



# **TiddlyWiki Thesaurus Redesign Recommendation**

**TC 518**

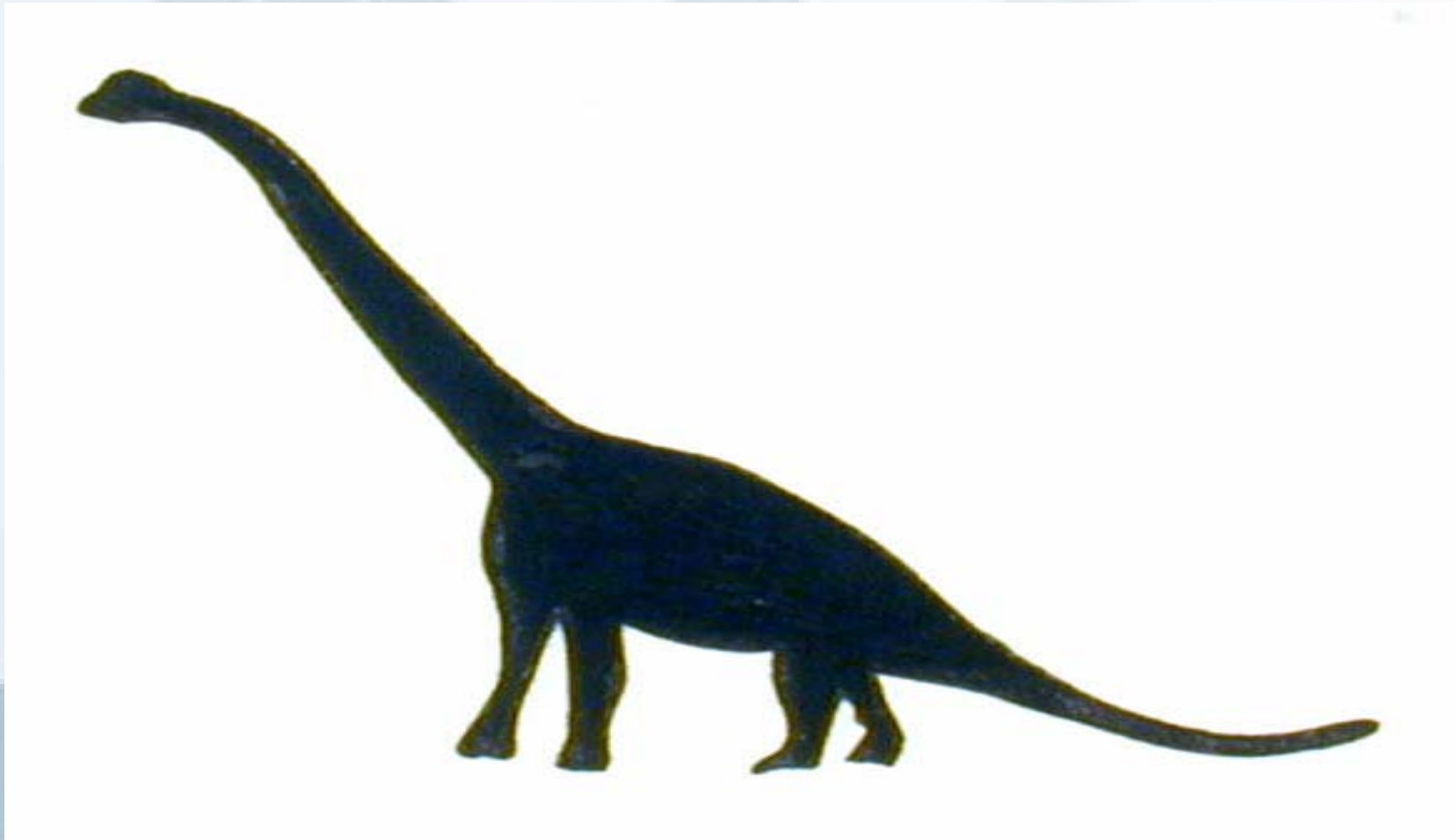
**Michael Adcock, Khue Duong,  
Marisa Haberfelde, Ann Swearingen**

