Rose-Hulman Institute of Technology

University of Wisconsin–Madison | Department of Computer Sciences
Human-Computer Interaction Laboratory

Milestone 5

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November 8, 2011

Contents

1 Executive Summary

This document's purpose is to detail the participant scheduling system proposed by the Human-Computer Interaction Lab of Wisconsin-Madison. It is the fifth document describing this project, and contains interface designs constructed from the use cases of Milestone 2, the results of usability analysis on that interface, and planned changes based on this analysis. The project exists because the lab wishes to unify their schedule information and provide a simple, intuitive interface for prospective participants to sign up for experiments.

2 Introduction

The Human-Computer Interaction Lab at the University of Wisconsin-Madison wants a web-based system to better manage the scheduling of participants for their studies. These studies range from one-on-one experiments to group interactions, and many of them involve the robot used by the lab. Currently, each researcher arranges studies independently via email and is responsible for scheduling rooms, avoiding conflicts, and notifying participants of changes; unifying this information onto one system simplifies all of these tasks. To the client, the most important benefit of a unified system is the ability for participants to easily browse all available experiments, which is not possible over email. However, a variety of other functionality should be integrated into this utility to take advantage of the unity of information; most notable is recognizing room conflicts when scheduling studies, since the lab has only one robot and it cannot be moved.[1]

Project information will be documented as follows: Milestone 1 provides an overview of the project, from client background to key features and requirements. Milestone 2 covers the behaviour of the system, including use cases and data flow diagrams. Milestone 3 details constraints, back-end requirements, and elaborates upon the user interface. Testing and maintenance information can be found in Milestone 4. Milestone 5 will include usability data and interface re-design related to such data.

3 Client Background

The client is the Human-Computer Interaction Lab at the University of Wisconsin-Madison. Their research focus is the on the way humans perceive computers, and how this perception influences their actions. The main goal is to learn about this interaction through making hypotheses, experimenting, analysing the data, and then publishing papers on the results. They draw the participants for their experiments from a wide range of people, usually ranging from 18-65 years of age and from diverse technical backgrounds. As such, any system they use must be designed for all levels of technical competency.

4 Current System

Each researcher has their own method of handling participant scheduling. For most, the current system is to have the participants email the individual researcher and then that researcher records the time slot in some sort of Excel spreadsheet. Other researchers have tried Google Calendar appointment slots; while this is a better system, not everyone uses it and the client believes it is too complex for most participants and some researchers. Addressing the lack of unified data and superfluous effort on the part of the participants is the primary goal of the project.

5 Product Overview

This section provides a high-level view of the product capabilities, interfaces to other applications, and system configurations.

5.1 Product perspective

The participant scheduling system will be a new product. It will be used to schedule experiments and participants in the Human-Computer Interaction Lab at the University of Wisconsin-Madison. The product is independent and totally self-contained, besides a few external software packages; it is not a component of a larger system.

5.2 Elevator Statement

For the researchers in the Human-Computer Interaction Lab at the University of Wisconsin-Madison who currently schedule experiments and participants with rudimentary tools such as pencil and paper, email, or Google Calendar, the participant scheduling system will be a web application that will streamline the lab's scheduling process. Unlike current solutions, this application will be the same for every researcher, so it will also be easier for participants to be a part of multiple experiments.

5.3 Summary of Capabilities

Here are the major benefits and features the product will provide.

Customer Benefit	Supporting Feature
List of participants for an experiment	Reports
Room availability (avoid conflicts)	Overall lab schedule
Simple sign up	Intuitive user interface
Track all experiments	Experiments manager
Access from anywhere at any time	Web application

5.4 Assumptions and Dependencies

- The participant scheduling system will be a web application.
- The server has the necessary operating system and software.
- There is no integration with any other system.
- There is no import of existing data.

5.5 Rough Estimate of the Cost

There is no monetary cost for this project, because the software development, as part of a college class, is free. Similarly, all software used is open-source. Furthermore, the client will be provided with free servers through the University of Wisconsin-Madison for the finished product. The client will perform maintenance and management on their own.

6 Features

ID	Feature	Status	Priority	Effort	Risk	Stability	Target Release	Reason
1	Browse Experiment	Approved	Critical	Medium	Medium	Medium	1st	Lets experiments be advertised better and to display the experiments
2	Persistent Experiment Storage	Approved	Critical	Medium	Low	High	1st	Store experiment for the data to be web based.
3	Levels of Authentication	Approved	Useful	Medium	High	Medium	3rd	Have levels of administrators, workers and participants in order to control privacy issues and other sensitive data
4	Participant Schedule Experiment	Approved	Critical	Medium	Medium	Medium	1st	Participant can schedule experiment slot
5	Filter Experiments	Approved	Useful	Medium	Low	High	2nd	Filter the experiments when browsing according to Time, Date, Payment, etc.
6	Experiment Participants	Approved	Important	Low	Low	High	2nd	View all of the participants by administrators and workers only of individual experiments
7	Cancel Experiment Appointment	Approved	Useful	Medium	Medium	Medium	3rd	Cancel participant scheduled appointment
8	Add Experiment	Approved	Important	Medium	Medium	Medium	2nd	Add experiment from administrators view
9	Modify Experiment	Approved	Important	Medium	Medium	Medium	2nd	Modify or Edit experiment from administrators view
10	Notify Participant when Creating Appointment	Approved	Useful	Medium	Low	High	4th	Send an email reminding participants of participation in an experiment
11	Notify Participant Appointment Reminder	Approved	Useful	Medium	Low	High	4th	Send an email or text reminding participants for their experiments
12	Notify Participant Appointment Cancellation Reminder	Approved	Useful	Medium	Low	High	4th	Send an email or text reminding/telling participants of cancellation of their experiments
13	Export Experiment Participant List	Approved	Useful	High	Low	High	4th	Reports on experiments scheduled with an option for Individual experiments reports
14	All Experiments Calendar	Approved	Useful	Medium	Low	Low	4th	Have an overall schedule viewer
15	Remove Experiments	Approved	Important	Low	Low	High	4th	Allow for workers or administrators to remove schedules
16	Tracking of Consent Payment Forms	Rejected	Useful	Medium	Low	Medium	N/A	Allow for workers to check off participants when filling out consent/payment forms
17	User Report	Rejected	Useful	Medium	Low	Medium	N/A	Allow participants to have a report on new experiments
18	Accounts	Approved	Critical	High	Low	Medium	N/A	Accounts for participant
19	Prevent Scheduling Conflicts (Participant)	Approved	Useful	High	Low	Medium	N/A	Prevent participants from scheduling 2 experiments at the same time
20	Prevent Scheduling Conflicts (Administrator)	Approved	Useful	High	Low	Medium	N/A	Prevent 2 rooms from being scheduled at the same time
21	Install Scripts	Proposed	Useful	High	Low	Low	TBD	Install scripts for installation
22	Documentation for Maintenance and User	Approved	Useful	High	High	Low	Ongoing	Documentation

The **Browse Experiments** feature and **Persistent Experiment Storage** both had a Priority of Critical since they both must be implemented for even a very basic version of the scheduling System. The effort on both was a medium as with a team of two, there would be a manageable amount of work. **Browse Experiments** has a stability of medium since it is up for change upon the client seeing the UI. **Persistent Experiment Storage** has a stability of high since once implemented has little chance of being changed.

