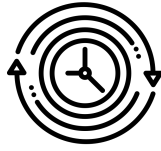


Keweenaw Time Travelers



Group 0b100

Evaluation Assignment 6 - Usability Test Report

4/27/2020

– Author –

Marissa Walther

– Team Members –

Ryan Ader, Kyle Alberth, Daniel Lambert,
Mason Sayles, Ruoxi Tian, Rebecca Barkdoll,
Christian LaCourt, Evan Monko, Manu Chemudupa

Description of UI

The UI for the search functionality in KeTT is as follows:

- Search box - a user will type a search term of a person, place, story, or another record into the search box and then hit the search button.
- After the results are shown, a filter drop down is populated with the different years, record types, and locations that relate to the search term. The user is then able to select any of these filters and hit apply. If the user wants to start over with the filters, then they can either manually unselect each filter or hit the clear filter button.
- Below the filter options are individual drop downs for each type of result. The types are buildings, people, places, and stories. If a filter is applied, the results that are shown in the drop down are filtered accordingly. A user will select one of the search result drop downs to find the result they are looking for. A more results button is at the bottom of each drop down where there are more results than what are currently being shown.
- When a user clicks on a result, a popup will show information based on the result and the map to the right will focus on the specific location if it is on file.

Test Goals

The tests were designed to analyze each of the testers based on:

- Time taken to complete each scenario
- How each tester performed each task
- Number of filters selected
- What filters were selected
- Number of questions asked
- How long to find the result after the filters were applied
- Mouse movements (i.e., what users were clicking on before they completed each task)

The goal of each task was to find a record based off of a scenario that was given to each tester. Each tester was asked questions relating to their technology usage before the test, and after each scenario they were asked to fill out a form rating their experience with different UI elements.

Pre-Test Questions

Before each test, each participant was asked questions relating to their experience with web applications. The questions are as follows:

- “What is your experience with using web applications?”
- “Would you consider yourself tech savvy?”
- “Besides a standard search engine, what other sites with search functionalities do you like?”

The goal of the first 2 questions was to get background information about each participant. The last question was so that way the KeTT team could look at other sites to see if they had features that were worth implementing into KeTT.

Every participant answered that they considered themselves to be tech savvy. Additionally, each participant answered that they were experienced with using web applications for things such as school, work, social, and other tools. The participants also noted that they found these characteristics and sites to be the search functionalities that they like the most:

- “Social media, online shopping”
- “xda-developers, Amazon/eBay, Facebook/Twitter”
- “Amazons ability to scale the product selection”
- “N/A”
- “Youtube (predictive search for videos), Gmail (predictive search for email properties)”
- “Newegg”

Test 1

Description:

You are a tourist in the Keweenaw. You are traveling on US-41 in Hancock, and notice the remains of a T-shaped building. You hear later in your trip that that building was constructed in 1900, and goes by the name Quincy. Intrigued, you come to KeTT to see if you can find more information about this place and learn more about its history.

Steps:

- Search "Quincy"
- Filters:
 - Year: 1900s
 - Location: Hancock
- Expand stories
- Locate the "Quincy Mine Drill and Blacksmith Shop" story

Results:

	Search	Filters	Results	Notes	Tester Comments
1 6:04	7	8	6	-Kept using search bar on map instead of our search bar -Tried to use map to find location -Brute forced	"I think in the instructions if i was told to use the left search functions first I would've been more on track otherwise it was good."
2 4:26	7	9	7	-The result stopped showing up when the location filter was applied, changed test to eliminate need of location filter -Tried to search for result without putting in search terms	
3 2:12	8	7	6	Brute forced	
4 1:03	8	7	3		"Searching for something with keywords (like the year) doesn't work, need to use filters."
5 2:04	7	9	6	-Searched for description of T-shaped building -Originally searched for Quincy+1900 -Brute forced afterwards	"I would have used + to make the search look for different keywords."
6 1:22	10	9	7		"Show that filter has worked."

The first column is the participant number, along with the time it took for each participant to complete the scenario. The average time entered is 2:51. The search, filters, and results column are what each participant rated each of the corresponding UI elements. In particular, the questions that were asked were “Rate the following on a scale of 1-10. The search functionality was easy to use,” “The filters functionality was easy to use,” and “The results were displayed in an easy to understand way.”

Looking at the mouse movements for each participant, the most notable were participants 1 and 2. Both of them tried to use the map to find the records, and even tried to use the native google search box on the map before realizing that they should use the KeTT search box. This accounts for why the time taken to complete test 1 was longer for each of those participants.

