Likert scale.
3. Next, they were asked to draw a picture of their ideal thesaurus building tool using pen and paper, with no time limits given.
4. In a final interview, they were asked to explain the features and functionalities of their sketch.
5. Finally, they were asked to verbally assess the prototypes and add any other comments, suggestions or questions.

Methods

We chose to use low-fidelity paper prototyping for several reasons. It was the most practical evaluative tool in this context: it is portable, inexpensive, and relatively easy to reproduce and modify. Because it was a low-fidelity representation, it let us focus on essential features of the thesaurus application, in this case issues which emerged as priorities in the earlier investigation: navigation and terminology. This method highlights these problem areas, permitting both investigators and participants to see past any design "clutter" to questions of function and basic features. (As one participant noted, it let him "get inside" the tool).

Two prototypes were demonstrated, each consisting of four frames. Changes to the existing TWT design were made, to the navigation bars, terminology and layout. These included dropdown menus, simplified side

navigation, renamed controls, relocated search, save and login functions, and new "housekeeping" features. The second prototype also featured vertical panels which could be expanded and collapsed, allowing users to customize their views of what they are working on at a given time. Users have indicated a need to work with content in different views, and to see their work in juxtaposed panels.

The post-task surveys were based on the results of the recent heuristic evaluations, as well as the earlier cognitive walkthrough. The surveys tacitly encouraged the participants to focus on navigation**,** vocabulary and layout issues which had emerged in those earlier investigations. Asking them to do a survey encouraged them to think about those issues in relation to each prototype.

The sketching exercise was designed to elicit original critiques and suggestions from the participants. The participants were given pens and unlimited sheets of 8 ½" X 11" white pape, and given unlimited time to draw. They were encouraged to talk while they worked, if they wished to, and were allowed to annotate the drawings in their subsequent explanations of their features. Sketching allowed the participants to engage with the application in a more concrete way, and to productively expand on their critiques of the prototypes.

The final interview questions enabled participants to focus on the same issues raised in the earlier survey questions, but in relation to their own sketches.

Findings

Several broad themes emerged in the sessions, which both confirmed and expanded on earlier discoveries. Areas of note were terminology, functionality, user process, and feature requests.

Terminology

- Participants found some of the terms to be unclear or confusing. They consistently identified problems with the same terms, and made similar suggestions for modifications. "Error checking" and "build" were disliked by two of the users, and one user perceived "help" and "error checking" as having negative connotations.
- "Save locally" and "save to server" created confusion, though participants liked having both options. The term "download" was suggested as an alternative for "save locally."
- "Track changes" was popular as a feature, but one participant suggested that it be renamed "edit history" and others weren't clear on what it meant. The same individual also assumed it was analogous to the Microsoft Word "track changes" feature, and could be toggled on and off as an editing tool.

Functionality

- All of the participants commented on the structure of the "help" dropdown menu. Two wanted the glossary function moved to the side navigation bar because it would be more convenient there.
- They wanted to see the alphabetical and classified schedules broken out of their dropdown menu and split out on the top navigation bar.
- Three of the users expressed a need to be able to work/edit in one window while being able to see changes to the classified schedule in an adjacent window.
- "Error checking" was a popular feature (despite objections to the term itself). Users expressed a desire to check their work after making changes or adding terms to the application.
- One participant pointed out the need for feedback and confirmation after performing tasks such as edit, save, add and delete.

- How to select terms for editing was unclear. Participants wanted to know how they would "get at "a term, if they could click directly on a hyperlinked term into an editing space, or if they would need to search the thesaurus to select and then edit a term.
- Participants generally liked the TWT.

User Process

- Participants identified several functionality issues related to the steps involved in performing some basic tasks.
    - All of the participants were anxious about the lack of clarity about deleting terms. ("The delete button is scary!")
    - The steps for selecting a term to delete were unclear, as were the expected result. (E.g., would it delete all of the terms, the thesaurus as a whole, a single term?)
    - The process of selecting a term to be deleted was also unclear, whether it could be selected directly from the schedule, or if the search function would need to be used.
    - Two participants asked about a mass-delete option.
- Concerns about saving their work compounded their worries about the deletion process. All the participants noted that they would save their work frequently, and saw saving it to the server as more reliable than saving locally.
- Participants wanted to be able to add terms in more than one way:
    - As single terms
    - As imported spreadsheets
    - Via a suggested "quick add" function.
- One user found the search function unclear, in that it was difficult to differentiate whether it would search only the thesaurus content, or the application as a whole

Feature Requests

- Automatic backup/save functionality.
- Enhanced support for online collaboration, through an expanded "track changes" function which would let users follow their team members' work in a distributed environment, such as online versions of the project. This would include the option to annotate terms with comments and source information, to sort by different elements, and to accept/modify changes made by other team members.
- A "quick add" feature, located in a fixed pane.
- "Sort by" functions within hierarchy display (for example: sort by date added, source, etc.).
- "Drag and drop" text from workspace to hierarchy list, or in chunks from one part of the hierarchy display to another, in order to represent hierarchical meaning relationships visually.
- Incorporation of colors into facet display, to support sorting of broad concepts and terms through a type of associative visual "coding".
- Administrative options which would permit customization; a modifiable interface.
- A separate toolbar for all of the functions which modify terms (add, edit, delete, save).

Redesign Implications

- Specific terminology related to critical tasks needs to be reworked.
- The tool needs to support online collaboration more effectively.
- The search function is ambiguous, and seems to be of little value when building a thesaurus.

- The user needs to be able to look at the work he is doing on the classified schedule from different perspectives
    - Zoom in on a specific term
    - Pull back and view the entire structure of the thesaurus

- People think of the relationships between terms visually. Meaning-relationships within the classified schedule need to be represented—and manipulated—visually.
- Graphical elements such as color coding, pictures and diagrams would help users identify groups of related terms.
- Users see the classified schedule as the focal point of the tool, and the main way to manage concepts.
- Care should be taken not to lose the current strengths of the design.

Administrator Script

Preparation

BEFORE starting the test, ensure the following are available and ready:

- 2 administrator scripts
- audio recorder + 2 60 min tapes

For each participant:

- consent form
- full set of prototype #1
- full set of prototype #2
- task list
- 2 participant surveys (one for each prototype)
- blank paper and pens/pencils
- interview script

Greetings and Introductions

[Shake hands] Hello _____, and thank you for participating in our usability test today. I'm _____ and I'll be conducting this test. This is my colleague [indicate colleague] _____ who'll be assisting me, taking notes and observing. Please have a seat.

Introduce TiddlyWiki Thesaurus and Usability Testing

Today we are going to have you perform some tasks with the web application, the TiddlyWiki Thesaurus. Keep in mind that we are not testing you and there is no such thing as a correct answer. We are testing the TiddlyWiki Thesaurus. Our focus today will be to assess how usable the TiddlyWiki Thesaurus is for you. We will do this as you perform a set list of tasks. Your actions will help us identify possible trouble areas and indicate place where we might improve the design.

Consent Form

To be able to use the information we gather from you during this test we need you to fill out this consent form. You are not obligated to sign this form and can at any time decide to change your mind. Additionally, once the test starts you can end it at any time for any reason. This is done completely with your permission and entirely at your discretion.
[Give participant Consent Form] Please fill this out and do not hesitate to ask any questions you might have.

Introduce Testing Mechanisms

We will be recording your actions by taking notes and using an audio recorder [indicate recorder].

In order to assist us in understanding your thought process and your choice of what actions to take, we would like you to employ what we call, thinking-aloud protocol. This is a method where you speak aloud your internal thoughts to express why you have chosen certain actions and why you might be having trouble with a certain task.

Although the TiddlyWiki Thesaurus is a web application, we will not be using a computer today. Instead we will use paper prototypes. We will ask you to perform a series of tasks, and would like you to interact with these prototypes as if they were a real application. As you speak aloud your internal thoughts, please also say what you are doing when interacting with the paper prototype. For instance, to click on an item, simply point to it and tell us what you are doing, and why you are doing it. One of us will act as the "computer", and will swap out the paper prototype as necessary after you complete your action, and tell you the result of that action. We cannot, however, tell you specifically what to do.

Introduce Task List and Test Procedure

We are going to have you perform a series of tasks using two different prototypes. These tasks will be performed with one prototype, and then the same tasks will be performed with a second prototype. We have all the tasks written on a sheet of paper here [indicate task list]. When we proceed, you will read the task and attempt to perform the task to the best of your ability, while implementing the Think Aloud Protocol. As mentioned earlier, we ask you to tell us what you are doing, and why you are doing it. When you believe you have completed each task, please let me know and then I will prompt you to continue to the next task. People sometimes forget to continue to talk aloud. Forgetting is completely normal but this is a very valuable method to use in gaining insight into the design of the TiddlyWiki Thesaurus. I may, periodically, remind you to use the think aloud protocol by saying, "Please continue to think aloud." (Facilitator: use only as a last resort, making sure to try and use inline prompting)

After we administer the sequence of tasks for one prototype we will ask you to take a very short survey and rate the tasks we asked you to perform in a few ways. This will give you a chance to express your immediate impressions. We will then proceed to the second prototype and follow up with another short survey. Time will be available at the end of the study to discuss overall issues with both prototypes. [Begin recording audio]

Are you ready? [wait for a positive response] Then please begin.

[Administer test for prototype #1] [Administer survey for prototype #1]

[Administer test for prototype #2] [Administer survey for prototype #2]

Sketching

Now we'd like *you* to show us *your* ideal interface. We'd like you to make a rough sketch of how you think the layout of a thesaurus construction tool should look, and what options should be available. You can look back at the earlier prototypes, but you should not restrict yourself to them. What sort of tool do you wish you had in your current LIS537 class? Please show us.