Participant Schedule Experiment has a priority of critical since the participants must be able to sign themselves up for an experiment for the project to be successful. Again, the effort is medium since with two people the work would be manageable. The risk is high on this feature, since the success of the project has a dependence on the feature. The stability would be medium since the steps are unlikely to change, but the UI could easily change.

Levels of Authentication is a useful priority because it would not be necessary for there to be an actual Administrator since the users trust each other, but this would be a nice feature. The effort and stability are medium since the feature may change some, but only smaller parts of the feature, while still being a very manageable task.

Filter Experiments has a priority of useful, since it might only apply to users in certain situations. **Filer Experiments** and **Experiment Participants** have a low risk, since the project does not depend on their success. They both also have a stability of high, since changes are unlikely to happen. The effort on **Filter Experiments** is medium, since there are some areas of the feature, such as what to filter by, that have not been established. The effort on **Experiment Participants** is low since a simple SQL query will do most of the job.

Cancel Experiment Appointment, **Modify Experiment**, and **Add Experiment** get and effort of Medium, since most deal with SQL and some logic on the back end. They also have a risk of medium, since a mistake while implementing these features could create a difficult to find bug elsewhere. The stability is medium, since parts of the database could change slightly.

Notify Participant When Creating Appointment, **Notify Participant Appointment Reminder**, and **Notify Participant Appointment Cancellation Reminder** all have a priority of useful since they would be nice to have, but are not vital to the projects success. They all have an effort of medium since they involve a persons email, but could be reduced to low, depending of the framework used. Their risk is low, since a failure here creates no problems else where in the project, nor does a mistake spread else where in the project. The stability is high on these since they are unlikely to change.

Export Experiment Participant List is a useful feature, that has a high effort due to formatting of the report. The risk is low though, since the feature is not critical in the release of the product. Stability is high due to the feature being very specific.

An **All Experiments Calendar** would be useful for the future participants. The effort is medium because it would be an extension of the **Browse Experiments** feature.

Remove Experiments has a priority of Important, since, although rare, experiments may be cancelled. The effort is low since most of it will be taken care with an SQL query. Also, a stability of high is given because of how specific the feature is described.

Accounts, **Prevent Scheduling Confilicts for the Participant**, and **Prevent Scheduling Conflicts for the Administrator** all have a priority of useful, except for **Accounts** which Critical, since the other two features mentioned rely upon the **Accounts** along with cancellation of the experiment slots. The effort is high for all the features due to the logic needed when implementing the features.

Tracking of Constent Payment Forms and **User Report** have all been rejected, since the client does not need theses features.

Documentation and **Install scripts** are both useful priority. The effort will be high, since there is complexity associated with the Install scripts and Documentation is difficult to keep up to date. The stability would be low since the definition could change.

Items 1, 8, 15, 18, and 21 will be assigned to Kevin Risden. Items 3, 4, 10, 11, and 12 will be assigned to Samad Jawid. Items 6, 9,14 and 20 will be assigned to Chris Gropp. Items 2, 5, 7, 13 and 19 will be assigned to Trey Cahill. The entire team will work on item 22.

7 Usability Report

7.1 Process

In order to conduct the usability study, our team used the human computer interaction experts at the University of Wisconsin-Madison HCI Lab. Our client contacted 5 experts and they reviewed our prototype system. Before the experts could review our system, they had to agree to an Informed Consent Form that is included below. A list of tasks was then provided to the experts with instructions to fill out a questionnaire on Google Documents. The questionnaire included the Informed Consent Form at the top of the form and by submitting the questionnaire the experts were agreeing to the terms of the Informed Consent Form. The specific instructions given to the experts are included below as well. Once the experts had completed the tasks, they filled out the questionnaire here `https://docs.google.com/spreadsheet/viewform?formkey=dExyUjl2cGJiMUlfb0dfMkFNT1k1UEE6MQ` and the questions have been copied below. This process proved to be useful since we did not have to find a common meeting time for everyone and the experts could complete the tasks on his or her own time.

7.1.1 Informed Consent Form

Please read this informed consent document carefully before you decide to participate in this study.

The purpose of this study is to analyze and test the design of the proposed Participant Scheduling System for use at the Human-Computer Interaction Lab at the University of Wisconsin in Madison (henceforth HCI lab).

This study is being conducted by Trey Cahill, Chris Gropp, Samad Jawaid, and Kevin Risden, with additional support from Sriram Mohan, Jimmy Theis, and Allie Terrell (henceforth the study organizers). No other persons or agencies will assist in this study or be allowed access to any identifying information.

This study is confidential; your name and specific responses will not be available to anyone outside of the study organizers. Only aggregate information will be available to the general public, and your name will not be released in any capacity (as part of a list or otherwise) to anyone outside of the study organizers.

Your specific responses and any identifying information will be destroyed no later than June 2012, even amongst the records of the study organizers.

Your participation in this study is entirely voluntary. You may refuse to answer any questions posed, and may choose to stop participating at any time.

If you have questions about the study, please contact Kevin Risden by email at risdenkj@rose-hulman.edu

Your completion and submission of the questionnaire indicates your consent to participate in this study under the terms stated above.

7.1.2 Expert Instructions

Thanks so much for agreeing to help out with this usability study. As you saw in my previous email, this is for the participant scheduling system for the lab and is being completed as part of a class project by a team of students from my undergraduate school. Kevin Risden (who is heading the team working on this) is CCed on this email - please feel free to email him with any questions (CC me), or if you have further comments after completing the study.

The study should take about 30 minutes to complete - instructions are below this message. Note that there is a feedback form as well via Google Docs. Since this is part of a class, the team needs your responses by Thursday morning so they can complete their milestone. Additionally, I will be out of town all day Thursday. I've asked Kevin to send out a reminder email if he doesn't have all of the responses by then.

Keep in mind that this is a prototype - their winter quarter will be spent developing the working system. So, provide constructive feedback for the team, particularly regarding the design and functionality.

Prototype: http://pss.csse.rose-hulman.edu/

Below is a provided username and password to use to login to the system.
Username: aterrell
Password: temp123

Before attempting to complete the tasks below, spend a few minutes exploring the system to gain an understanding of it.

As a HCI Lab Researcher, here is the list of tasks to complete:

- Login
- Add Experiment
- Modify Experiment
- Experiment Time and Date Range
- Delete Experiment

Please complete a feedback form at https://docs.google.com/spreadsheet/viewform?formkey=dExyUjl2cGJiMUlfb0dfMkFNT as you proceed through the tasks.

Limitations:
Signup will not work due to verification emails not being allowed outside the Rose-Hulman Institute of Technology firewall.

7.1.3 Questionnaire

Task Review Questionaire

Please read this informed consent document carefully before you decide to participate in this study.

The purpose of this study is to analyze and test the design of the proposed Participant Scheduling System for use at the Human-Computer Interaction Lab at the University of Wisconsin in Madison (henceforth HCI lab).

This study is being conducted by Trey Cahill, Chris Gropp, Samad Jawaid, and Kevin Risden, with additional support from Sriram Mohan, Jimmy Theis, and Allie Terrell (henceforth the study organizers). No other persons or agencies will assist in this study or be allowed access to any identifying information.

This study is confidential; your name and specific responses will not be available to anyone outside of the study organizers. Only aggregate information will be available to the general public, and your name will not be released in any capacity (as part of a list or otherwise) to anyone outside of the study organizers.

Your specific responses and any identifying information will be destroyed no later than June 2012, even amongst the records of the study organizers.

