

Keweenaw Time Traveler

Usability Test Plan

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Participant Details:

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Pre-test questions:

- 1) How many years have you used a computer?
- 2) How often do you use a computer?
- 3) Do you have a Facebook account?
- 4) How often do you use Facebook?
- 5) Are you comfortable with making a post on your Facebook wall for test purposes?
- 6) Please indicate your level of agreement to the follow statement:
I am very interest in the testing of this application.
 1. Strongly agree
 2. Agree
 3. Neutral
 4. Disagree
 5. Strongly disagree

Introduction:

This document describes a test plan for carrying out a usability test for the Keweenaw Time Traveler application. The primary purpose of usability testing are evaluating the experience of the user and identifying the usability problems. Additionally we would also make recommendations for modifying the application to better satisfy user needs.

About Keweenaw Time Traveler Application:

Team Platypus comprised of five Undergraduate students namely Colin Brevitz, Colin Baldwin, Marcus Stojcevich and Dave Morehouse developed the Keweenaw Time Traveler Application. Dr. Don Lafreniere and Sarah Scarlett were the Scientists associated with this initiative. Two Graduate student Dave Schreifels and Supriya Bachal were the UX consultants on the team.

The Keweenaw Time Traveler aims to delve deep into the history of any location in the Keweenaw Ontonagon Counties from the 1880s up to the present day. The application is used to explore historic maps, names and occupations of people who owned certain properties find the mining sites or even view historic pictures.

Design Usability Goals:

The application was designed keeping these goals in mind:

1. To allow users to upload the historical documents including pictures easily and efficiently.
2. To allow users to go through the locations and view the documents associated with that location.

Usability Concerns and Goals

The usability concerns for this application are divided into Three sections: Concerns related to the contributor's Interface, the concerns related to the explorer's Interface, concerns related to all users. A contributor can be any user who is trying to upload a historical document, the explorer is a user who is trying to view the locations on the map, and the history associated with them. A few quantitative and qualitative goals have been mentioned below. These goals help to evaluate the areas of concern. These goals are the basis for the questionnaires that are present in this document.

A) Contributor's Interface:

1. Will the contributors find the application efficient and easy to use?

Goal 1a: The users will be able to use the application and upload documents, which make up a use case scenario without any external help, in a stipulated period. The users will be timed during the evaluation, to determine the average time required to upload a document.

Goal 1b: The users will feel that the amount of time and energy to perform each task in the use case scenario is justified.

2. Will the contributors find it easy to comprehend the instructions and their outcomes while uploading a document?

Goal 2a: The users will be able to understand how to upload a document without any assistance or visible or reported difficulty in the first attempt. The users will find the description given to assist the user helpful.

Goal 2b: The users will feel that the flow the task of uploading a document matches their natural flow of thought.

3. Will the contributors feel the need of help documentation to assist them with the process?

Goal 3: The users will not feel the need of any help documentation to be provided for the application.

B) Explorer's Interface:

1. Will the explorers be able to navigate through the map and find points on various locations easily and efficiently?

Goal 1a: The Users will be able navigate to different various areas on the without any observed or reported discomfort.

Goal 1b: Users will be able to locate a point on the map and retrieve the information associated with it within a specific time limit. The users of the application will be timed during the evaluation.

Goal 1c. The users will be able to zoom in and zoom out for a more detailed view of the map

2. Will the explorers be able to use the search interface effectively?

Goal 2a: Most of the Users will intuitively give the correct search criteria.

Goal 2b: Users on giving the correct search criteria will be able to locate the appropriate point on the map in the first attempt.

3. Will the explorers find the comment feature useful and effective?

Goal 3a. The users will be able to comment on a point without any assistance.

Goal 3b. The users will find the comment feature interesting and useful.

C) All Users

1. Will the application support different platforms (eg browsers, OS) efficiently?

Goal 1. There will be no effect on the performance of the application even if varied platforms are used.

2. Does the Application respond fast enough to provide a good user experience?

Goal 2: The users will not feel they spent too much times waiting for the application to respond.