Post-Test Interview

Alright! Thank you for completing the tasks. Now we would like to take just a few more moments of your time and get your impressions of the TiddlyWiki Thesaurus. We have a few questions for you, and would like to hear any additional suggestions you might have.
[Administer Post-test Interview]

Thank you once again for participating in this Usability Test of the TiddlyWiki Thesaurus. You have our gratitude for helping us out today. Good bye. [Indicate door]

UNIVERSITY OF WASHINGTON
CONSENT FORM
Student Project for TC 518: User-Centered Design

Contact: Mark Zachry, Instructor of TC518 - email: zachry@u.washington.edu

Student team: Michael Adcock – [adcockm@u.washington.edu]
Khue Duong – [khduong@u.washington.edu]
Marisa Haberfelde – [risa1618@u.washington.edu]
Ann Swearingen – [annswe@u.washington.edu]

PURPOSE AND BENEFITS
Today you are being asked to participant in a usability study, which is part of a student project for a class in User-Centered Design. This study provides students with the experience of evaluating the usability of technology products, processes and other consumer goods.

PROCEDURES
As a participant in this study, you may be asked to do one or more of the following:

- try a set of tasks using a product
- think out loud while performing these tasks
- fill out questionnaires
- take part in an interview.

While you are participating in this study, our team will observe you and record information about the session. Additionally, we may record audio for all or some of the study session.

RISK, STRESS, OR DISCOMFORT
This study will not expose you to risk, stress, or discomfort beyond that normally encountered when using a computer or other technology, being recorded, or completing questionnaires.

OTHER INFORMATION
Once the results of these studies have been tabulated, your name will be removed from all materials associated with the study in order to ensure confidentiality. No one other than the investigators named above will be viewing the data collected from today's study. Some of the findings from this study may be shared with project sponsors or in an educational setting. You are free to refuse to participate in the study and may withdraw at any time.

If you have any questions, you may ask now or contact a member of the study team at the email addresses provide above.

_____
Signature of Investigator Date

The study described above has been explained to me, and I voluntarily consent to participate in it. I have had an opportunity to ask questions and understand that future questions I may have about the research or about subjects' rights will be answered by the investigators named above.

_____
Signature of Participant Date

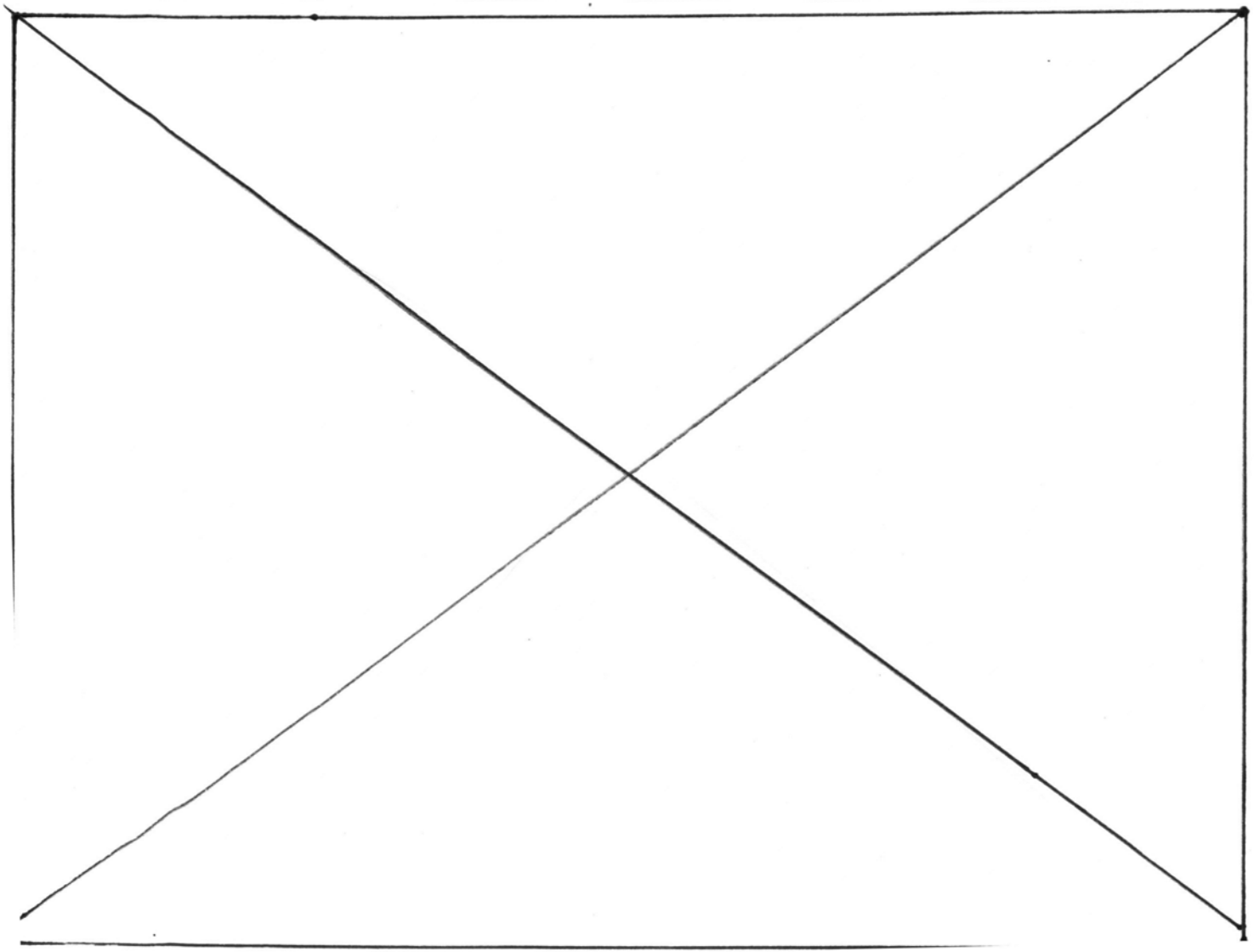
_____
(please print name)