Your participation in this study is entirely voluntary. You may refuse to answer any questions posed, and may choose to stop participating at any time.

If you have questions about the study, please contact Kevin Risden by email at risdenkj@rose-hulman.edu

Your completion and submission of the questionnaire indicates your consent to participate in this study under the terms stated above.

Please fill out this survey for each task you are asked to complete.
* Required

Name: *

Log In

What is the Task? *

- Log In
- Create Experiment
- Modify Experiment
- Select Time and Date range for the experiment
- Delete Experiment

The screens are well designed: *

- Strongly Disagree

- Disagree
- Neutral
- Agree
- Strongly Agree

Are that any areas of the screen that need improvement?

Are there any areas of the screens that were well done?

Create Experiment

What is the Task? *

- Log In
- Create Experiment
- Modify Experiment
- Select Time and Date range for the experiment
- Delete Experiment

The screens are well designed: *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Are that any areas of the screen that need improvement?

Are there any areas of the screens that were well done?

Modify Experiment

What is the Task? *

- Log In
- Create Experiment
- Modify Experiment
- Select Time and Date range for the experiment
- Delete Experiment

The screens are well designed: *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Are that any areas of the screen that need improvement?

Are there any areas of the screens that were well done?

Select Experiment Dates and Times

What is the Task? *

- Log In
- Create Experiment
- Modify Experiment
- Select Time and Date range for the experiment
- Delete Experiment

The screens are well designed: *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Are that any areas of the screen that need improvement?

Are there any areas of the screens that were well done?

Delete Experiment

What is the Task? *

- Log In
- Create Experiment
- Modify Experiment
- Select Time and Date range for the experiment
- Delete Experiment

The screens are well designed: *

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Are that any areas of the screen that need improvement?

Are there any areas of the screens that were well done?

For All Tasks

List and explain any design flaws that you have found

Are that any areas that "annoy" you?

General Comments:

Submit

Powered by Google Docs

7.2 Analysis

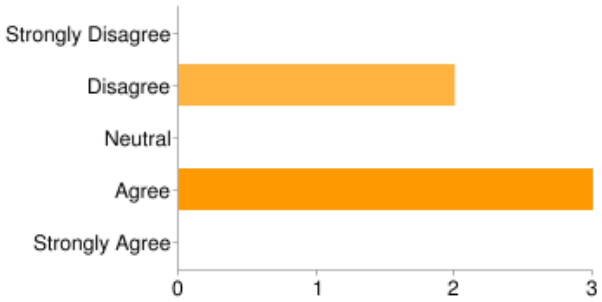
Using the Google Documents form and corresponding spreadsheet provided a convenient way to aggregate the data and analyse it. The raw data was downloaded from Google Docs in Excel format and then the analysis of each task was done following the general structure outlined here:

- A bar chart showing the number of each type of response for how well the screen was designed.
- The answers for the how well screen(s) were designed question were given a numerical value. Strongly disagree was given a 1, disagree a 2, neutral a 3, agree a 4, and strongly agree a 5. These scores were averaged to give an overall score for how well each task was designed in terms of the screens.
- Common themes for the two open ended questions were identified.

The three open ended questions at the end of the questionnaire relating to the overall feel of the system were each analysed for common themes. Based on the feedback from each participant, follow-up questions were generated in order to gain more specific information.

7.2.1 Login

The screen was well designed

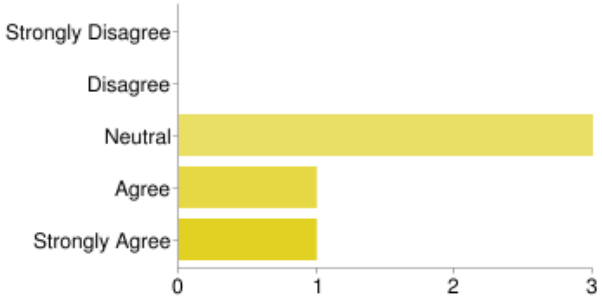


Average Score: 3.2
Common Themes:

- Positive
  - Simple
  - Clean
  - Straightforward
- Negative
  - Main page needs more content

7.2.2 Add Experiment

The screen was well designed

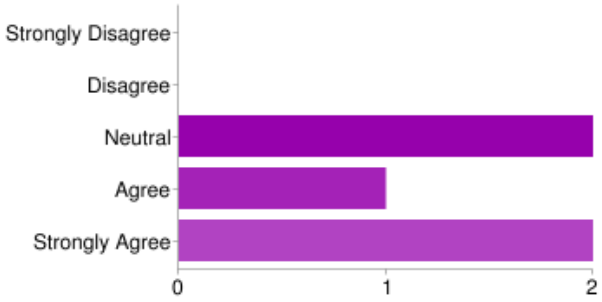


Average Score: 3.6
Common Themes:

- Positive
  - Intuitive
  - Style of page/buttons
- Negative
  - Combine Add Experiment with Date/Time Range selection
  - Add Save button to top of page

7.2.3 Modify Experiment

The screen was well designed

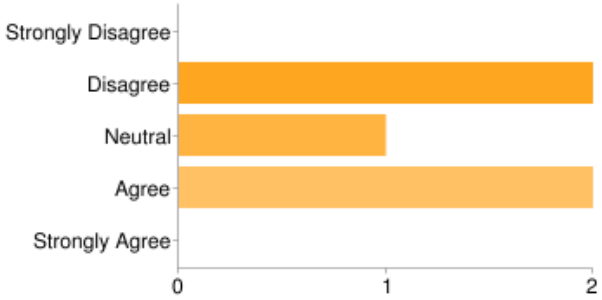


Average Score: 4
Common Themes:

- Positive
  - Easy to use
  - Straightforward
- Negative
  - Combine Add Experiment with Date/Time Range selection
  - Modify button on list experiments page

7.2.4 Experiment Time and Date Range

The screen was well designed

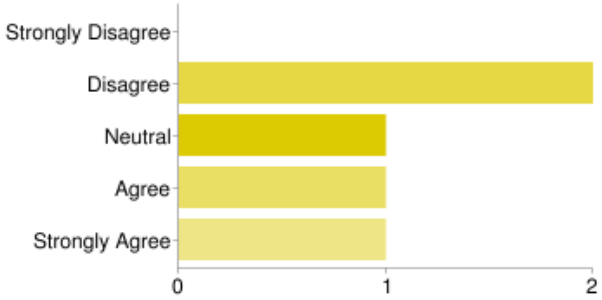


Average Score: 3
Common Themes:

- Positive
  - Entering time is clear and simple
- Negative
  - Combine Add Experiment with Date/Time Range selection
  - Use Google Calendar type interface
  - Cannot range over multiple days at once
  - Forced to use widget to enter time

7.2.5 Delete Experiment

The screen was well designed



Average Score: 3.2
Common Themes:

- Positive
  - Confirmation before actually deleting
- Negative
  - Add delete ability to list all experiments page
  - Delete button hidden

7.3 Findings

The analysis of the usability study provided some results that were expected due to the level of the prototype, but also some results that were unexpected. Overall findings are listed first followed by the findings broken out into the tasks the experts completed.

7.3.1 Overall

The experts' opinions in general showed that the prototype showed promise and the parts that were completed had only some minor issues. For each task, the average score was at or above 3 meaning that the experts either were neutral or agreed with our design. The biggest issue was the separation of experiment length and date from the experiment time slot creation. Aside from that, the minor issues included not having a meaningful home page, changing the colours of the delete experiment button, and providing indication in the top navigation bar as to what page you are on. Many of the changes suggested were already on the roadmap to be completed in the next revision. This shows that our product is on the right track and that we have done a good job relating to usability this far.