**June 4, 2008**

**Who are we?**



# **What is a Thesaurus?**



**No, not that!**

# So What is a Thesaurus?

- **Thesauri are subject-based classification systems**
  - **used to index documents or map subject areas.**
- **They are hierarchically structured, but allow for associative relationships**
- **They are represented 2 ways:**
  - **Hierarchical schedule**
  - **Alphabetical**

## 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

# What is a TiddlyWiki?

- **Tiddly?!?**
  - In the UK, a “tiddler” just means something small
- **Wiki?!?**
  - Multiple people can edit it, and it’s a web page
- **Created in late 2004 by Jeremy Ruston**
  - It’s a “reusable non-linear personal web notebook”
- **Like a bunch of index cards that can be searched, tagged, and linked inside a single web page**



# TiddlyWiki

a reusable non-linear personal web notebook

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[MainFeatures](#)

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[Customisation](#)

[Community](#)

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 TiddlyWiki 2.4.0

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## HelloThere

[JeremyRuston](#), 9 May 2008 (created 20 September 2005)

Welcome to [TiddlyWiki](#), a [popular](#) free [MicroContent](#) [WikiWikiWeb](#) created by [JeremyRuston](#) and a busy [Community](#) of independent developers. It's written in HTML, CSS and JavaScript to run on any modern browser without needing any [ServerSide](#) logic. It allows anyone to create personal [SelfContained](#) hypertext documents that can be posted to a WebServer, sent by email or kept on a USB thumb drive to make a [WikiOnASTick](#). Because it doesn't need to be installed and configured it makes a great [GuerillaWiki](#). This is revision 2.4.0 of [TiddlyWiki](#) (see [recent changes](#)), and is published under an [OpenSourceLicense](#).

tags:  
welcome

[close](#) [close others](#) [view](#) [more](#)

## GettingStarted

[JeremyRuston](#), 7 May 2008 (created 18 August 2005)

The easiest way to learn about [TiddlyWiki](#) is to use it! Try clicking on various links and see what happens - you cannot damage tiddlywiki.com or your browser. (Use the [close all](#) button over on the right to clear all the displayed tiddlers and start again).

tags:  
instructions

[close](#) [close others](#) [view](#) [more](#)

There is an extensive [Community documentation wiki](#), including an invaluable [FAQ](#). Other useful guides include:

- Jeremy Wagstaff's [The Power of Tiddly](#)
- Dave Gifford's [TiddlyWiki for the Rest of Us](#) and his [slideshow introduction](#)
- Morris Gray's [TW Help - TiddlyWiki help file for beginners](#)
- Dmitri Popov's [TiddlyWiki quick reference card](#)
- Screencasts from [JimVentola](#) and [LeonKilat](#).

When you're ready to create your own [TiddlyWiki](#) on your computer, follow the

search

[close all](#)

[permaview](#)

[options »](#)

[Timeline](#) [All](#) [Tags](#) [More](#)

9 May 2008

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[TiddlySaver](#)

[Opera](#)

[GradientMacro](#)

[Safari](#)

[SafeMode](#)

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[TiddlyWikiAdaptations](#)

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[NewFeatures](#)

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31 March 2008

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24 August 2007

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# **What is the TiddlyWiki Thesaurus?**

- **Thesaurus construction tool**
  - **LIS537: Construction of Indexing Languages**
  - **Group project in Autumn 2007**
  - **Aid thesaurus construction process**
  - **Alternative to index cards and spreadsheets**
- **Limitations**
  - **Built only with the LIS537 project in mind**
  - **Hacked together**
  - **Minimalist aesthetics**
  - **Poor layout and navigation**
  - **Not built for other users**
- **Instructor saw as promising tool for future versions of class**
- **<http://students.washington.edu/adcockm/amateurastronomythesaurus/>**



## Classified Schedule

[close](#) [close others](#) [edit](#) [permalink](#) [jump](#) [delete](#)

## Classified Schedule

*adcockm*, 26 November 2007 (created 15 November 2007)