TITLE

LOG IN

SAVE TO SERVER

INTRO | V | SCHEDULES | V | HELP | V



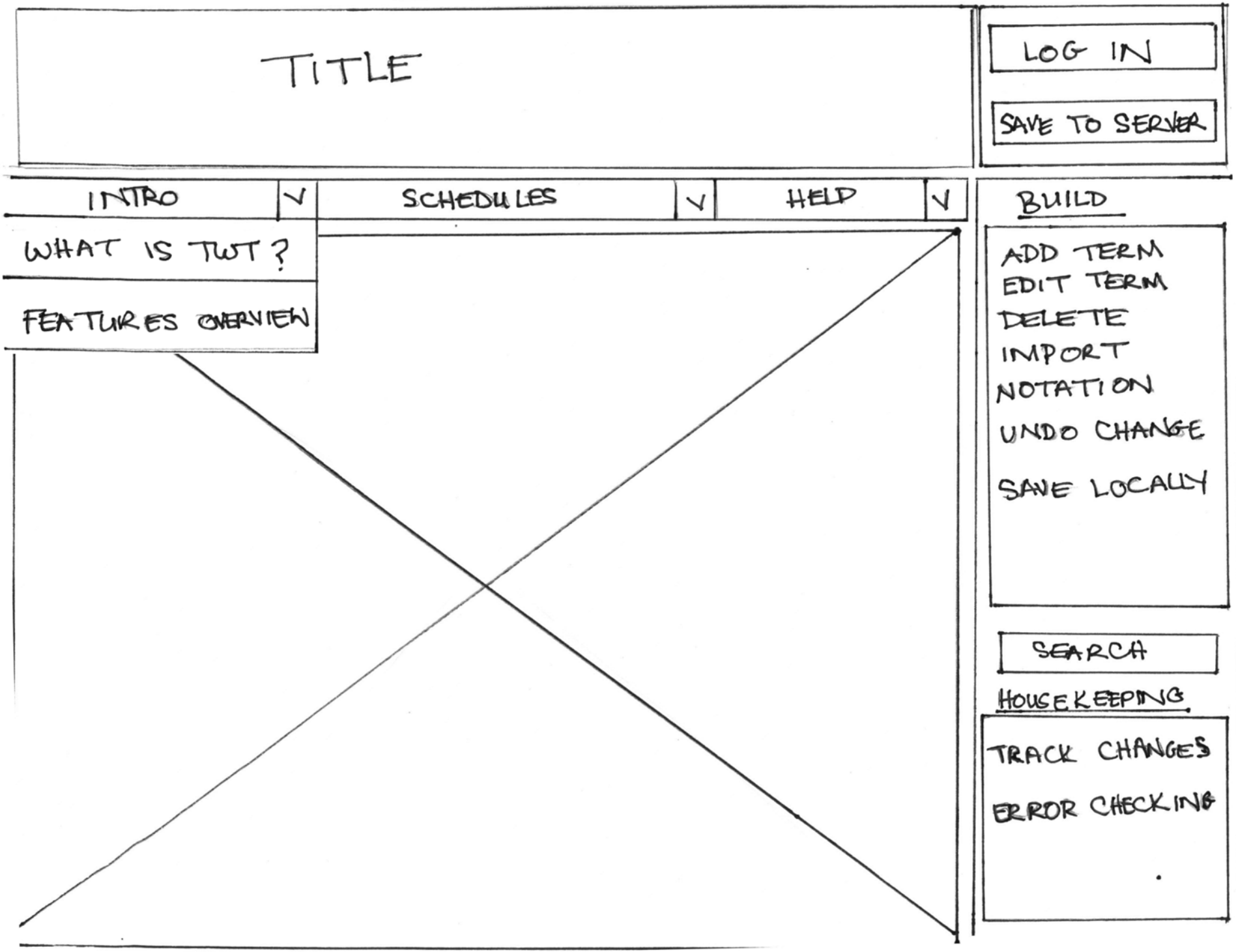
BUILD

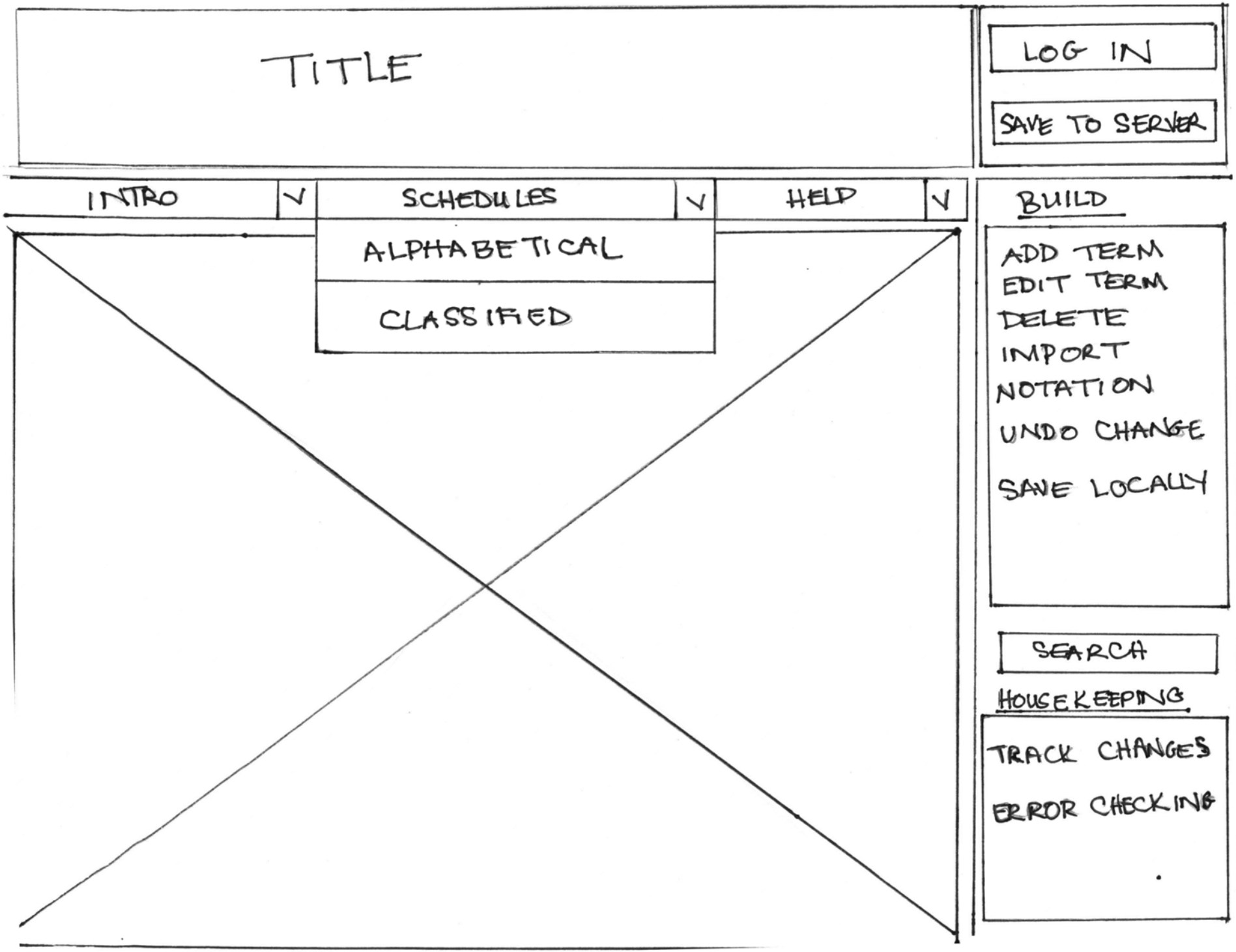
ADD TERM
EDIT TERM
DELETE
IMPORT
NOTATION
UNDO CHANGE
SAVE LOCALLY

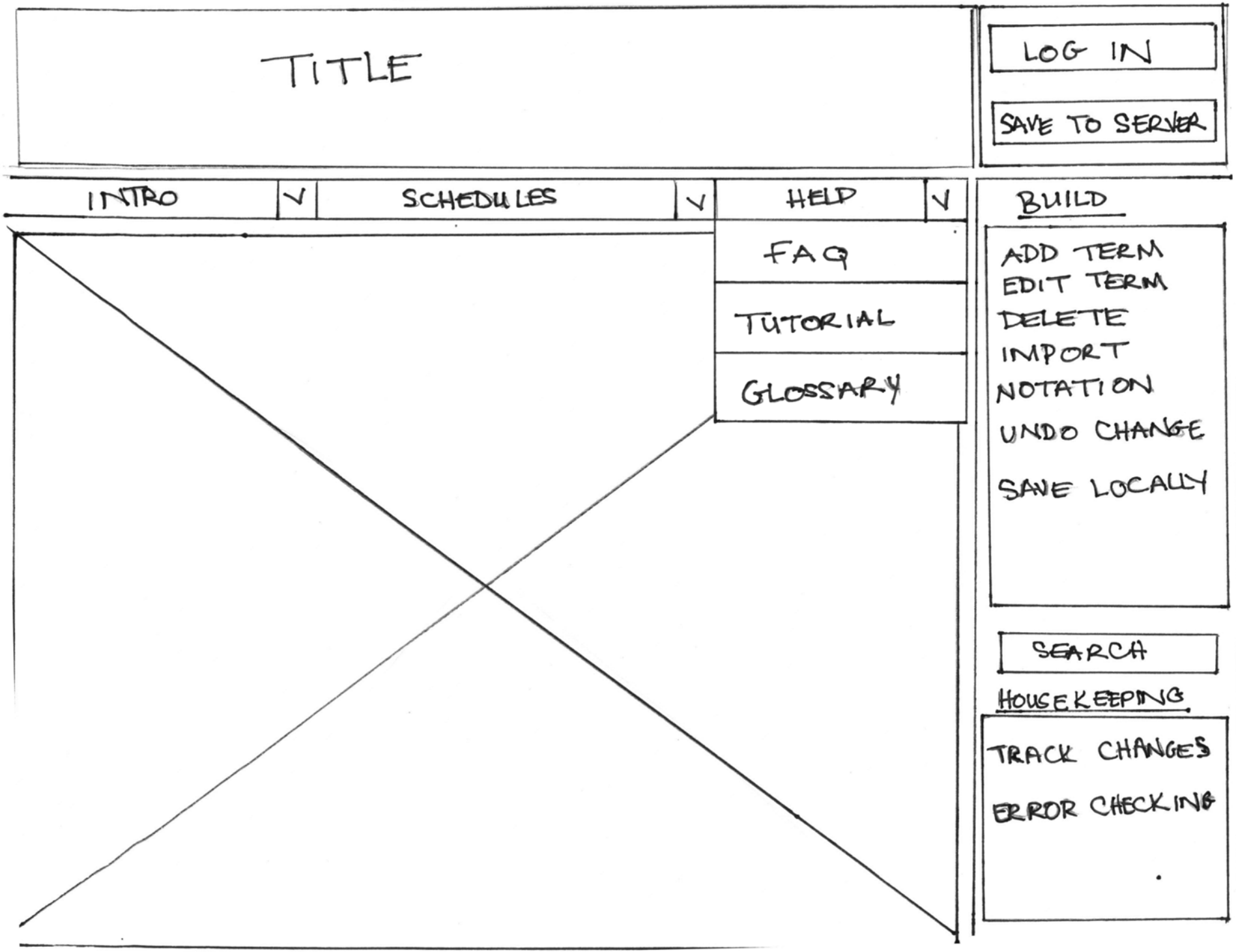
SEARCH

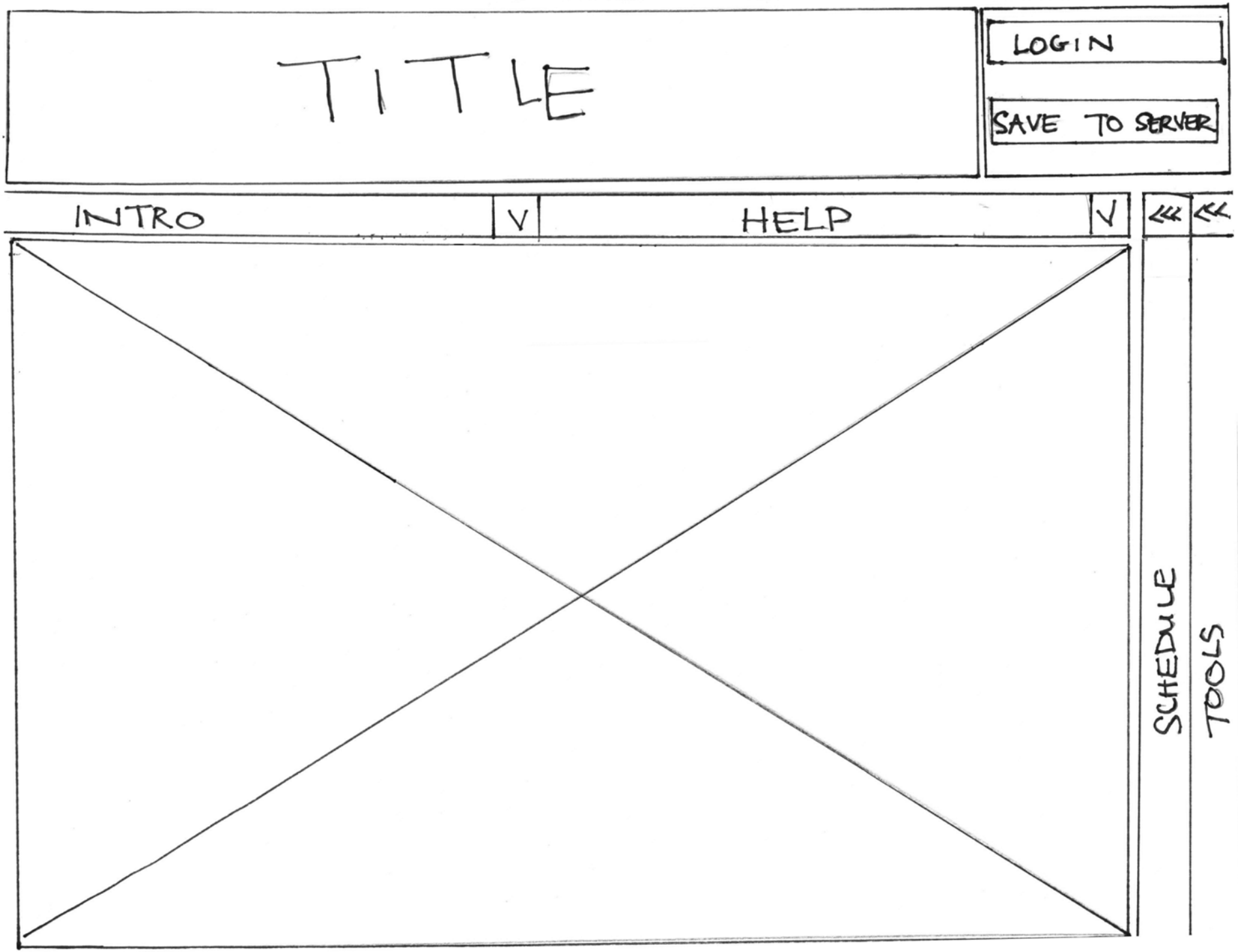
HOUSEKEEPING

TRACK CHANGES
ERROR CHECKING


TITLE
LOG IN
SAVE TO SERVER
INTRO
V
SCHEDULES
V
HELP
V
WHAT IS TWT?
FEATURES OVERVIEW
BUILD
ADD TERM
EDIT TERM
DELETE
IMPORT
NOTATION
UNDO CHANGE
SAVE LOCALLY
SEARCH
HOUSEKEEPING
TRACK CHANGES
ERROR CHECKING


TITLE
LOG IN
SAVE TO SERVER
INTRO
V
SCHEDULES
V
HELP
V
ALPHABETICAL
CLASSIFIED
BUILD
ADD TERM
EDIT TERM
DELETE
IMPORT
NOTATION
UNDO CHANGE
SAVE LOCALLY
SEARCH
HOUSEKEEPING
TRACK CHANGES
ERROR CHECKING


TITLE
LOG IN
SAVE TO SERVER
INTRO
V
SCHEDULES
V
HELP
V
FAQ
TUTORIAL
GLOSSARY
BUILD
ADD TERM
EDIT TERM
DELETE
IMPORT
NOTATION
UNDO CHANGE
SAVE LOCALLY
SEARCH
HOUSEKEEPING
TRACK CHANGES
ERROR CHECKING