7.3.2 Login

The overall sentiment showed that the experts liked the simplicity of the home page and login page. The other suggestion was that the home page should provide information about the lab, which is planned for a later version when the experiments are displayed on the home page for participants to choose from. With the overall average rating being a 3.2, the experts were close to neutral due to the lack of content on the home page, but this was planned to be changed when more of the system is implemented.

7.3.3 Add Experiment

The comments for the Add Experiment question suggested that the division of creating an experiment and the time slots separately was a bad design. This should be integrated into one screen since the two activities are related. The ability to add rooms, qualifications, and researchers while creating an experiment is a feature that was missing from the initial prototype but is on the radar to be completed in the next revision. This hurt the usability since the experts could not create a new room or add a qualification. One comment related to not knowing what a qualification was and we attribute this to not using the same terminology when they create an experiment. If this is a common theme with later studies, we may look into changing the wording. The positive attributes of the Add Experiment task was that it was straightforward and that the interface had a nice pleasing layout to the eye.

7.3.4 Modify Experiment

Much of the feedback for Modify Experiment mirrored the Add Experiment feedback since they were similar in the page design. Since the two designs are similar the fixes for Add Experiment will also apply to the Modify Experiment task. There was some more positive feedback for the Modify Experiment page such as providing a green line when modifying the experiment was a good indicator. Another good design feedback was that the experts liked the modify button the side of the experiment list. On the downside, the delete button was too hidden and hard to find when needed. The next revision plans to fix the delete button issue and is addressed more in the Delete Experiment task.

7.3.5 Experiment Time and Date Range

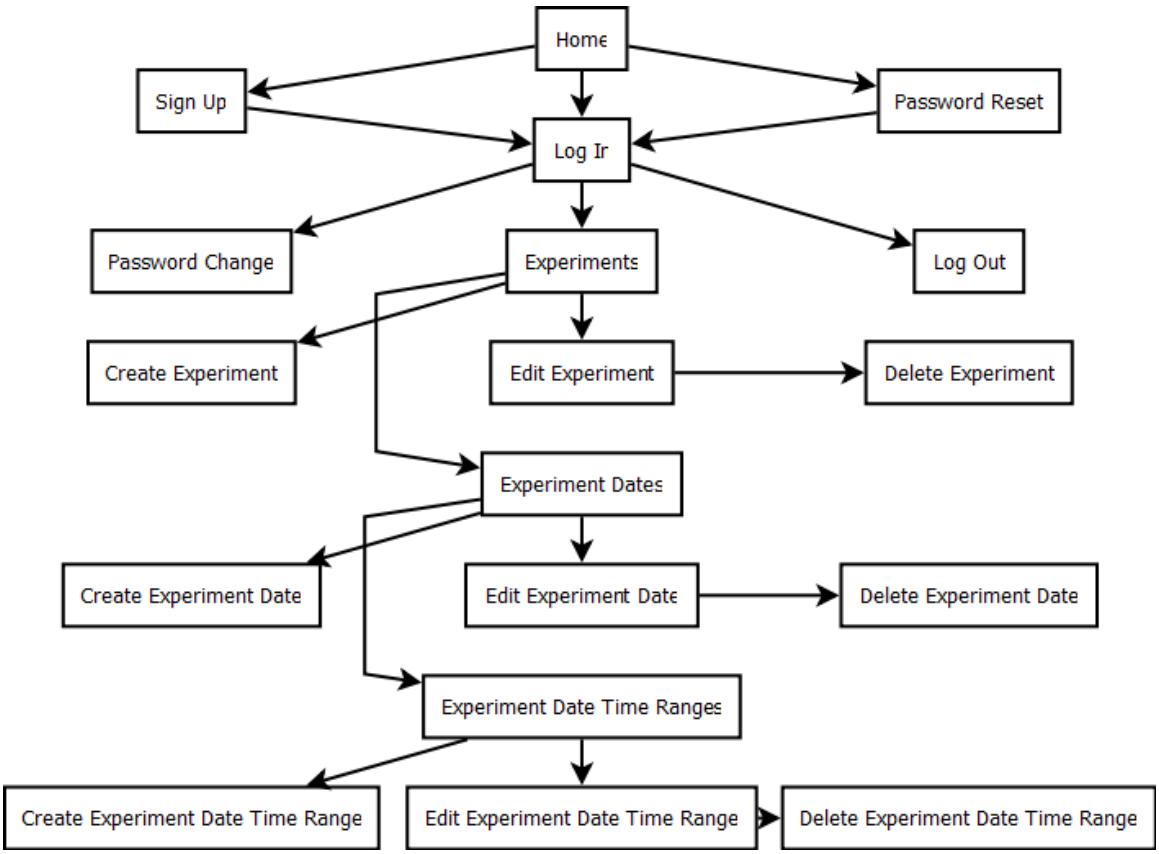
The Experiment Time and Date Range had varied feedback since some users liked the use of military time for entering the time but others wanted a Google Calendar type approach to entering the time. In addition

to this, some of the experts wanted the ability to type in a date and time instead of being forced to use the calendar and time widgets. The important critical feedback we received was that the experts did not like having the Experiment Time and Date Range task separate from the Create/Modify Experiment task. They felt that this is the same task and should be handled on one screen instead of two separate screens. This feedback means that we need to redesign how the time and date ranges are chosen for our next releases of the prototype.

7.3.6 Delete Experiment

The major issue pointed out during the Delete Experiment task was that the delete button was hard to impossible to find. It did not match the look and feel of the other buttons on the site and this made it a difficult button to find. The experts felt that button should be more subtle than the save button but still fit the look and feel of the other buttons. Another suggestion was to include a way to delete experiments from the experiment list instead of having to open an experiment first. The positive feedback was that deleting an experiment was straightforward once the delete button was found. The next revision was planned to redesign the way the delete button worked so now we know how the delete button should be redesigned based on the expert feedback.

8 Interaction Architecture



9 Initial and Revised Interface Design

9.1 Home

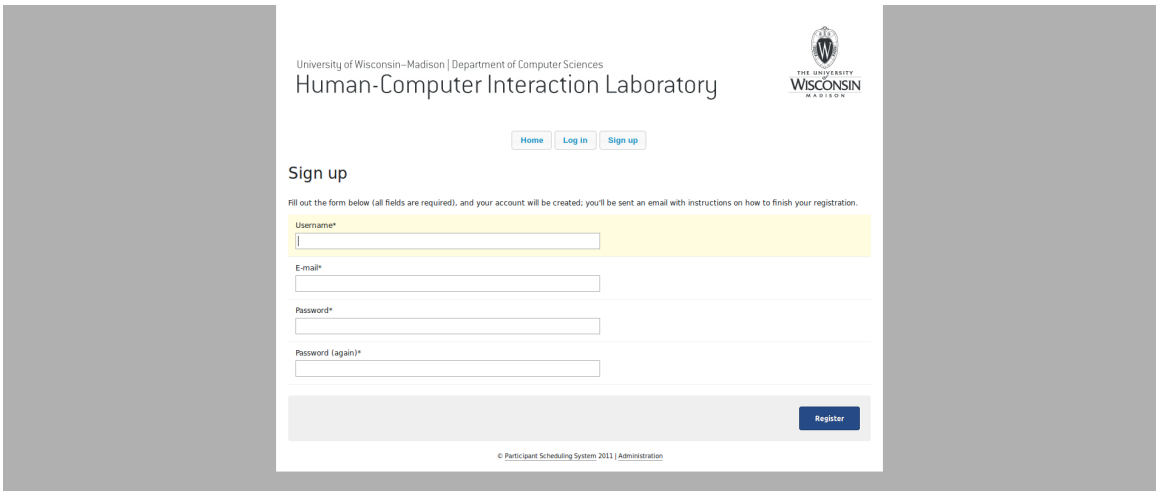
9.1.1 Initial

9.1.2 Revised

There will a paragraph introducing the lab and the participant scheduling system. Furthermore, it will explain who should be clicking what to get started. On every page, the menu button associated with the current page will be distinguished in some way.