- [astronomical instruments](#) (1)
  - [binoculars](#) (1.1)
  - [catalogs](#) (1.2)
  - [CCD cameras](#) (1.3)
  - [maps](#) (1.4)
  - [observing logs](#) (1.5)
  - [telescopes](#) (1.6)
    - [components of telescopes](#) (1.6.1)
      - [adaptive optics](#) (1.6.1.1)
      - [apertures](#) (1.6.1.2)
      - [eyepieces](#) (1.6.1.3)
      - [filters](#) (1.6.1.4)
      - [finderscopes](#) (1.6.1.5)
      - [lenses](#) (1.6.1.6)
      - [limbs](#) (1.6.1.7)
      - [mirrors](#) (1.6.1.8)
      - [mounts](#) (1.6.1.9)
      - [setting circles](#) (1.6.1.10)
    - [types of telescopes](#) (1.6.2)
      - [catadioptric telescopes](#) (1.6.2.1)
      - [GOTO telescopes](#) (1.6.2.2)
      - [reflecting telescopes](#) (1.6.2.3)
      - [Newtonian reflectors](#) (1.6.2.3.1)

search

[close all](#)

[permaview](#)

[options](#) »

[new tiddler](#)  
[adcockm: logout](#)

[save changes](#)  
[download](#)

font-size: [+](#) [=](#) [-](#)

Also see [AdvancedOptions](#) !

[Timeline](#) [All Tags](#) [More](#)

27 November 2007  
[twinkling](#)  
26 November 2007  
[meteor showers](#)  
[radiant](#)  
[eclipses](#)  
[lunar phases](#)  
[occultations](#)