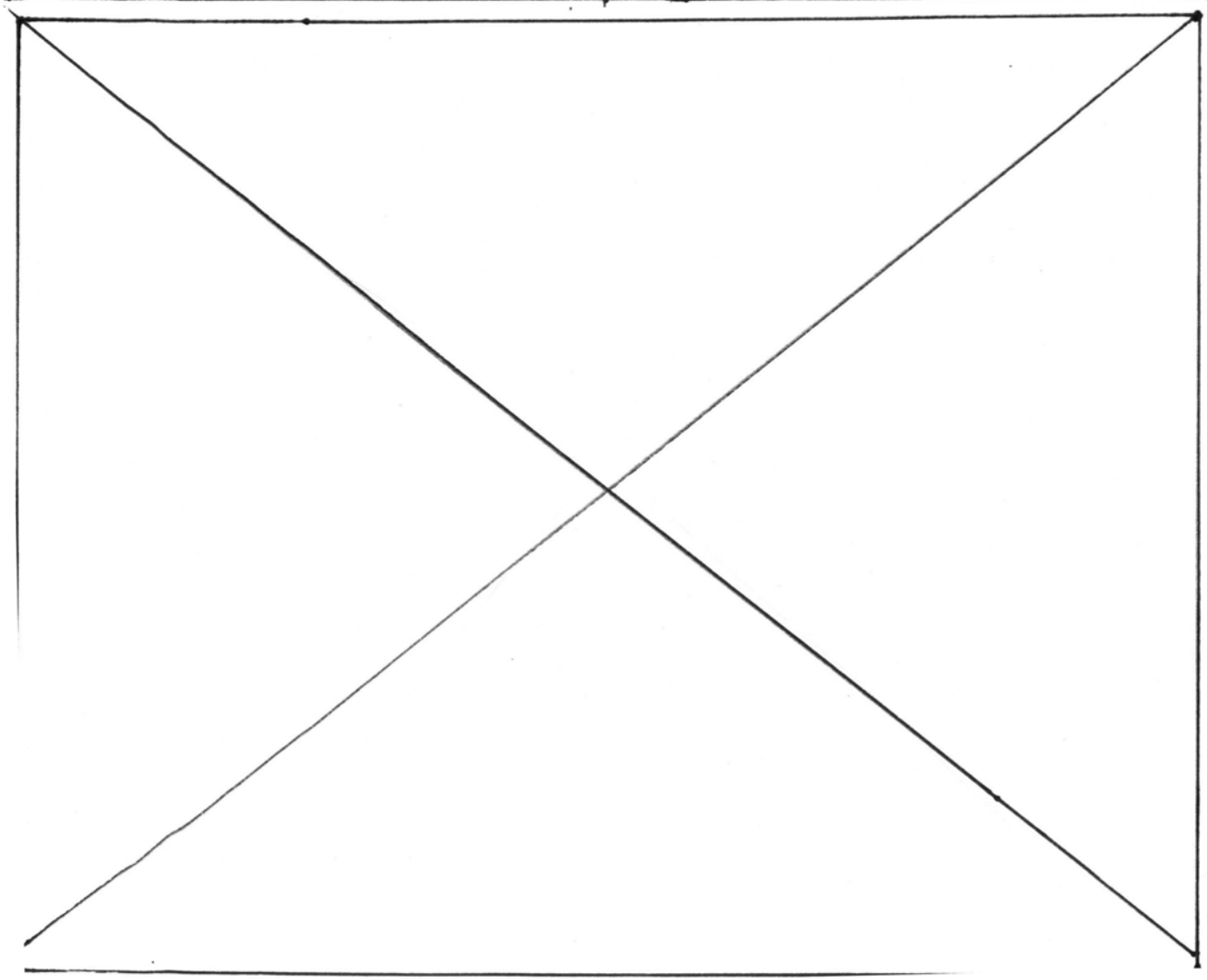

TITLE
LOGIN
SAVE TO SERVER
INTRO
V
HELP
V
SCHEDULE
TOOLS

TITLE

LOGIN

SAVE TO SERVER

INTRO | v | HELP | v



SCHEDULE

BUILD

ADD TERM
EDIT TERM
DELETE
IMPORT
NOTATION
UNDO CHANGE
SAVE LOCALLY

SEARCH

HOUSEKEEPING

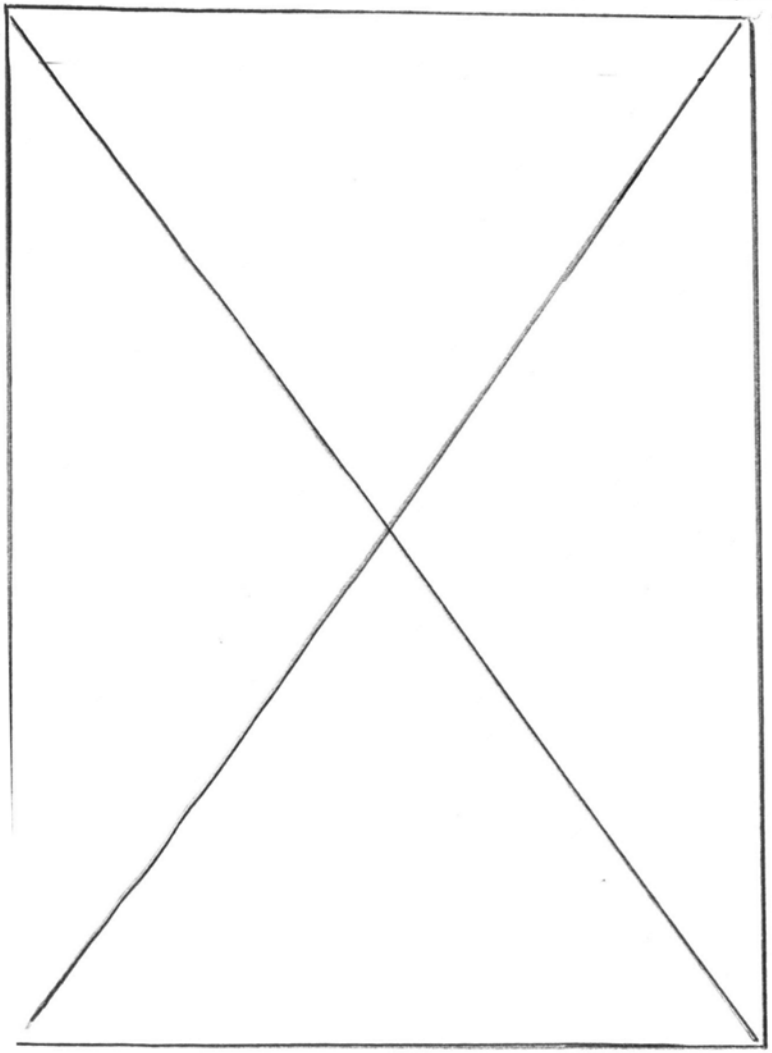
TRACK CHANGES
ERROR CHECKING

TITLE

LOGIN

SAVE TO SERVER

INTRO | V | HELP | V | >>>



>>> SCHEDULE

BUILD

ADD TERM
EDIT TERM
DELETE
IMPORT
NOTATION
UNDO CHANGE
SAVE LOCALLY

SEARCH

HOUSEKEEPING

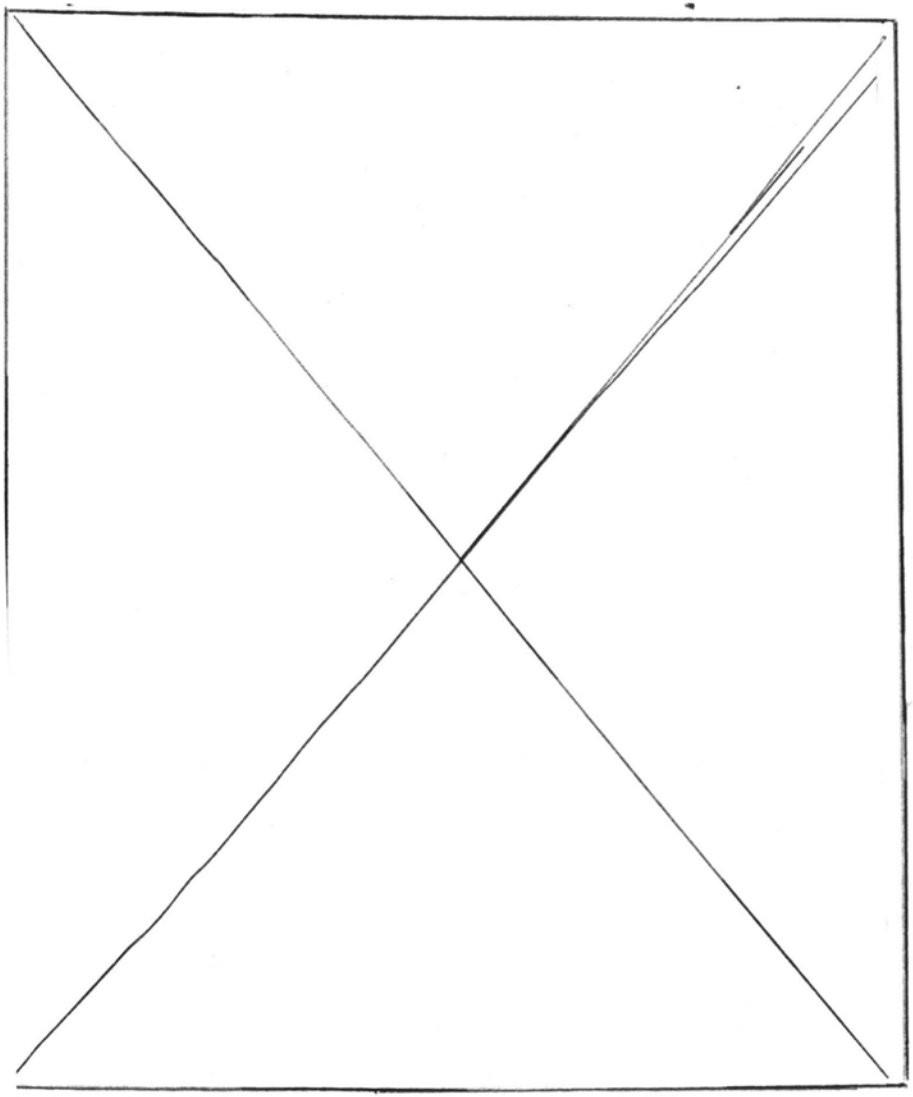
TRACK CHANGES
ERROR CHECKING

TITLE

LOGIN

SAVE TO SERVER

INTRO | v | HELP | v



SCHEDULE

TOOLS

Task List

Background

You are a student in LIS 537 and your instructor has given you the TiddlyWiki Thesaurus (TWT) web application tool to help you in your thesaurus construction project. You are not required to use this tool, but your group decides to give it a chance since it sounds like it may make some tasks easier or faster. The instructor has indicated that multiple group members can work simultaneously to construct the thesaurus using this tool on the web.

REMINDER:
We will be looking at early **prototype** designs. Actual details of content screens are **not shown** since we are evaluating **navigation** and **layout** of the designs.

Task 1

It is the beginning of the quarter and you decide to take a look at the TWT. An account has been created for all your group members. You go to the TWT page in your web browser.

- What do you do when you get to the page? How do you familiarize yourself with the application?

Task 2

Your group decides to use Excel for the initial harvesting of terms, and then to use the TWT to manage the terms and construct the thesaurus.

- What do you do to bring the terms in Excel spreadsheet into the TWT? How might you find more information about this?

Task 3

You realize that you need more terms to build your thesaurus.

- What do you do to enter more terms?