9.2 Sign Up

9.2.1 Initial

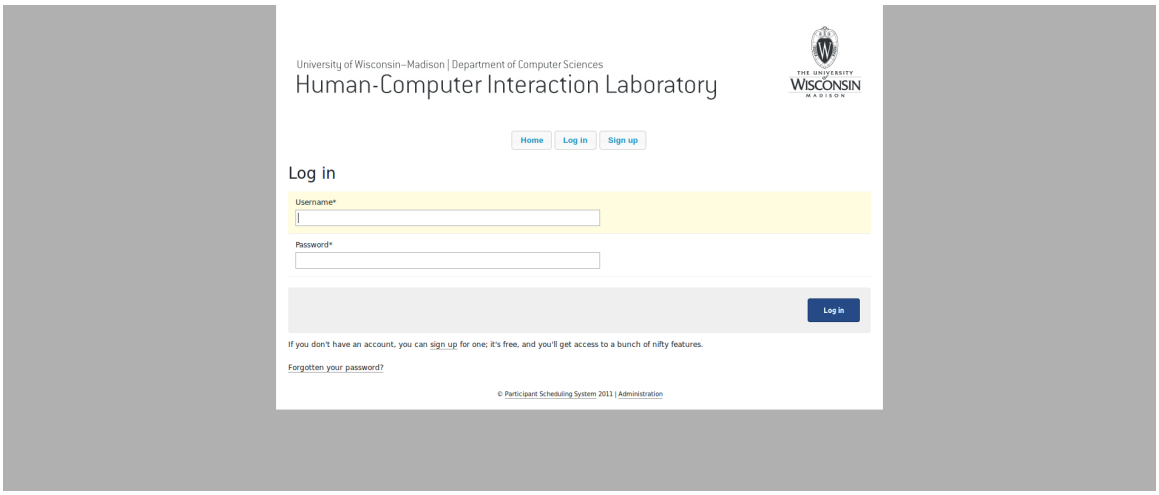


9.2.2 Revised

No changes

9.3 Log In

9.3.1 Initial

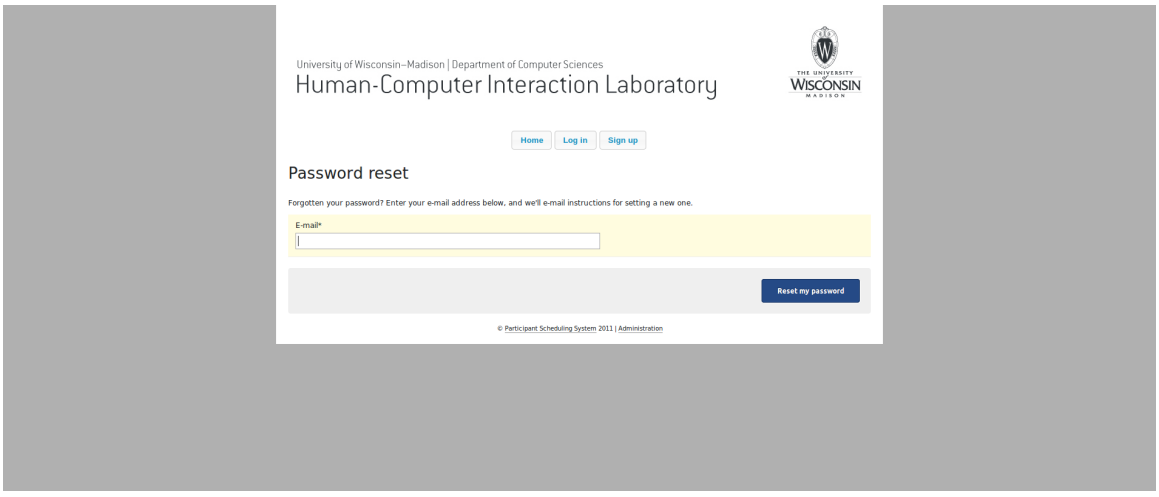


9.3.2 Revised

No changes

9.4 Password Reset

9.4.1 Initial

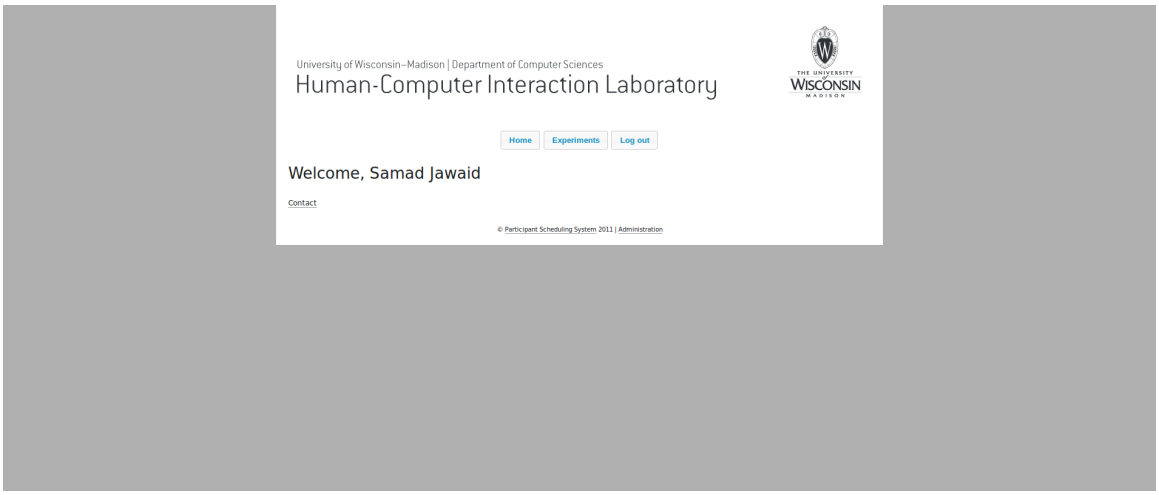


9.4.2 Revised

No changes

9.5 Home, Logged In

9.5.1 Initial

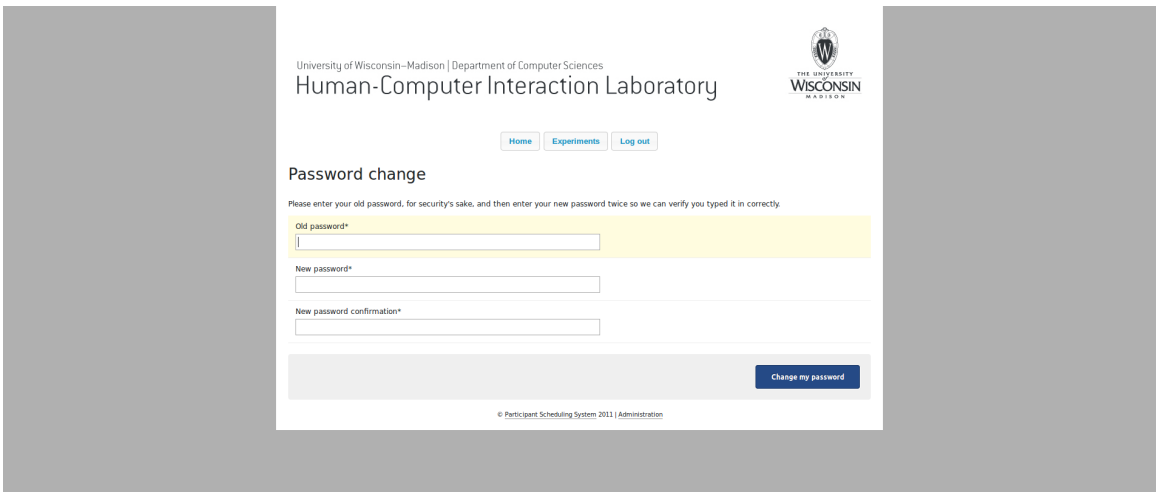


9.5.2 Revised

Upon logging in, instead of being taken back to the home page, the user will be taken to the experiments page. If the user manually returns to the home page while logged in, the revisions of the default home page will be reflected there as well; see **Home, Logged In**. On every page, the logged in user's username or name will be displayed somewhere.