3. Are there any functions provided in the application that are not useful?

Goal 3: The user will feel there is no functionality that is unnecessary and confuses user

Procedure

Participants will take part in the usability test at MEESE 206 in the Harold Meese Center located at 1400 Townsend Drive, Houghton, MI 49931. The testing is done using a laptop running Windows or Ubuntu. The Participants will be requested to fill the consent form and answer the Pre usability Test Questions. The Participant will be informed about the tasks and the application for which the usability test is being performed. The Participants will be instructed to think aloud so that a verbal record exists of their interaction with the application. After the task, the participant will complete a post usability test questionnaire.

Test Scenarios

1. Test 1

A. Name:

Upload a Photograph with Description on a point.

B. Test Goals:

1. Verify the functionality of photo upload, point title, description, estimated date, name fields and submit button fields.

2. To verify whether the users find the application easy to use and efficient.

3. To evaluate the responsiveness of the app

C. Quantitative measurement list:

1. Time taken to find The location where the picture is to be uploaded

2. Time to upload the image from the gallery

3. Time taken to enter information in the form
4. Time taken to save the entered data
5. Overall time taken for the entire scenario
6. The number of attempts a user needs before he successfully uploads a document.
7. The number of times the user asks for assistance.

D. Scenario description :

The Keweenaw Time Traveler app allows users to upload historical documents with reference to a location on the map. Assume you have a photograph clicked on 12th of August 1900 which was clicked at Mount Ripley. A man named Roger Pandas who was a very famous hockey player clicked this picture. Upload the picture to the appropriate location with a description of who clicked the picture. Name the Point as Roger Pandas.

E. Task list:

1. For finding the appropriate location:
 - The user will navigate through the map using the hand pointer. Then zoom into the Area where Mt Ripley is Located.
2. For placing the point:
 - The User will click on the location of mount Ripley
3. For Entering Details:
 - The User will enter the Name for the point. Then enter the description of the picture.
 - The User will enter the date the picture was taken using the drop down calendar.
 - The User will click on the choose file button select the picture to be uploaded.
 - Enter his name in the Name box

F. Qualitative measurement list :

- 1) The Facial expressions of the User.
- 2) Comments of the user about this feature
- 3) User's attention in the application
- 4) User's comfort while entering information
- 5) Analysis of post test Questions.
- 6) The user screen is recorded using hotjar analytics
- 7) The Users reactions are captured using an online voice recording service.

G. Potential observations of participant

1. Type of Questions asked by the user based on The System Usability Scale (SUS)
2. The User's Body language and facial expressions
3. Attention span of the User while using the application

I. Test set-up details

Open the website <http://www.csl.mtu.edu/classes/cs4760/www/projects/s17/group1/www/> in the browser. Click on the demo App icon in the bottom left part of the website. Wear the Microphone provided. Start the Audio recording software say your name before you start the test.

H. Bug Report:

Bug Number	Bug Name	Bug Uniqueness	Bug Location	Bug Description

2. Test 2

A. Name:

To search a point, view it, comment on it and share it on Facebook.

B. Test Goals:

1. Verify the functionality of comment feature
2. Verify the functionality of the Search bar feature
3. Evaluate the user experience while navigating through the map to find the specified point.
4. Evaluate the User experience while using the comment feature and the efficiency of interaction between the application and Facebook.

C. Quantitative measurement list:

1. Time taken by the application to load the point addressed in the search query
2. Time required for loading the images completing the task from the side pane related to the point.
3. Time required by the user to find the comment box and the also post on facebook checkbox.
4. Time taken by the page to redirect to Facebook.
5. Time taken by the application to load the facebook login form.
6. Total time required to complete the task.
7. No of attempts by user before successfully completing the task.

D. Scenario description :

The Keweenaw Time Traveler app provides the user a platform to view various historical documents. In this task the user is supposed to find the point named "Roger Pandas" using the search bar. The user then has to comment on it as "Testing Case" using their personal facebook account or test account created for this purpose.

E. Task list

For finding the Point

1. The user will click on the search bar and type the name of the point to be searched namely Roger Pandas.
2. Click the suggestion in the menu .
3. Click the Search Icon or press Enter.

For Viewing the related documents:

1. The User will View the Related documents in the side pane of the Interface and the location of the point on the map is marked by a green colour dot.
2. The user clicks on the images in the side Pane.