Common questions that were asked by most participants are as follows:

- “What search box am I to be using?”
- “I clicked the apply filter button but nothing happened. What am I doing wrong?”
- Other clarifying questions about the test (most testers did not write down the details and the scenario had to be repeated).

The testers comments column are what the participants wrote in the “Any other comments about KeTT or this test?” box in the form, along with answers to any questions myself or the undergraduate student helpers asked after the test.

Important findings are that many of the testers preferred to brute force their way through the scenario along with putting in descriptors in the search terms. Those who brute forced their way asked more questions about the overall test in general, however their time to complete the scenarios were normally longer than those who used the filter options. Those who put descriptors in the search terms got confused at first when no results were shown, however they realized that they couldn’t put the descriptors in and finished the task at a faster time on average than those who brute forced.

The only bug that was found during this test was that the location filter for this scenario stopped turning up the correct results during the second test. The test had to be altered to remove the need of the location filter after that test.

Test 2

Description:

You are going through old memorabilia from relatives, and you find multiple letters signed by N. Smith, with the address being made out to somewhere in Houghton and the date stamp on the letters say 1908. Curious to who this is, you turn to KeTT to find more about this mysterious N. Smith.

Steps:

- Search "Smith"
- Filters:
 - Year: 1900s
 - Location: Houghton
- Expand People
- Locate the "Nora Smith" entry

Results:

	Search	Filters	Results	Notes	Tester Comments
11:40	9	9	10	Brute Forced	"This was much easier than the first once I figured it out."
2 :43	10	9	10	Selected filters before hit search and then had to re-enter them	
3 1:26	7	7	5	-Used filters unlike scenario 1 -Didn't see more results button	
4 :43	7	8	6		"Filters reset after I correct a search."
5 2:32	9	6	9	Brute forced	"Allow "N Smith" to be used in the search and assume that the "N" is the first letter of a name (first or last)."
6 1:02	10	10	10	Tried to search all the people in Houghton	"Didn't see more results."

Overall, the ratings for each of the three UI elements were rated higher than they were in scenario 1. The average time taken to complete this task was also lower than the previous task, taking 1:41 on average. This average time decrease is due to the participants knowing what they have to do since they had the previous test to get used to the UI. The same 2 participants who brute forced the previous test also brute forced this one. The users that clicked around the map and Google search bar for the last task did not do the same thing for this task, allowing for less misclicks and faster time completion.

During this test, it was noted by a few of the users that the filters they were clicking on were resetting whenever they went to adjust their search term. Most users tried to search for “N. Smith” instead of “Smith”, and KeTT did not find the correct person for “N. Smith”. No bugs were noted during this test. Many testers also tried to search for the location by using “Houghton” as a search term, however this returned no results in the people tab and some participants got confused.

Recommendations

The recommendations that I have for the application are as follows:

- Provide the opportunity to search for information in the details component of an entry instead of just a name. Many participants were searching for “t-shaped building”, which exists in the description of the story, however KeTT returned no results.
- Allow for a user to search for part of a string that isn't a complete match. This would allow for users to search for “N Smith” to filter their results further.
- Inform the user that the filters have been applied instead of only updating the lists. Many users would wait a minute or so after hitting the apply button before asking if it applied since they could not see anything that changed.
- Allow for the searching of people by location. Many participants searched “Houghton”, and expected to be able to expand the people tab to iterate through all of the people tagged with Houghton.

Undergraduate Participation

Date	4/11	4/14	4/16	4/17	4/18	4/18
Time	4:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM	6:00 PM
Attendees	Marissa Walther	Marissa Walther	Marissa Walther	Marissa Walther	Marissa Walther	Marissa Walther
	Mason Sayles	Kyle Alberth	Kyle Alberth	Mason Sayles	Mason Sayles	Daniel Lambert
	Daniel Lambert	Ryan Ader	Ryan Ader	Daniel Lambert	Daniel Lambert	Kyle Alberth

The names in red did not show up to their section. Mason Sayles missed the session on 4/18 due to fixing something in the application with other team members.

Testing Challenges

Holding meetings over zoom was difficult at first as the first two participants struggled to retain the scenario information and they couldn't get zoom to open the chat feature while they were sharing their screen. This made it difficult to relay information. Other testing challenges include not being able to see participant's faces. Most of the participants did not have a camera on their computer and therefore we could not judge confusion or other visual cues.