- What do you do to modify terms you have already entered?
- What do you do to remove a term?
- What do you do to preserve your work for next time?

Task 4

You want to make sure that everything is "working" properly in your thesaurus.

- What do you do to see if other people on your team have made additions or edits to the thesaurus?
- What do you do to check your work?

Participant Survey

Participant: _____ Date: _____

Prototype #:_____

Please rate the clarity of the prototypes features on a scale from 1 to 7.

1=impossible to understand **7=very easy to understand**

1. **Orientation and Help**:

Layout and location of controls	1	2	3	4	5	6	7
Clarity of TWT terminology	1	2	3	4	5	6	7
Consistency of thesaurus terminology	1	2	3	4	5	6	7

2. **Importing:**

Layout and location of controls	1	2	3	4	5	6	7
Clarity of TWT terminology	1	2	3	4	5	6	7
Consistency of thesaurus terminology	1	2	3	4	5	6	7

3. **Building (Adding, editing, and deleting terms, saving work**.):

Layout and location of controls	1	2	3	4	5	6	7
Clarity of TWT terminology	1	2	3	4	5	6	7
Consistency of thesaurus terminology	1	2	3	4	5	6	7

4. **Housekeeping:**

Layout and location of controls	1	2	3	4	5	6	7
Clarity of TWT terminology	1	2	3	4	5	6	7
Consistency of thesaurus terminology	1	2	3	4	5	6	7

Post Study Interview Script

A) Debriefing after sketch exercise:

- Ask them to describe their sketch.
- Ask them to explain its features, point out controls, and walk you through its functions.
- Ask them to verbally expand on any features that they did not have time to fully complete, or feel dissatisfied with. If they need to make corrections to a feature or annotate their sketch, let them.

Note their responses on a separate piece of paper, and attach it to their sketch. Do not mark on the sketch.

B) TWT Survey follow-up questions:

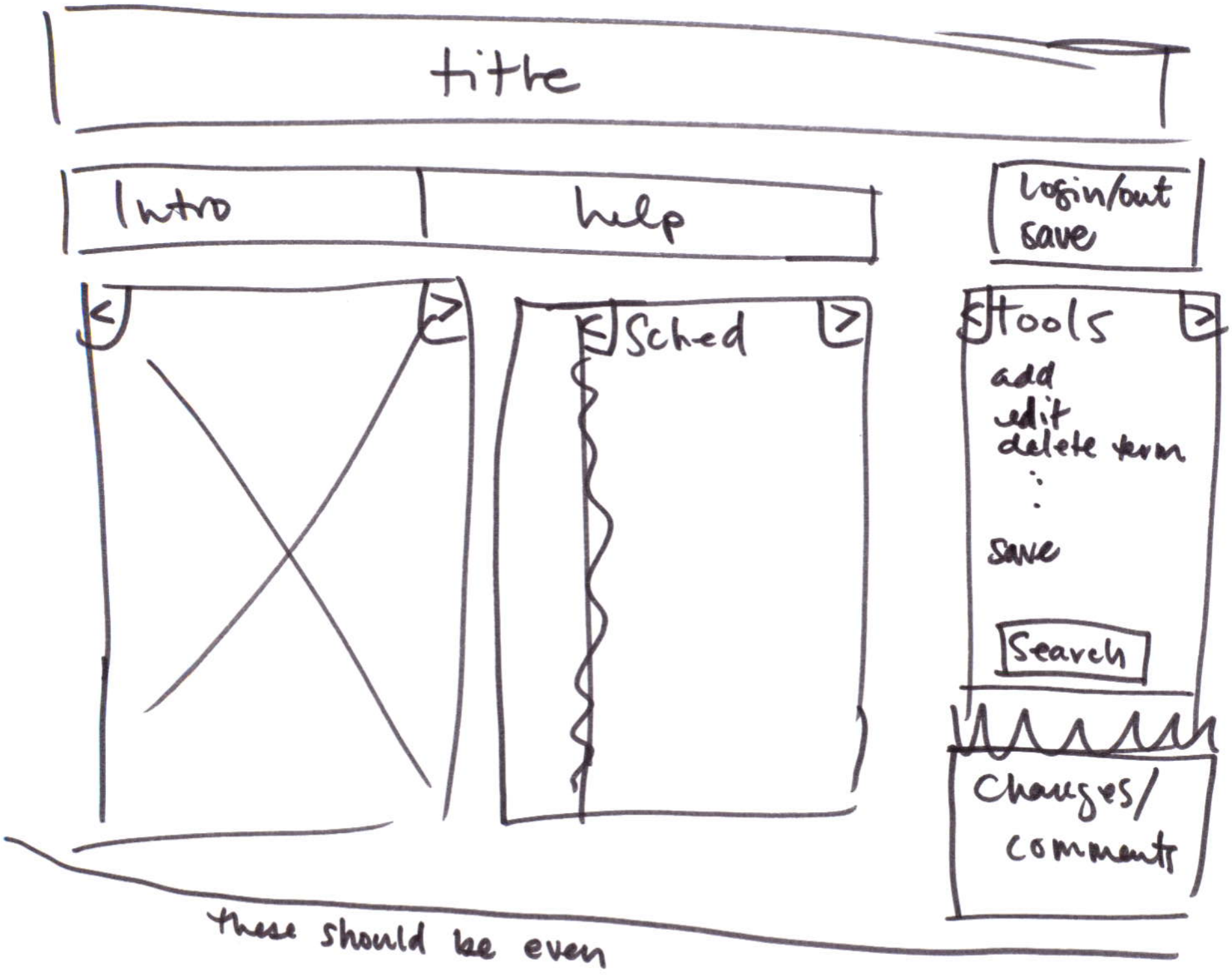
1. Do you have any comments about the layout of the prototype interface?