3. The user Views the image.
4. The user clicks either on the close button at the bottom of the image pane or the “x” sign at in the corner of the image pane to close the window.

For commenting:

1. The user clicks on the text box provided and types the comment.
2. User checks the also post on facebook checkbox
3. User clicks the Login to post Button
4. User is redirected to facebook login page
5. User clicks on the Email or Phone field and enters a valid email id
6. User clicks on the password field and enters the password.
7. User views the comment on the side pane of the application.
8. User Views the comment on the wall of the Facebook account used to make the comment.

F. Qualitative measurement list :

1. Body language of the user.
2. Verbal responses of the User
3. The video recordings from hotjar to identify where user spends most of his time.
4. Users expression
5. Users responses to post Usability test Questions based on The System Usability Scale (SUS)

G.Potential observations of participant

1. How the user is interacting with the application
2. How the user is giving attention to the application.

I.Test set-up details

Open the website <http://www.csl.mtu.edu/classes/cs4760/www/projects/s17/group1/www/> in the browser. Click on the demo App icon in the bottom left part of the website. Wear the Microphone provided.Start the Audio recording software say your name before you start the test.

H.Bug Report:

Bug Number	Bug Name	Bug Uniqueness	Bug Location	Bug Description

3.TEST 3

A. Name:

To change the decade of the map

B. Test Goals:

1. Verify the functionality of the Decade feature
2. Evaluate the responsiveness of the application

C.Quantitative measurement list:

1. Time taken by the application to load the new map of the decade.
2. Time required for the user to select the decade to view
3. Total time required to complete the task.

D.Scenario description :

In this task the the User is suppose to View the maps for the 1900,1820 and 1920 decade.

E. Task list

1. User clicks on the drop down menu labelled Decade to select the decade as 1900
2. User Views the map for the decade
3. User clicks the drop down menu labelled decade and selects 1820
4. User Views the Map of the Decade
5. User Clicks the Drop down menu labelled Decade and selects 1920
6. User Views the map of the decade.

F.Qualitative measurement list :

1. Body language of the user.

- Users responses to post Usability test Questions based on The System Usability Scale (SUS)

G. Potential observations of participant

- How the user reacts while the maps are loading
- The verbal reactions from the user while the maps are loading

I. Test set-up details

Open the website <http://www.csl.mtu.edu/classes/cs4760/www/projects/s17/group1/www/> in the browser. Click on the demo App icon in the bottom left part of the website. Wear the Microphone provided. Start the Audio recording software say your name before you start the test.

H. Bug Report:

Bug Number	Bug Name	Bug Uniqueness	Bug Location	Bug Description

4. Test 4

A. Name:

To Test the application on Safari, Mozilla and Chrome Browsers.

B. Test Goals:

- Verify the functionality of the Application on various Platforms
- Evaluate the responsiveness and performance of the application on various Platforms.
- Evaluate the user experience of the application on various platforms.

C. Quantitative measurement list:

- Time taken by the application to load the maps in the in the specified Browser
- Time required for the user to type the name of the points in various browsers

3. Time required to load the specific points in the various browsers.
4. Time required to load the images associated with the points in the various browsers.
5. Time required to find the comment section for each browser.
6. Time taken by the page to redirect to Facebook for each browser .
7. Time taken by the application to load the facebook login form for each browser .
8. Total time required to complete the task in each browser.
- 9.

D. Scenario description :

In this task Users will Repeat Task 2 three different browsers namely Safari, Mozilla Firefox and Google Chrome to compare and evaluate the performance and functionality of the application in each of the Browsers.

E.Task list

For finding the Point

The user will click on the search bar and type the name of the point to be searched namely Roger Pandas.

Click the suggestion in the menu .

Click the Search Icon or press Enter.

For Viewing the related documents:

5. The User will View the Related documents in the side pane of the Interface and the location of the point on the map is marked by a green colour dot.
6. The user clicks on the images in the side Pane.
7. The user Views the image.
8. The user clicks either on the close button at the bottom of the image pane or the “x” sign at in the corner of the image pane to close the window.