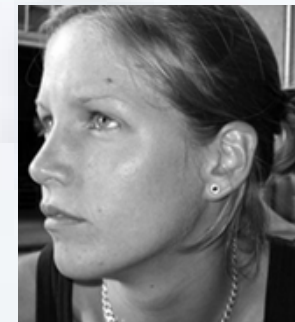


# Overview of Activities

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

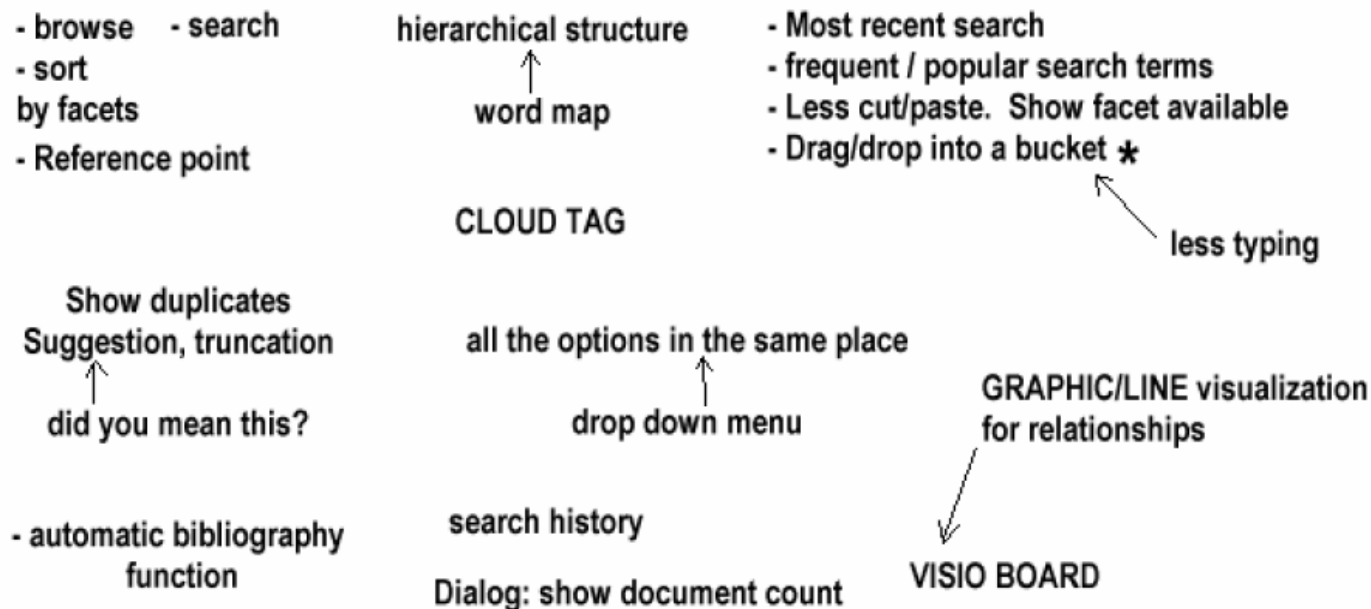
# User Research

<b>Age</b>	22+
<b>Gender</b>	Male or female
<b>Work Title</b>	UW iSchool Student MLIS OR MSIM
<b>Work Hours</b>	Part time employment/full time enrollment OR Full time employment/part time enrollment
<b>Education</b>	Baccalaureate at minimum
<b>Technology</b>	<ul style="list-style-type: none"> <li>- Comfortable with Microsoft Suite applications and other web-driven technology</li> <li>- Access to high speed internet connection at home and/or at school</li> </ul>
<b>Experience level</b>	Novice to experienced user of the TWT. Required to have taken LIS 530 or IMT 530, and ideally one other class in cataloging
<b>Location</b>	Residential and distance students
<b>Income</b>	Varies
<b>Relevant Limitation(s)</b>	<ul style="list-style-type: none"> <li>-Culture/language as some users may be non-native speakers</li> <li>-Inability to type</li> </ul>
<b>Family status</b>	Varies



# Wants & Needs Analysis and Cognitive Walkthrough

- *What would an ideal software-based thesaurus building tool look like?*
- *Think Aloud!*



# Heuristic Evaluation

- Clarity
- Consistency
- Help and Documentation
- Navigation
- Memory Load
- Error Prevention
- Aesthetics
- Ease of Use

## Heuristic Evaluation: TiddlyWiki Thesaurus

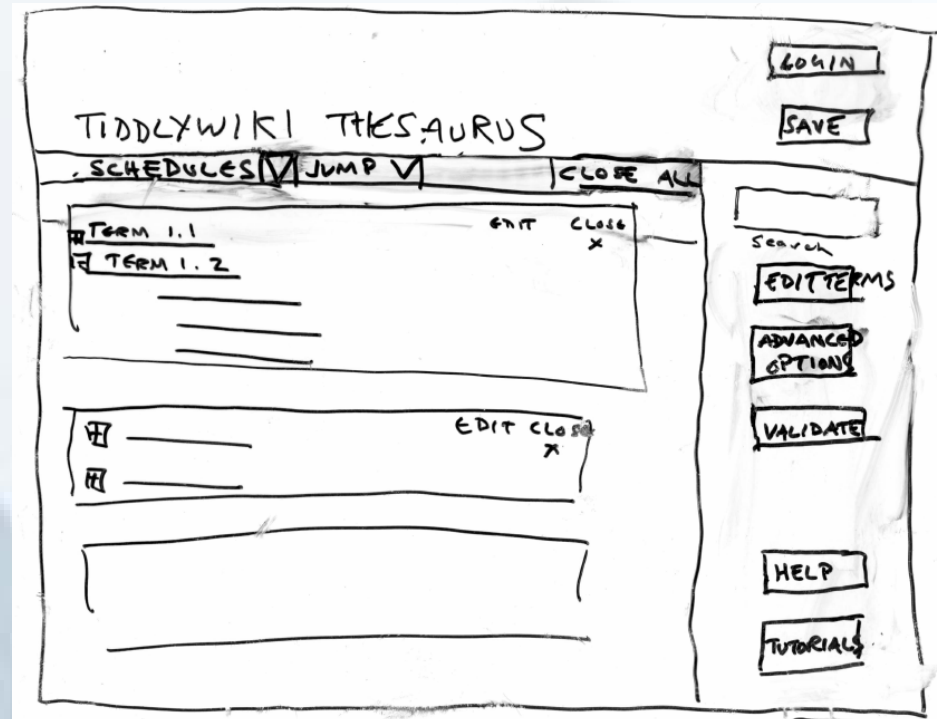
Clarity				
	Yes	No	N/A	comments
Does the interface make it clear when you have selected or deselected something?				
Are the phrases and word choice easy to understand?				
Are you able to easily locate the menus and selections you are looking for?				
Do the names of the commands indicate clearly what 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:				

# In-class Prototype

- Based on feedback from Heuristic Evaluation
- Incorporated feature requests
- Focus:
  - Layout and navigation
  - Terminology
  - Ease of use



... Starting place for paper prototypes?