9.6 Password Change

9.6.1 Initial

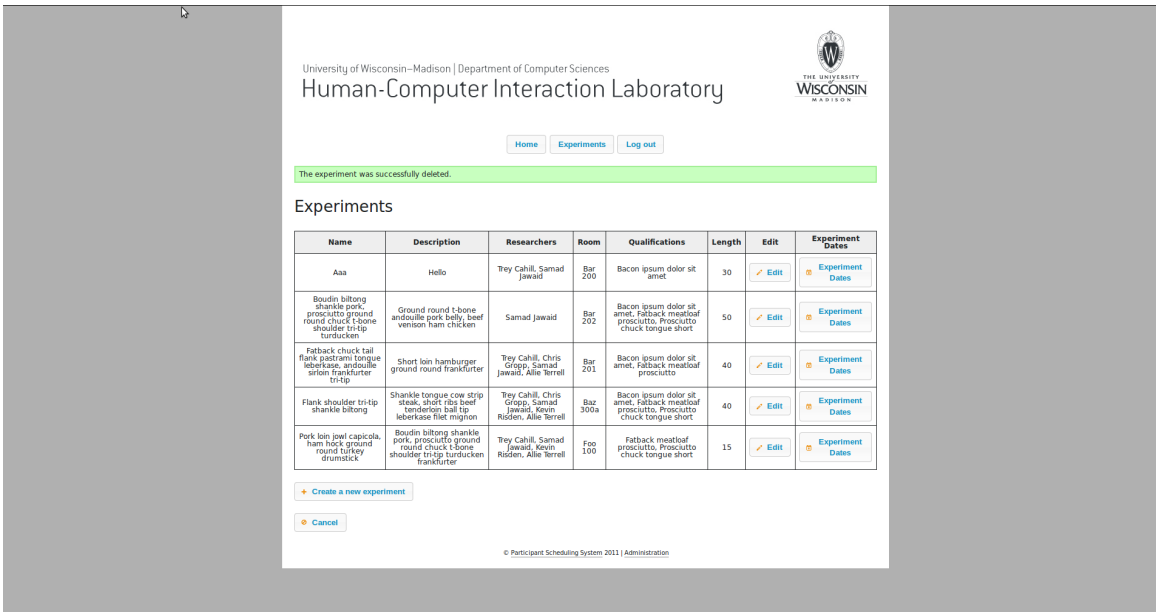


9.6.2 Revised

It will be linked to from some other page, maybe the home page while logged in. No user was able to access it without explicitly visiting the URL, which they were not given.

9.7 Experiments

9.7.1 Initial

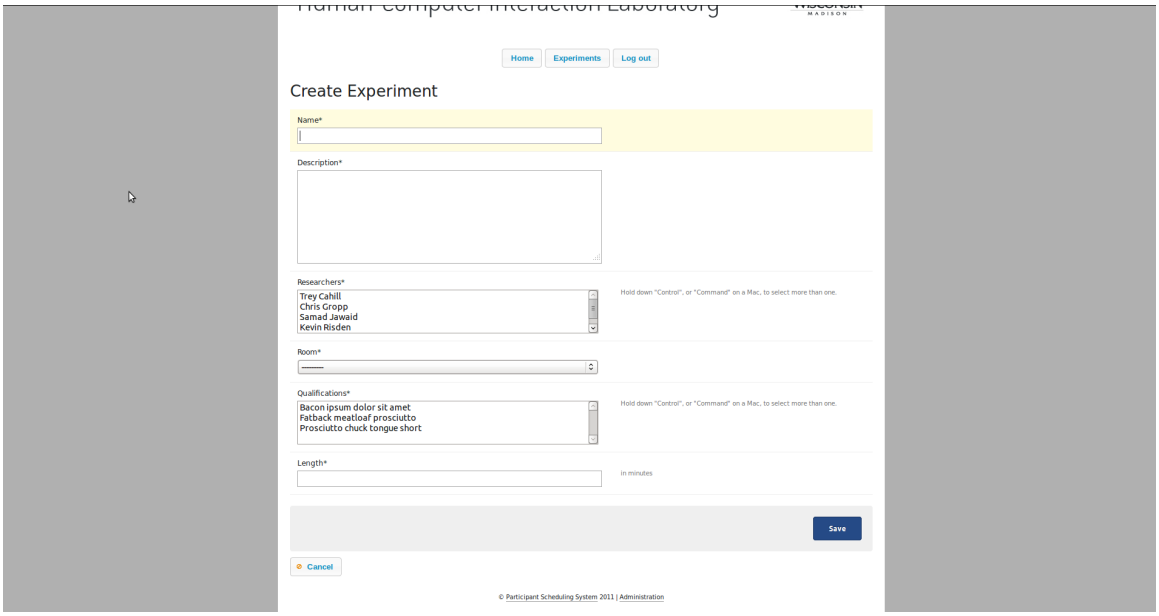


9.7.2 Revised

The unit of length (minutes) will be specified. The table will be filterable and sortable. Experiments will be able to be mass-deleted from the table. The create button will be duplicated above the table as well. The cancel button will be changed to a back button with an appropriate icon.

