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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 MLIS¹ 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 TiddlyWiki², through code customization and additions. A test copy³ 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 research 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 Thesaurus⁴.

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 prototype⁵ 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 MSIM⁶ 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	<ul style="list-style-type: none"> - 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)	<ul style="list-style-type: none"> -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	