# Usability Evaluation

## Five-Step Process:

### 1. User demonstrates tasks using prototypes

- Become oriented to the TWT
- Import term spreadsheets
- Add, edit and delete a term
- Save work in progress

### 2. User completes first questionnaire

### 3. User sketches “ideal” TWT: think-aloud

### 4. User completes second questionnaire

### 5. User adds final comments or suggestions

#### Administrator Script

##### Preparation

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

- 2 administrator scripts
- audio recorder + 260 min tapes

For each participant:

- consent form
- fullset of prototype #1
- fullset 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

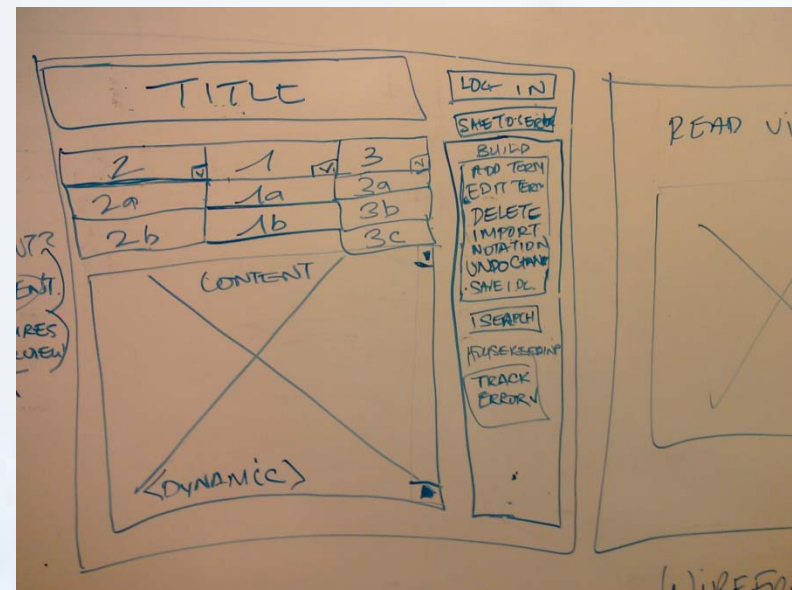
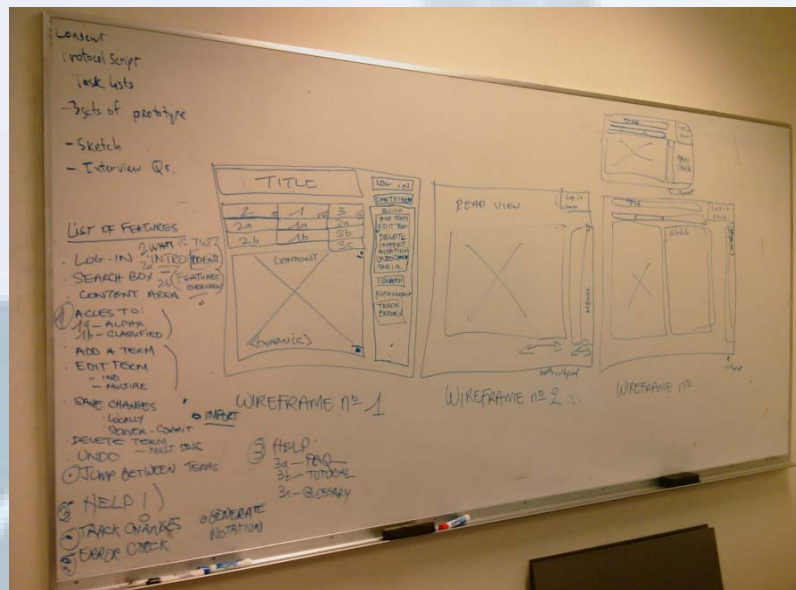
We will be recording your actions by taking notes and using an audio recorder [indicate recorder].

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.