9.8 Create Experiment

9.8.1 Initial

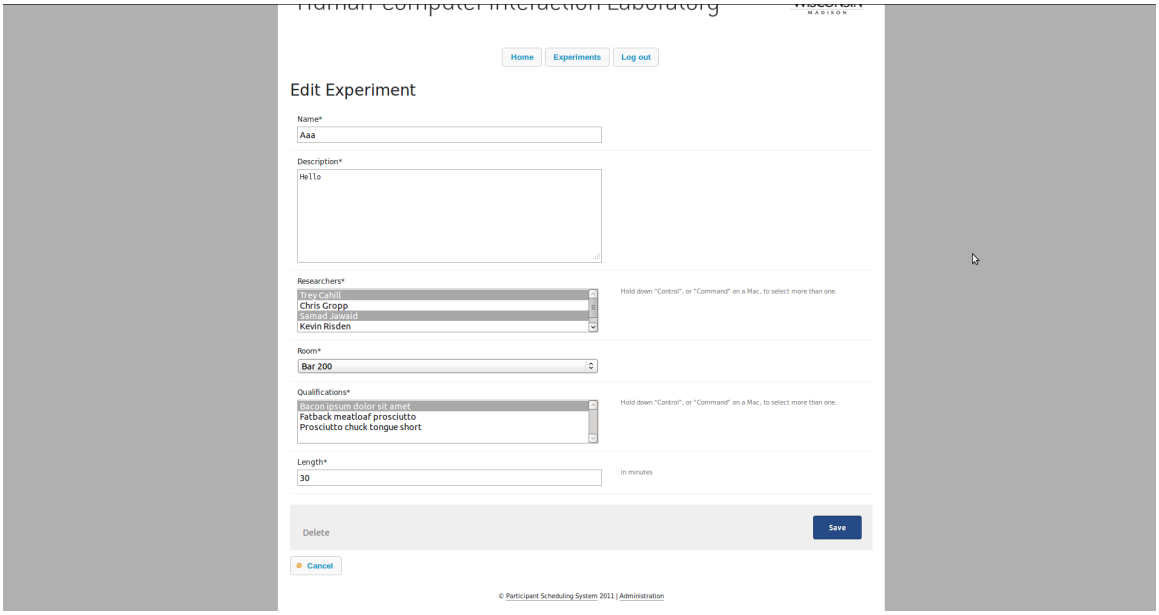


9.8.2 Revised

The qualifications, room, and researchers inputs will be jQueryUI autocomplete fields with the ability to create new values. It will be clear that the cancel button discards all unsaved changes.

9.9 Edit Experiment

9.9.1 Initial

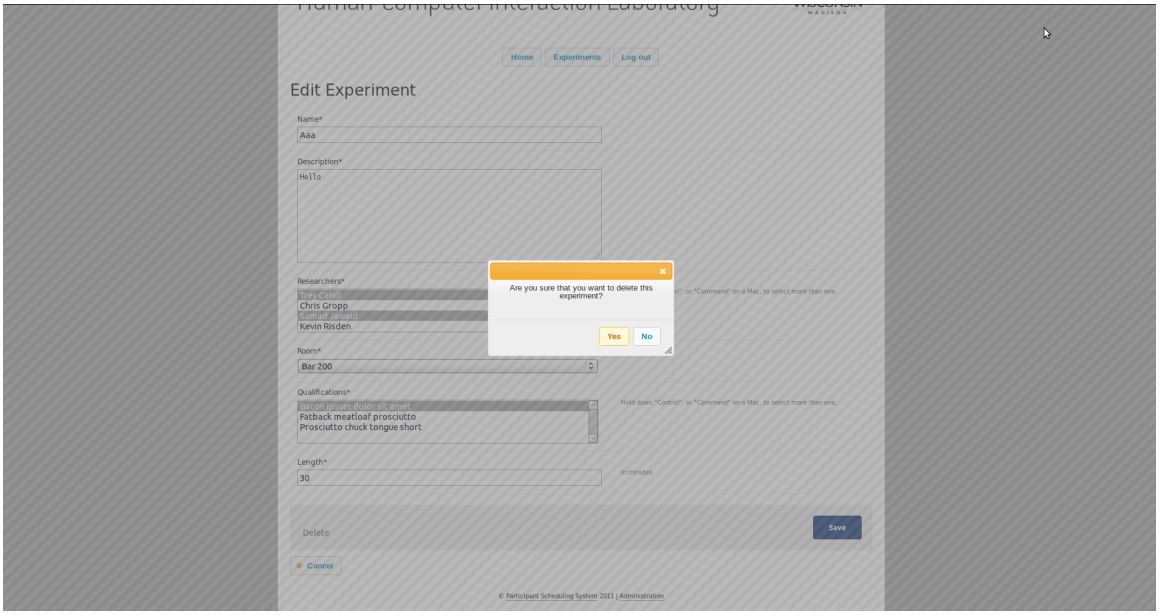


9.9.2 Revised

The delete button will not be so subtle. Also, see **Create Experiment**.

9.10 Delete Experiment

9.10.1 Initial

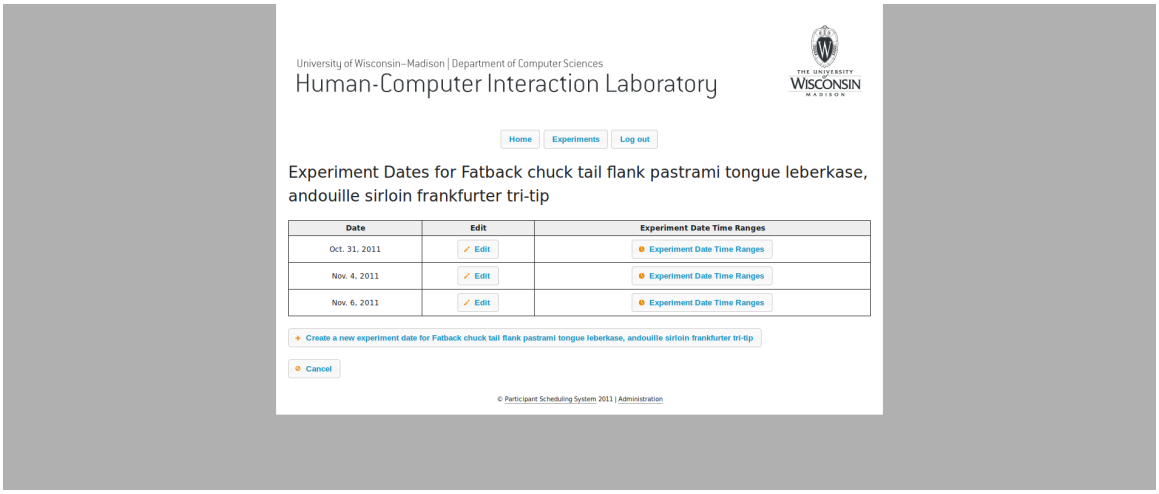


9.10.2 Revised

The jQueryUI CSS theme will match the existing CSS, so the dialog box will not appear so out of place.