For commenting:

9. The user clicks on the text box provided and types the comment.
10. User checks the also post on facebook checkbox
11. User clicks the Login to post Button
12. User is redirected to facebook login page
13. User clicks on the Email or Phone field and enters a valid email id
14. User clicks on the password field and enters the password.

15. User views the comment on the side pane of the application.
16. User Views the comment on the wall of the Facebook account used to make the comment.

F. Qualitative measurement list :

1. Body language of the user for each browser .
2. Users responses to post Usability test Questions based on The System Usability Scale (SUS) for each browser.

G. Potential observations of participant

1. How the user reacts while the images are loading
2. The verbal responses of the User while performing the tasks in various browsers
3. The body language of the User while using various browsers.

I. Test set-up details

Open the website <http://www.csl.mtu.edu/classes/cs4760/www/projects/s17/group1/www/> in the browser. Click on the demo App icon in the bottom left part of the website. Wear the Microphone provided. Start the Audio recording software say your name before you start the test.

H. Bug Report:

Bug Number	Bug Name	Bug Uniqueness	Bug Location	Bug Description

Post Usability Test Scenario Questions

Please indicate your level of agreement to the follow statement:

Overall, this application was easy to perform the task.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

I enjoy using this application.

1. Very much
2. A little bit
3. Neutral
4. Not very much
5. Not at all

I would use this application again.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

.I found the system unnecessarily complex.

1. Very much
2. A little bit
3. Neutral
4. Not very much
5. Not at all

I think that I would need the support of a technical person to be able to use this system.

1. Very much
2. A little bit
3. Neutral
4. Not very much
5. Not at all

I found the various functions in this system were well integrated.

1. Very much
2. A little bit
3. Neutral
4. Not very much
5. Not at all

Measures For usability Testing

1. Completion Rate

The Completion rate is defined as the no of participants who completed the test without encountering any Critical errors. Critical errors are errors which result in incorrect or unexpected results or

2. Error-free rate

The percentage of participants who complete the tasks without any critical or non critical errors. The non critical errors are errors that affect only the efficiency of the system.

3. Time on Task (TOT)

The total time taken by the User to complete the Task.

Appendix A

For Convenience purposes all the scenarios are listed below:

1.The Keweenaw Time Traveler app allows users to upload historical documents with reference to a location on the map. Assume you have a photograph clicked on 12th of August 1900 which was clicked at Mount Ripley. A man named Roger Pandas who was a very famous hockey player clicked this picture. Upload the picture to the appropriate location with a description of who clicked the picture. Name the Point as Roger Pandas.

2.The Keweenaw Time Traveler app provides the user a platform to view various historical documents.In this task the user is suppose to find the point named “Roger Pandas” using the search bar.The user then has to comment on it as “Testing Case” using their personal facebook account or test account created for this purpose.

Note: The test facebook profile for this part is as listed below:

Username:sups_cool@yahoo.com

Password: testing1234

3.In this task the the User is suppose to View the maps for the 1900,1820 and 1920 decade.

4.In this task Users will Repeat Task 2 three different browsers namely Safari, Mozilla Firefox and Google Chrome to compare and evaluate the performance and functionality of the application in each of the Browsers.

Appendix B

Consent Form

Computer User Interface Usability Testing

You are being invited to participate in a research study to determine the usefulness and usability of computer user interfaces. This study is being conducted by Dr. Robert Pastel of Michigan Technological University Computer Science Department and students in Dr. Pastel's Human-Computer Interaction (HCI) courses. The students are performing the usability tests as part of their project and to fulfill the HCI course requirements.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you provide and tasks that you will perform will determine the usefulness and usability of user interfaces. The questionnaires and the tasks should take less than an hour to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

The questionnaires and test are anonymous. Do not write your name on the survey. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study except for the instructor of the class that is giving you credit for participating. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. By completing the questionnaires and performing the tasks, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer or not to perform a task for any reason.

If you have any questions about the study, please contact Dr. Robert Pastel, Assistant Professor, Computer Science Department, Michigan Technological University, Houghton, MI 49931.

The MTU Institutional Review Board has reviewed my request to conduct this project. If you have any concerns about your rights in this study, please contact Joanne Polzien of the MTU-IRB at 906-487-2902 or email jpolzien@mtu.edu.

Participant signature and date: