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Evaluation Assignment #4: Usability Test Plan

Team 4: Calm B4 The Storm

App: Wet/Dry Mapping

Usability Test Plan- Overall Schedule

1. Participant is briefed and consented (PDF on website)
2. Participant fills out demographic and experience questionnaire
3. Participant is read instructions for the wet-dry mapping task (directly from the scientist) and the wet-dry application (humanities students)
4. Participant navigates through the desert representation “partnered” with one of the present developers
 - a. Made up of sub scenarios (described later)
 - b. Participant engages in a concurrent think-aloud protocol (audio is recorded)
 - i. Observer takes notes of frustrations/questions/bugs
 - ii. Developer may comment on data collection questions, but NOT on app related confusions or questions
 - c. Time to segment (sub scenario) completion is recorded
5. Participant engages in a post-test interview with the test proctor
 - a. Open ended questions
 - b. Geared towards understanding participant’s general strategies for utilizing the app and discussing any issues they encountered
6. Participant fills out post-test form on google forms
 - a. Scaled responses focused on design, aesthetics
7. Participant is debriefed and dismissed

Demographic and Experience Questionnaire

Participants will be asked to answer the following questions in order to better understand the demographics of our usability study. They will be informed that all of these questions are voluntary and that they can choose to not answer any questions that they do not feel comfortable with.

Participants will be reminded that this demographic data will only be discussed on the group level, and that any specific comments referenced will be using their sequential and anonymous participant number. The Common Usability Test Questions will also be incorporated in this questionnaire.

1. How old are you?
2. What gender do you identify with?
3. What is your ethnicity?
4. Do you have any visual impairments? (i.e. nearsightedness, colorblindness)? If so, do you utilize any corrective devices or accessories?
5. Do you own a smart phone? If yes, please name the make and model.
6. How often do you use applications on your phone when outside?
(Never, Rarely, Sometimes, Frequently, All the Time)
7. Have you ever utilized an application to collect data outside?
8. How familiar are you with wet-dry mapping? (Not at all-0 to Very knowledgeable-5)
9. Have you specifically ever engaged in any wet-dry mapping research or activities before participating in this study?

Wet-Dry Mapping Instructions for Participants

Participants will be provided with these instructions that are typically provided to volunteers who are about to engage in the wet-dry mapping. Participants will be told that they do not have to worry about utilizing a GPS unit, and that the data for that will be provided during the task. They will also be told that they will have a partner (who will be one of the developers) that will engage in the activity with them, but will not be able to answer any questions about the app, as they are the person in the group in charge of using the current paper forms. The instruction form will maintain most of the integrity of the original, but some of the wording and unapplicable sections will be changed or deleted in order to prevent participant confusion and to maintain the scope of the usability test. Some snippets of the instructions are provided below:

“DATA COLLECTION:

Your mission is to record the GPS reading, accuracy estimate, waypoint number, time, and whether the water in the river starts or stops. Include both ponded water (stagnant pools) and flowing/ running water. Do not include wet sand or dirt, only the water surface itself. Note that you are recording data in two forms – hand-written on data sheets, and using the Wet-Dry mapping application. One group member will be in charge of the hand-written data and the other will utilize the application. Record ONLY the Wet/Dry observations in the GPS unit. Record BOTH the Wet/Dry observations and other observations on the hand-written data sheets and the Wet-Dry mobile application.

Be careful to check out all of the river’s channels. Sometimes the flow of the river will be divided (with islands in the middle). Your group may spread out as you move along the river to make sure that you don’t miss “another” parallel channel”

Other Observations:

When recording wildlife sign, large trash dumps, or other unusual sightings **DO NOT press the “Enter/ Mark”** button or record the information on regular data sheets. Use the separate “Other Observations” form to record the GPS data, circle the appropriate

type of observation, and make any additional remarks. It is important that this information be kept separate from the water data and not entered in the GPS units.

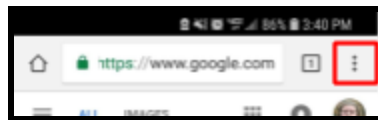
Wet-Dry Mapping App Instructions for Participants (continued)

The following instructions have been created by the humanities students to guide the users through the application and to troubleshoot any issues. This will (in theory) be provided as training material for actual users when they are being instructed on how to use the app. We are also looking at input on the instructional materials.

Downloading the App

Webpage: Open google chrome on your device. Then go to “url.com”.

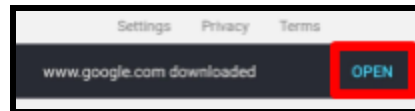
Downloading: 1) Click



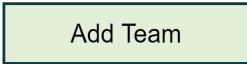
2) Click

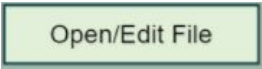


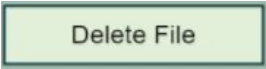
3) Click




Homepage

Starting a New Reach File: While on the Homepage. Press . This will bring you to the Team Data Page and will create a new Reach File.


Opening an Existing File: While on the Homepage, then press . This will bring you to the Recorded Data Page.

Deleting an Existing File: While on the Homepage, then press . This will delete the data that has been saved. ONLY do this after the data has been successfully uploaded.

Team Information Page: **Caution: Once confirmed the team information cannot be edited.**

Adding a Team Member: While on the Team Information Page, then press . This will open another textbox

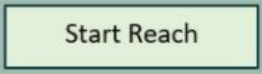
Editing a Team Member: While on the Team Information Page select the text box with the team member's name to be changed. The phone/tablet keyboard will pop up and the team member's information can be changed.

Deleting a Team Member: While on the Team Information Page press . This will delete the team member from the team list.

Entering Reach Segment Name: While on the Team Information Page select the textbox under 'Reach Segment Monitoring' and type the reach name in the box.

Selecting Data Collection Direction: While on the Team Information Page select the bubble under 'Direction of Data' that corresponds with the direction of the data collection.

Team Confirmation Page: **Caution: Once confirmed the team information cannot be edited.**

Recording Your Start Point: While on the Team Confirmation Page press . This will bring you to the Data Entry Page where the waypoint data can be entered.

Data Entry Page

Entering a Waypoint: While on the Data Entry Page select the textbox labeled 'Waypoint'. The information in this textbox can be edited by re-selecting the textbox. **The waypoint number should be automatically populated.**

Entering a Time: While on the Data Entry Page select the textbox labeled 'Time' and **the time should be automatically populated** or enter the time displayed on the phone/tablet.

Entering an Accuracy: While on the Data Entry Page select the textbox labeled 'Accuracy' and enter the Accuracy reading displayed by the GPS unit.

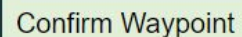
Entering UTM-Easting: While on the Data Entry Page select the textbox labeled 'UTM-E' and enter the Easting coordinate displayed by the GPS unit.

Entering UTM-Northing: While on the Data Entry Page select the textbox labeled 'UTM-N' and enter the Northing coordinate displayed by the GPS unit.

Entering Comments: While on the Data Entry page select the textbox labeled 'Comments' and enter any observations made at the waypoint. (E.g. presence of debris, wildlife presence or tracks, water conditions, etc...)

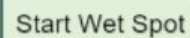
Selecting Water Presence: While on the Data Entry Page select the bubble under 'Water Present?' next to the option that describes the water presence at that waypoint.

Confirming a Waypoint: While on the Data Entry Page press

 Confirm Waypoint

Recorded Data Page: **Caution: Once the data has been Submitted the file will no longer be editable or accessible on your phone/tablet.**

Starting a Wet Spot: While on the Recorded Data Page press

 Start Wet Spot

. This will display the Data Entry Page where the waypoint data can be entered.

Ending a Wet Spot: While on the Recorded Data Page press

 End Wet Spot

. This will display the Data Entry Page where the waypoint data can be entered.

Editing a Data Point: While on the Recorded Data Page press



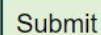
. This will return you to the Data Entry Page.

Deleting a Data Point: While on the Recorded Data Page press



. If this is pressed on the first data point of a couplet, it will delete both the data points in the couplet. If this is pressed on the second data point of a couplet, it will only delete the second data point.

Submitting Your Data: While on the Recorded Data Page press

 Submit

. This will bring you to a password entry form, the password to which will be given to the team leader. Once the password is entered and the OK button is pressed the Submission Confirmation Success or Failure page will be displayed.

If directed to the Submission Confirmation Success Page you can close out of the application.

If directed to the [Submission Confirmation Failure Page](#) refer to the troubleshooting directions below.