2. Do you have any comments about the names and locations of the prototype controls?

3. Do you have any comments about the thesaurus-related terminology which the TWT uses?

4. Would the TWT be a useful tool for the 537 course project? Explain.

5. Do you have any other comments or suggestions?


title
Intro
help
login/out
save
Sched
tools
add
edit
delete term
save
Search
changes/
comments
these should be even

title

Intro | help

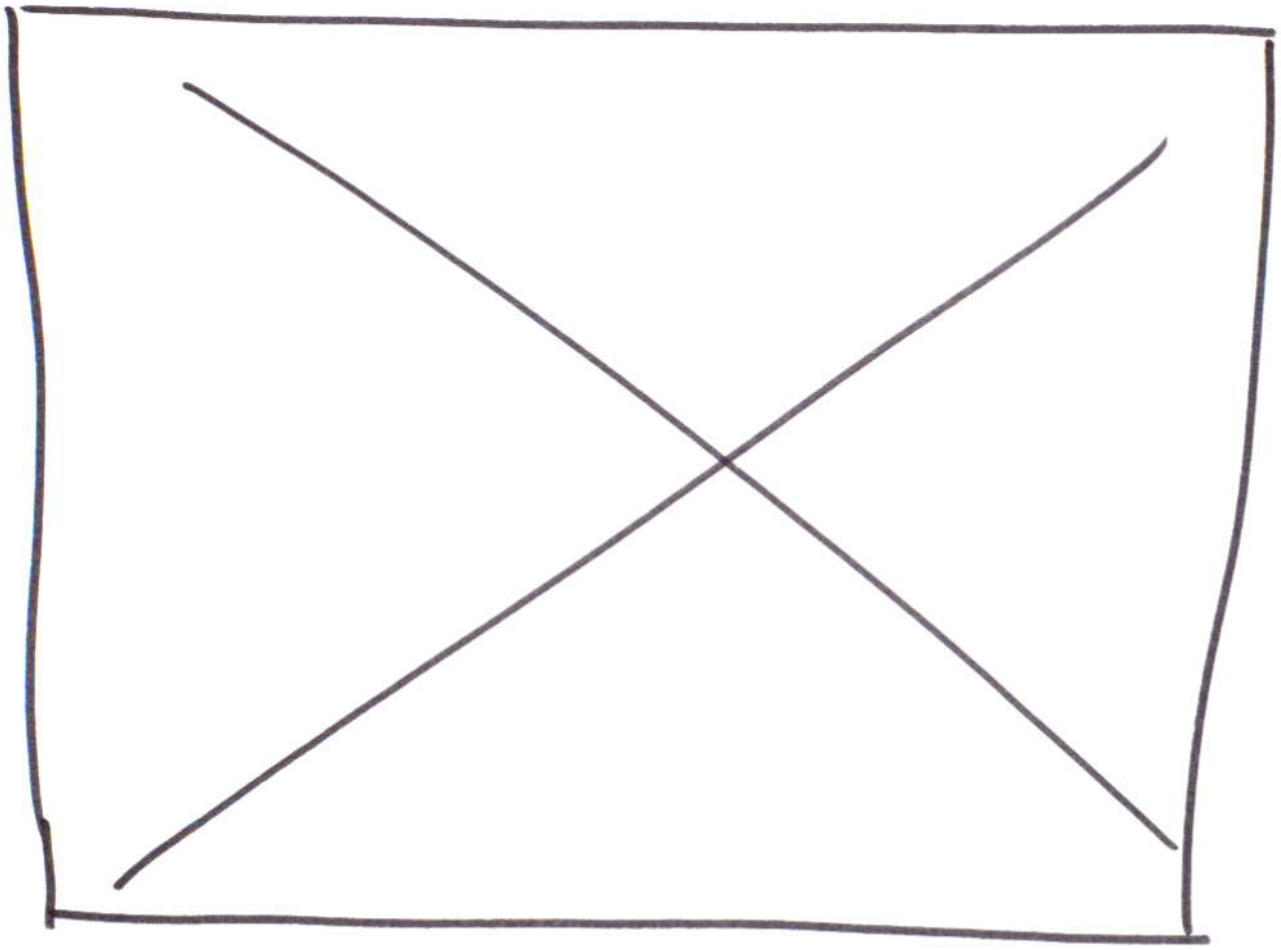
login/out

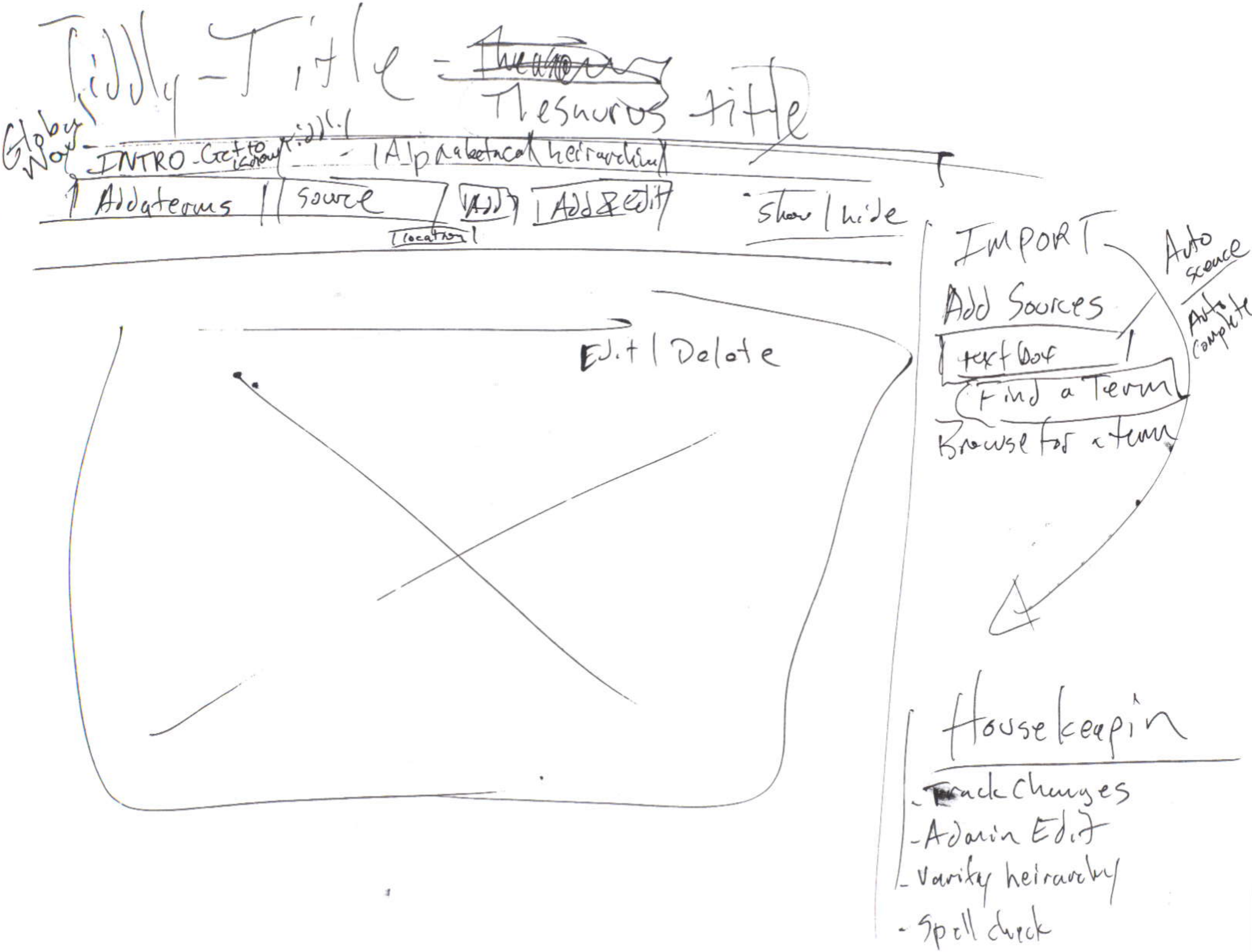
Save

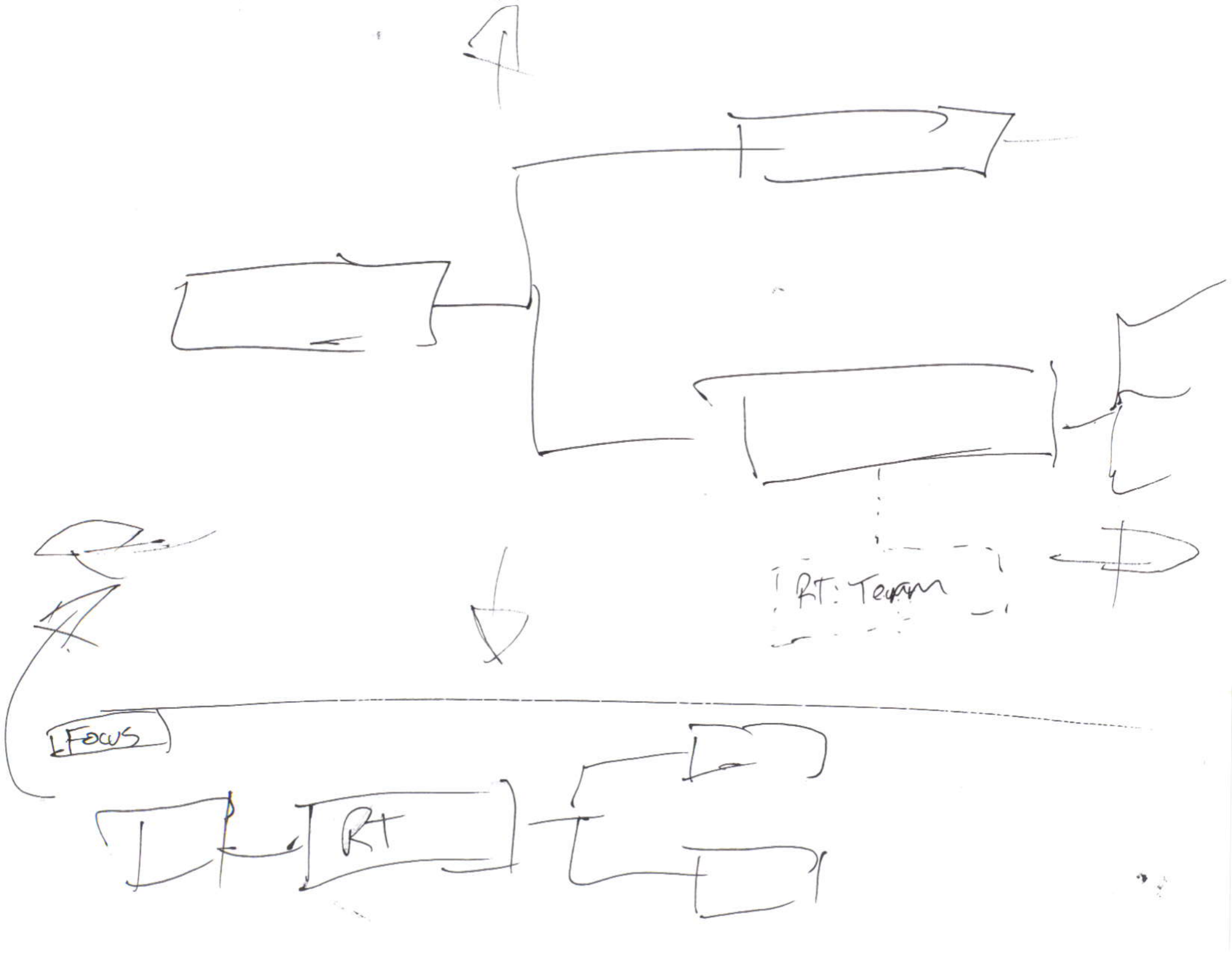
Schedule

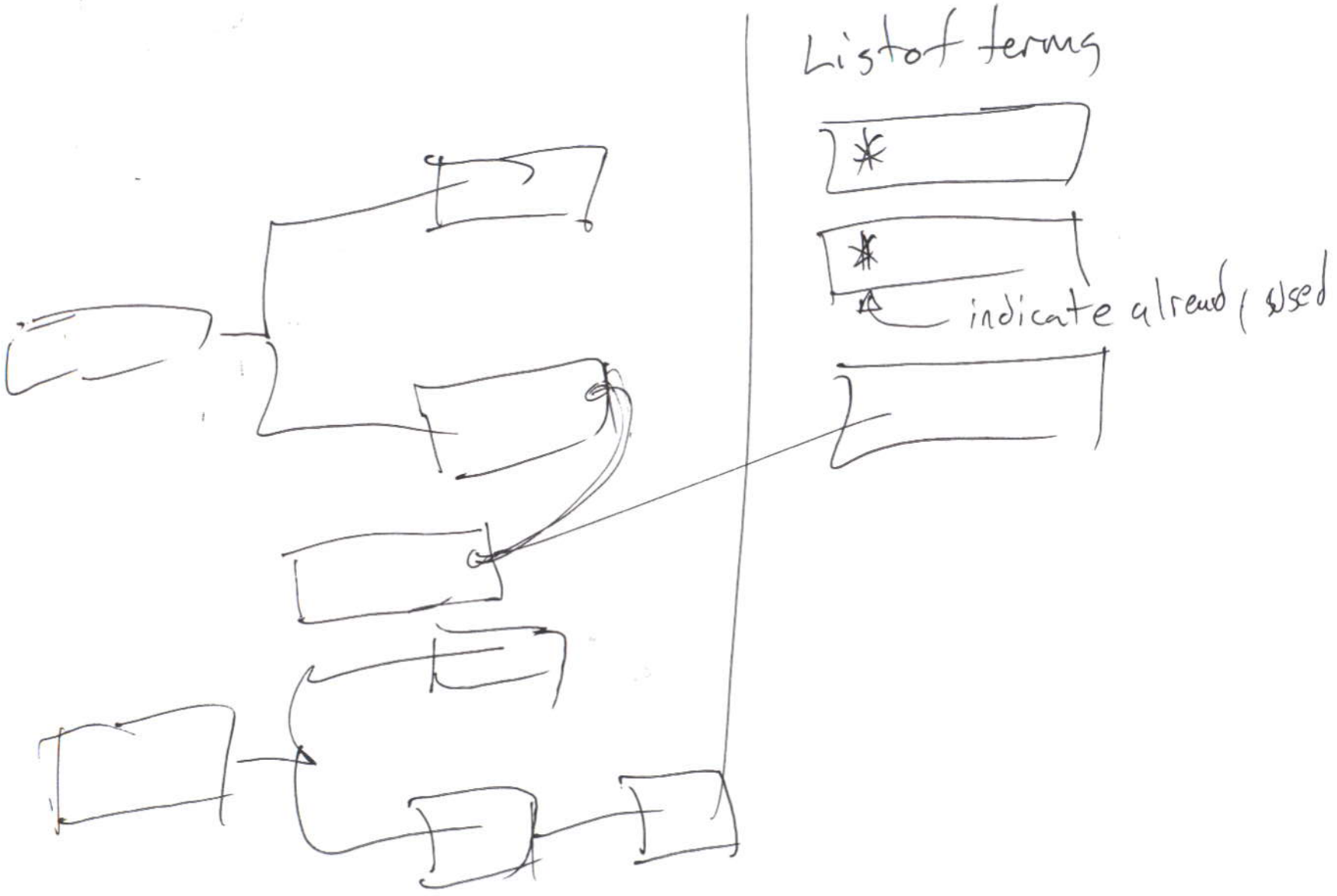
Tools

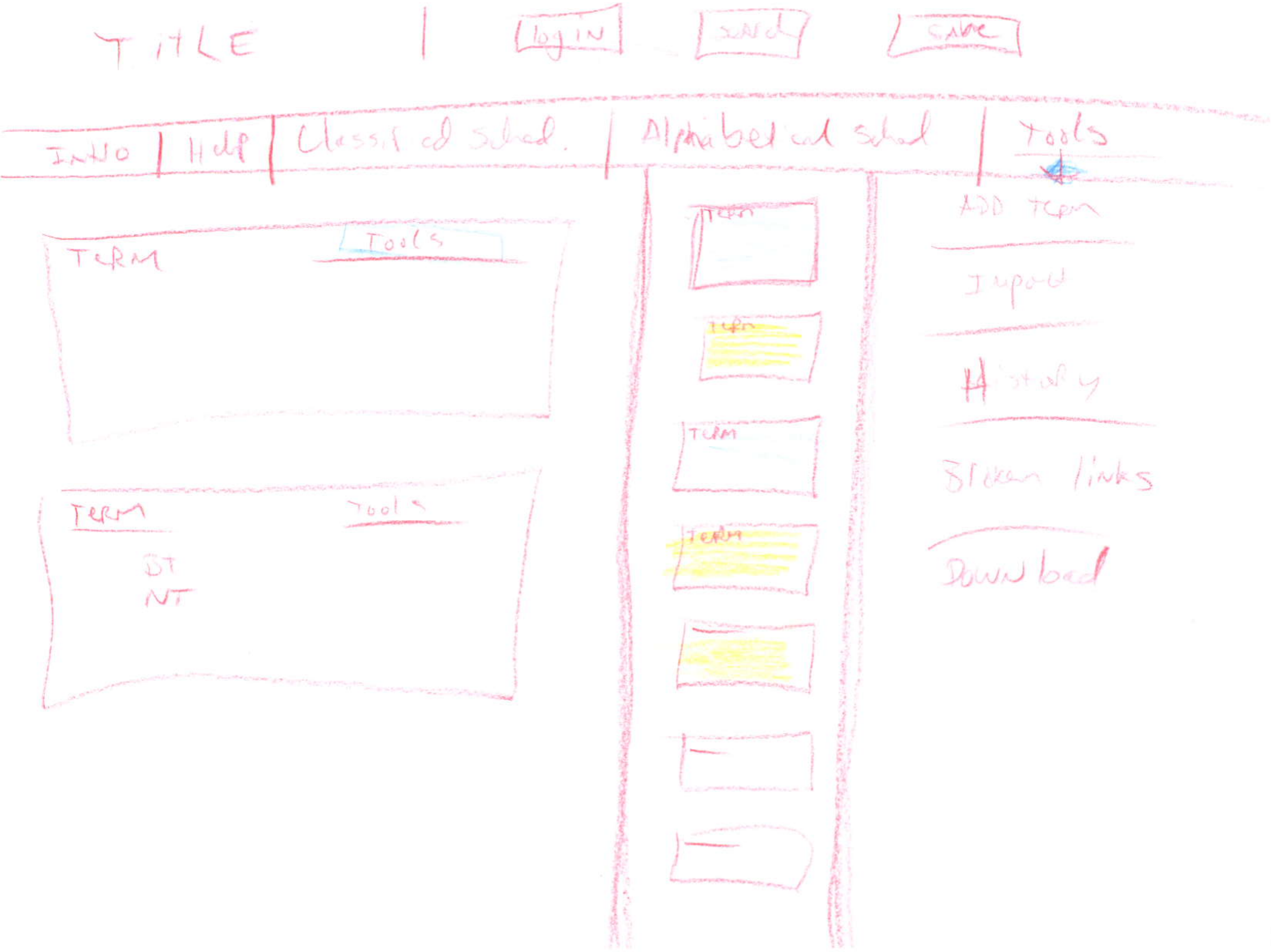
"Changes" or "Comments"