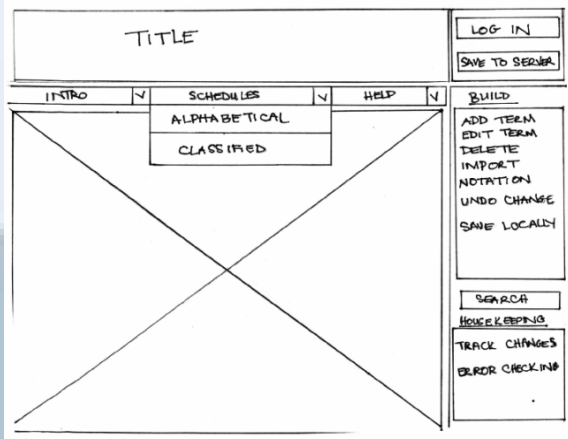
# Usability Evaluation – Prototypes

- **Based on feedback from:**
  - **Wants & Needs Analysis**
  - **Heuristic Evaluation**
  - **In-class prototype**
- **We brainstormed many prototypes on the whiteboard:**

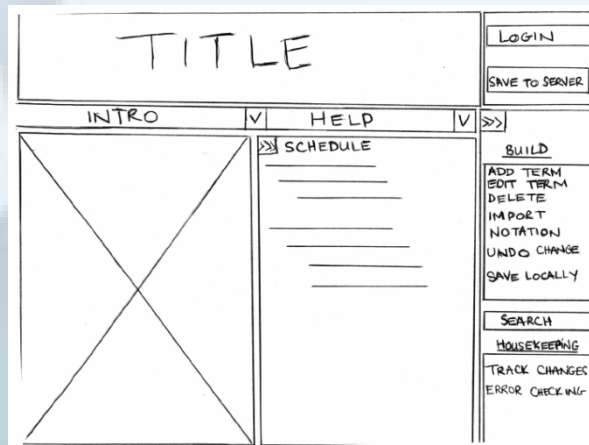


# Usability Evaluation – Paper Prototypes

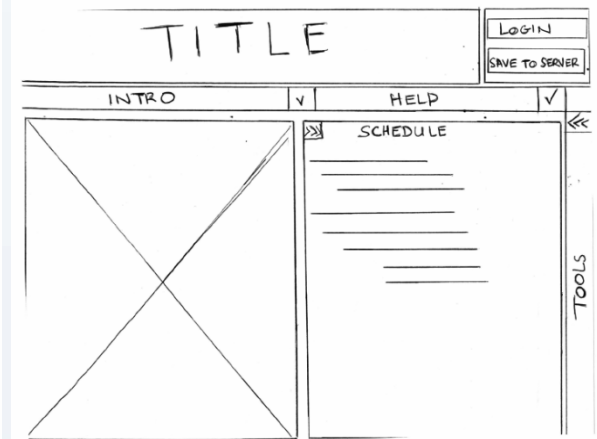
- **We tested 2 different prototypes**
  - **Prototype #1** was most similar to existing TWT
  - **Prototype #2** was more of a departure – more dynamic
- **We focused only on navigation and layout issues (surface level)**



**Prototype #1**



**Prototype #2**



**Prototype #2**

# Usability Evaluation – Questionnaire

Likert scale:

- Layout and navigation
- Clarity
- Consistency
- Completed before and after sketching