Troubleshooting

Data Not Submitting

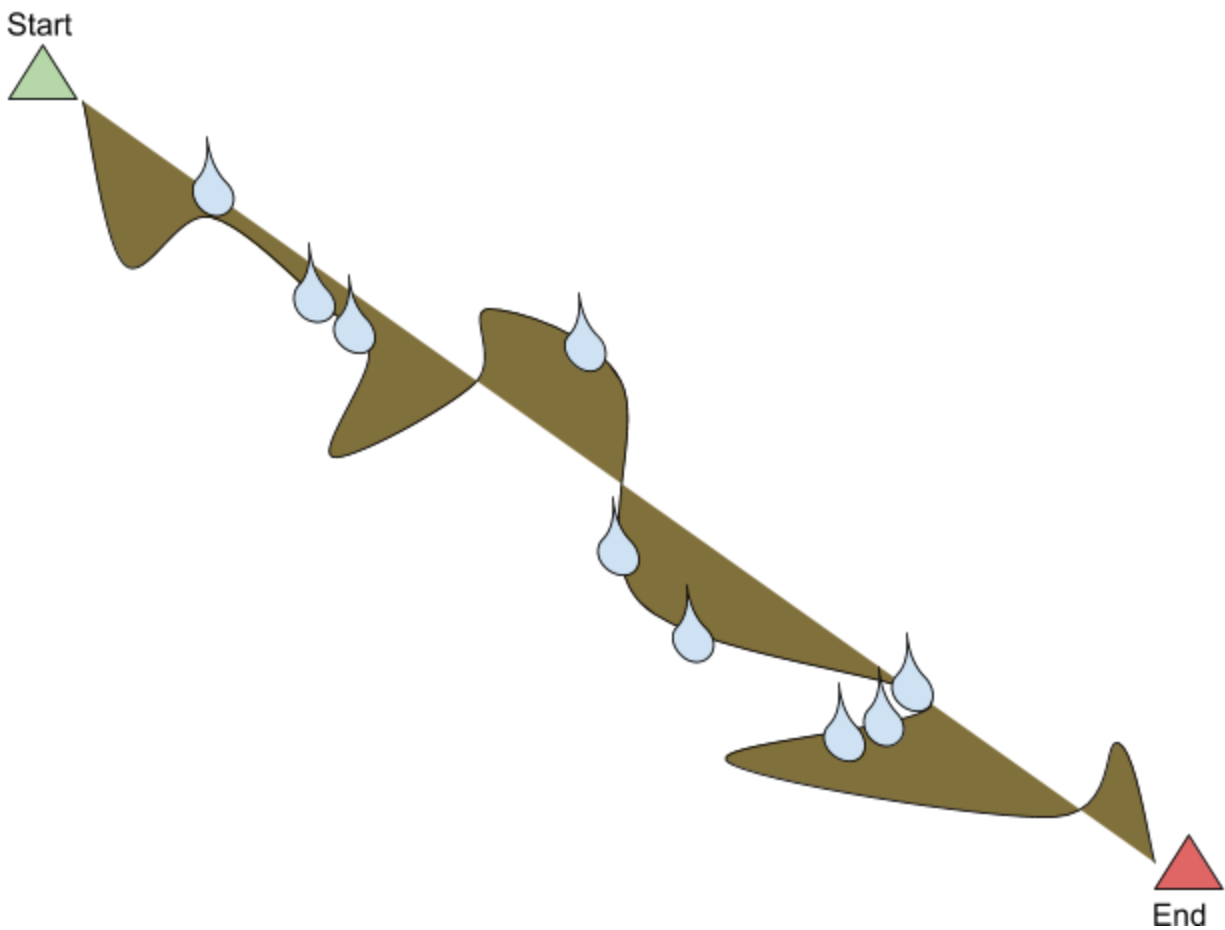
Submission Failed:

- a. You do not have cellular or wifi service necessary for submitting data. Go to a location with cellular service and attempt to submit again.
- b. You entered the password incorrectly. The password entry page will reappear. Try entering the password again and hit OK.

Task Scenarios/Objectives

The general simulation is made up of subtasks or objectives in which participants have to “collect field data.” Participants will be provided with a visualization and a marker representing themselves and their spatial relationship as they navigate down their route. Participants will experience sub tasks in which they experience transitions between wet and dry spots (wet-> dry, wet-> wet, etc).

Below is a visual representation of the overall objective and the subtasks and an example of how they will be portrayed to participants.



Post-Test Interview Questions

The post test interview will be mostly improvised as it will depend on the output and strategies from the concurrent verbal protocol. Here are some example questions that may be asked:

1. Describe your process for navigating the application.
2. Describe your strategy for becoming efficient using the app.
3. Describe what features of the application made these processes and strategies difficult.

Post-Test Form

The post-test form will ask for scaled responses from 1-9 (5 is neutral) on different assessment categories.

Please rate the instructions on the following:

1. Clarity (1=Completely Unclear, 9=Completely Clear)
2. Confusion (1=Very Confusing, 9=Not Confusing at all)
3. Applicability to the application (1= Not applicable at all, 9=Very applicable)
4. Helpfulness (1=Not helpful at all, 9= Very helpful)

Please rate the application on the following:

1. Ease of learning (1=Slow and Very Difficult, 9= Quick and Very Easy)
2. Ease of correcting errors (1=Very Difficult, 9= Very Easy)
3. Intuitiveness of design (1=Very Unintuitive, 9=Very Intuitive)
4. Functions are consistent with the data collection (1= Very inconsistent, 9=Very consistent)
5. Simplicity of design (1=Too complex, 9=Perfectly simple)
6. Enjoyment of app usage (1= Not enjoyable at all, 9=Very enjoyable)

Bug Report Form

The bug report form is used to keep track of technical bugs that are encountered or identified during the usability test.

Bug Number	Bug Name	Bug uniqueness	Bug Location	Bug Description