Tiddly-Title = Thesaurus title
Global Nav
INTRO - Get to know tiddly
[A]lphabetical heirarchical
Add a terms
source
[Add]
[Add & Edit]
[location]
show | hide
Edit | Delete
IMPORT
Add Sources
text box
Find a Term
Browse for a term
Auto source
Auto complete
Housekeepin
- Track Changes
- Admin Edit
- Varify heirarchy
- Spell check


RT: Team
Focus
RT


List of terms
indicate already used


TITLE
log in
save
Info
Help
Classified sched.
Alphabetical sched
Tools
ADD Term
Import
History
Broken links
Download
TERM
Tools
TERM
Tools
BT
NT
TERM
TERM
TERM
TERM

Title

Intro | Schedule

Add
Edit
Delete
Import
Sort
tags

Alphabetical /

term / Scope Note /
Editing things @ term

RT
NT
BT
Tag / Facet

Scope Note

Modified by

Timestamp

Title

Intro | Schedules

Add
Edit
Delete
Import
Sort
Tags

Add terms:

Bulk copy + paste into field or type - separate w/ comma

Add term 1 at time:

Term

BT | auto complete existing term

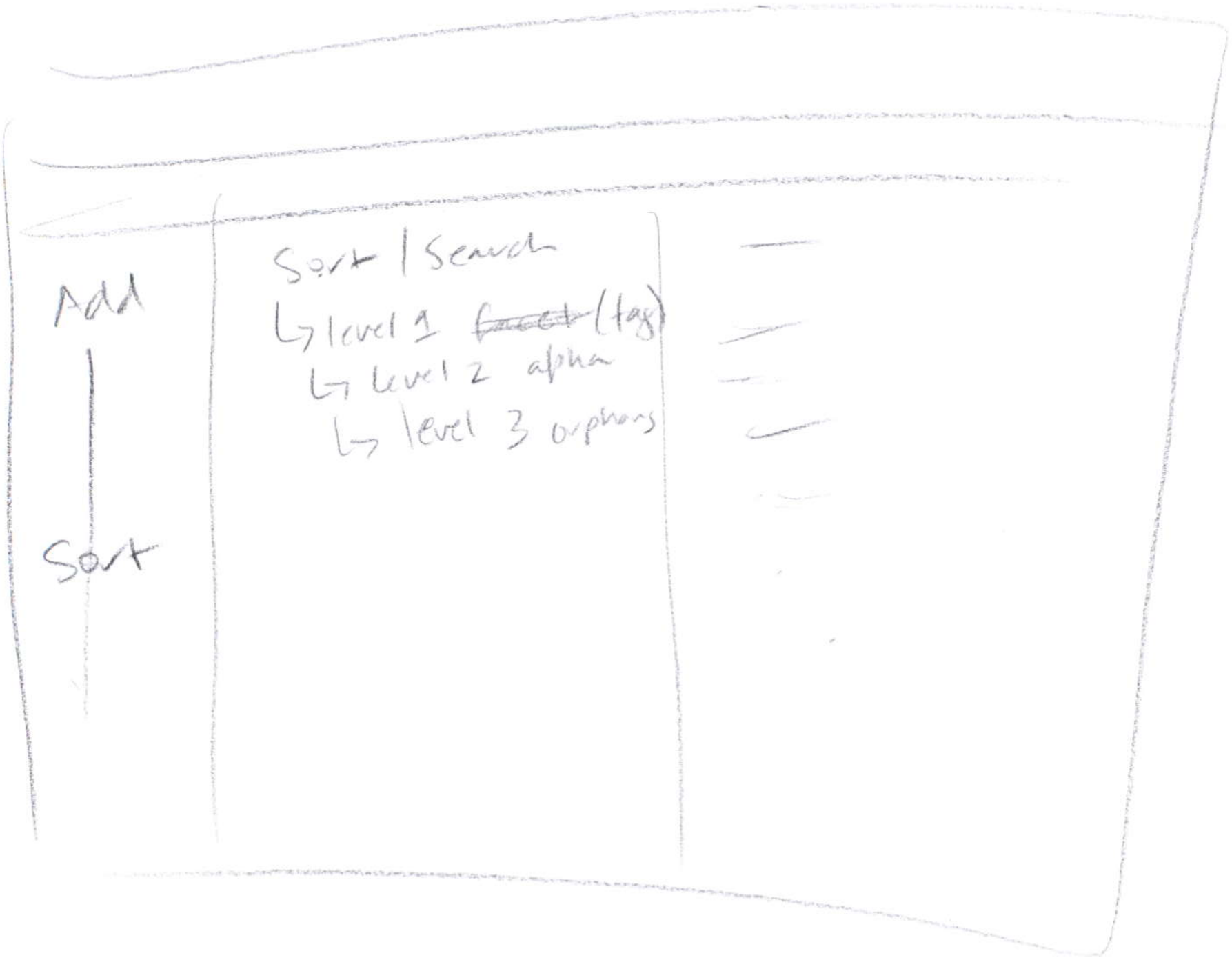
NT | "

RT | "

↙ Dialogue

↳ no match → Do you want to create? -

↳ browse for RT/NT/BT terms (dialog)


Add
Sort
Sort | Search
↳ level 1 ~~facet~~ (tag)
↳ level 2 alpha
↳ level 3 orphans

Appendix L:

Findings by Theme and Activity

Findings by theme and activity

		In-class Wants & Needs 16-Apr-08	Trent Interview 17-Apr-08	Wants & Needs 7-May-08	Cognitive Walkthrough 7-May-08	Heuristic Evaluation 14-May-08	Usability Evaluation 28-May-08
TERM EDITING	**enter terms**		enter raw terms	specify relationships when term harvesting, reduce typing, auto-completion, spelling suggestions, less cut/paste			singly, or through a "quick add" feature, import through a spreadsheet
	delete terms					both single and mass deletion	scary operation, should support both single and mass deleting
	term properties	times found in sources	scope notes, definitions	found in document count, facet			
	apply tags to terms	represent concepts		for source document			
TERM RELATIONSHIPS	**search and browse**	combines facets, pivot table		by category, recent search history, popular search terms, show duplicate terms		provide more search methods	search terms or search application as a whole?
	term sorting	sort by alphabetical, geographically, time, popularity, etc.		by facets		custom sorting/display (by relevance)	incorporate colors to support sorting of broad concepts through visual "coding"
	graphical sorting			drag and drop into "buckets", visual "card sort" of terms, Visio-like			drag and drop in hierarchy list or in chunks from one part of hierarchy to another
	customized user views	apply own view or context	output to MS Word, web pages	hierarchical, associative (tag clouds), word map		collapsible term lists, open terms in new windows	edit terms in one window while viewing schedule in another window, modifiable interface controlled by admin options
	schedules		generate reports: alpha & classified schedules			linked A-Z list	split out schedules separately in menu, sort within schedules in several ways

Findings by theme and activity

		In-class Wants & Needs 16-Apr-08	Trent Interview 17-Apr-08	Wants & Needs 7-May-08	Cognitive Walkthrough 7-May-08	Heuristic Evaluation 14-May-08	Usability Evaluation 28-May-08
LAYOUT AND NAVIGATION	**inconsistent with expected behavior**				didn't follow conventions	missing "undo", alphabetical schedule has slow load time	need feedback and confirmation after performing tasks
	confusing terminology				names of tools and features unclear	"close all", "permalink", "close others", "done", "permaview", "view", "jump", "backstage", "orphans", "tiddler"	"error checking", "build", "save locally" vs "save to server", "track changes", "delete"
	location of functions					"close all", sidebars & toolbars, "close", "jump", "logout", "status"	suggest separate toolbar for all modify terms functions
	hidden features				hidden features	minimalist style obscures functionality	
	lack of help	links to more information	link to ANSI/NISO, textbooks		no help or guidance	no documentation, should target (2): admin and thesaurus builders	move glossary to side navigation
GROUP WORK	**tracking changes**		distributed and concurrent editing				annotate terms with comments, accept/modify changes made by other team members
	error checking						need to check work after changes
	saving work						would save work frequently, save to server expected more reliable, suggest automatic backup/save feature