## 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.):

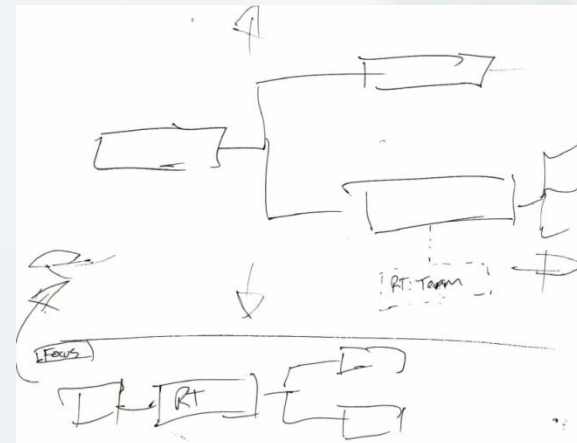
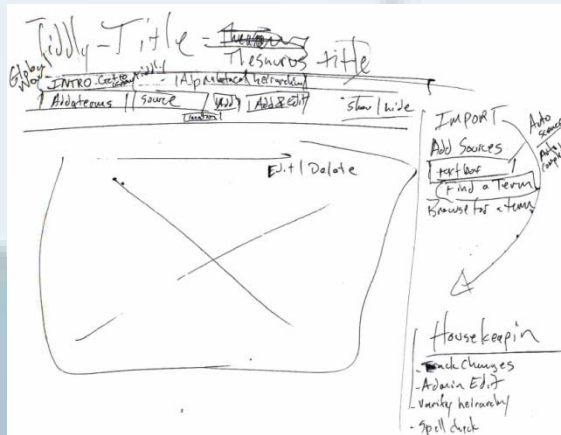
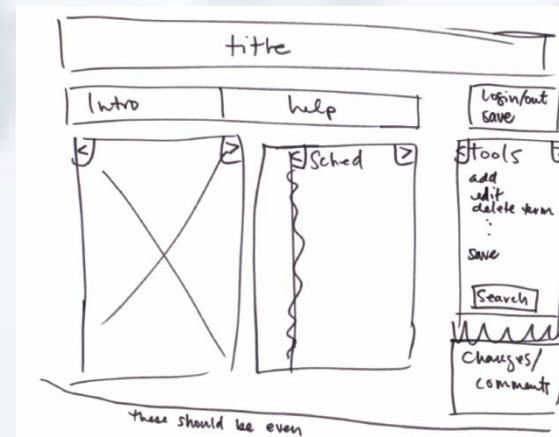
Layout and location of controls	1	2	3	4	5	6	7
Clarity of TWT terminology	1	2	3	4	5	6	7
Consistency of thesaurus terminology	1	2	3	4	5	6	7

### 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

# Usability Evaluation – User Sketches

- UNexpected activity: Surprise!
- Questionnaire “kick started” sketches
- Creative dialogue
- From criticism to innovation



# Findings

- **Complex product**  
+  
**lots of UCD methods = lots of findings !!!**
- **Organized in a table by activity and looked for themes...**
- **Themes emerged:**
  - **Term Editing**
  - **Term Relationships**
  - **Layout and Navigation**
  - **Group Work**

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; red use typing, auto-completion, spelling suggestions, less cut/paste			single, orthograph a "quick add" feature, import through a spreadsheet
	delete terms					both single and mass deletion	scan 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, should 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, visible			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 administrators
	schedules		generate reports: alpha & classified schedules			linked A-Z list	split out schedules separately in menu, sort within schedules in several ways

# Findings

- **Term Editing**

- Enter terms, Delete terms, Term properties, Tagging

- **Term Relationships**

- Search and browse, Term sorting, Graphical sorting, Customized user views, Schedules

- **Layout and Navigation**

- Inconsistent behavior, Confusing terminology, Location of functions, Hidden features, Help

- **Group Work**

- Tracking changes, Error checking, Saving work

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 tool and features unclear	'close all', 'permalink', 'close others', 'done', 'permalink', '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	link to more information	link to ANSI/NEO, text tools	no help or guidance	no documentation, should target (2) admin and thesaurus builders	more glossary, to side navigation
GROUP WORK	tracking changes					annotate terms with comments, accept/modify changes made by other team members
	error checking		distributed and concurrent editing			need to check work after changes
	saving work					would save work frequently, save to server expected more reliable, suggest automatic backup/save feature



# **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**
  - **providing a way to annotate thesaurus terms.**
- **Locate the hierarchical schedule at the center of the application for ease of access.**

# **Recommendations**

- **Give users more control over the appearance and organization of the content:**
  - **A “sort by” function which allows users to manipulate the order of their displayed terms**
  - **Drag and drop capabilities for adding and moving terms**
  - **Collapsible hierarchical schedule**

# **What We Learned About UCD Process**

- **Adapt general UCD principles to specific product**
- **Value of user sketching method**
- **Advantages of multiple methods**
- **Usefulness of combining techniques in sequence**

**UCD: A truly iterative process**

# **What Would We Do Differently ?**

- **Refine scope and goals**
- **Planning, priorities, and organization**
- **Protocols**
- **Pilot studies and rehearsals**
- **More methods?**

# **Acknowledgements**

- **TC518 class**
- **Trent Hill, UW Information School**
- **Various current and former students of LIS537**
- **The active TiddlyWiki community of users**