9.11 Experiment Dates

9.11.1 Initial

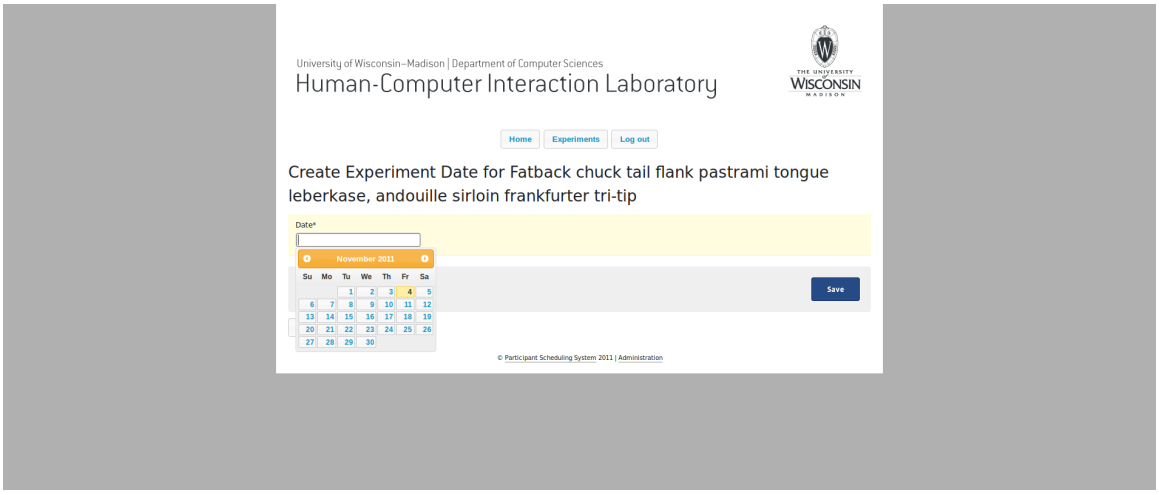


9.11.2 Revised

The table will be filterable and sortable. Experiment dates will be able to be mass-deleted from the table. The create button will be duplicated above the table as well. The cancel button will be changed to a back button with an appropriate icon.

9.12 Create Experiment Date

9.12.1 Initial

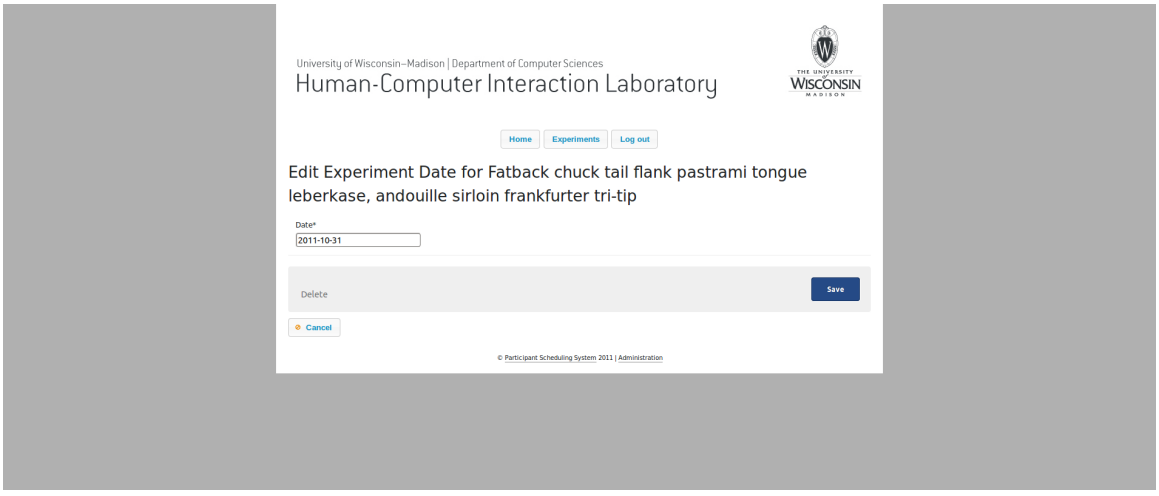


9.12.2 Revised

The user will be able to type in a date manually without using the calendar widget. Help text explaining the date format will be added. The widget will not automatically appear on page load. It will be clear that the cancel button discards all unsaved changes.

9.13 Edit Experiment Date

9.13.1 Initial

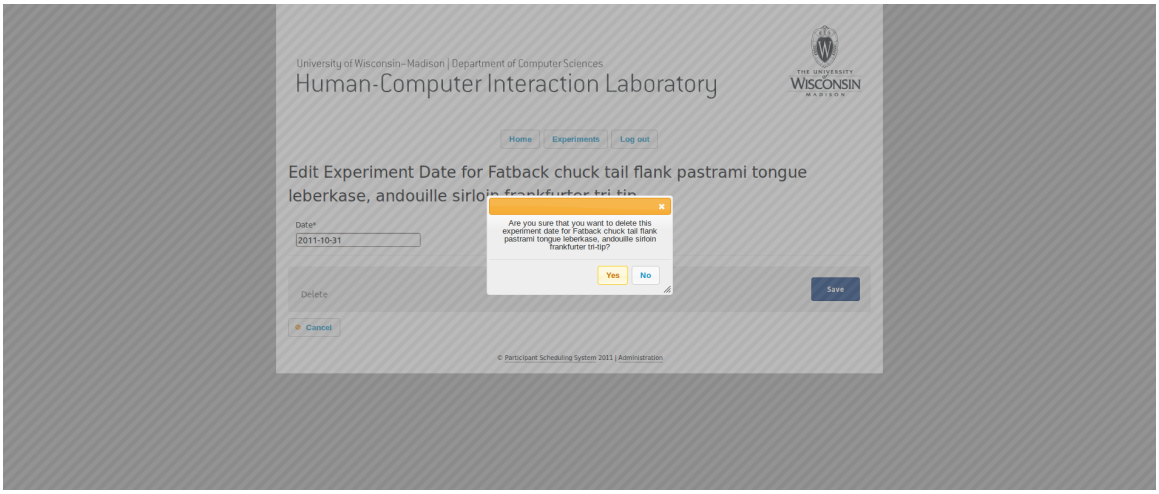


9.13.2 Revised

The delete button will not be so subtle. Also, see **Create Experiment Date**.

9.14 Delete Experiment Date

9.14.1 Initial

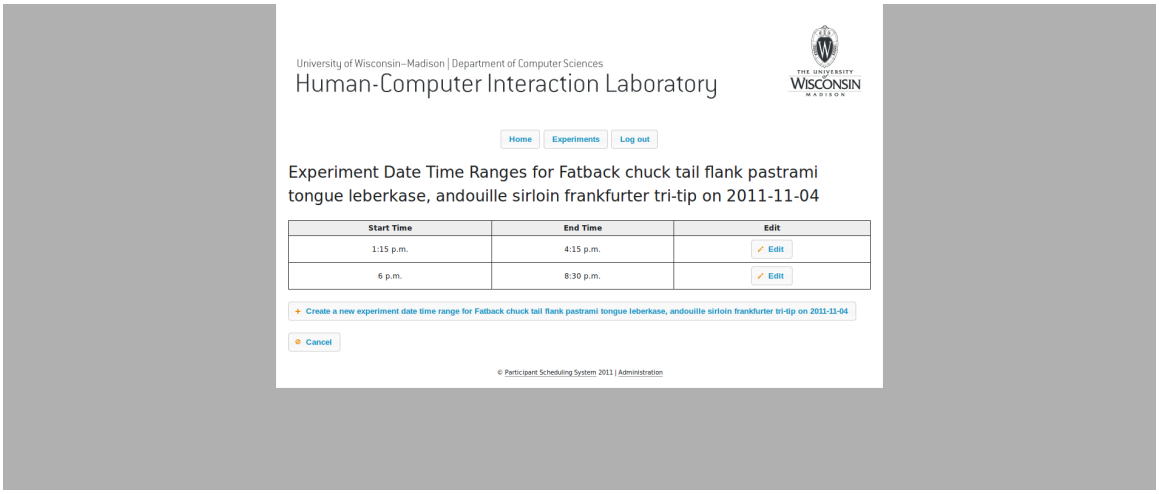


9.14.2 Revised

The jQueryUI CSS theme will match the existing CSS, so the dialog box will not appear so out of place.

9.15 Experiment Date Time Ranges

9.15.1 Initial

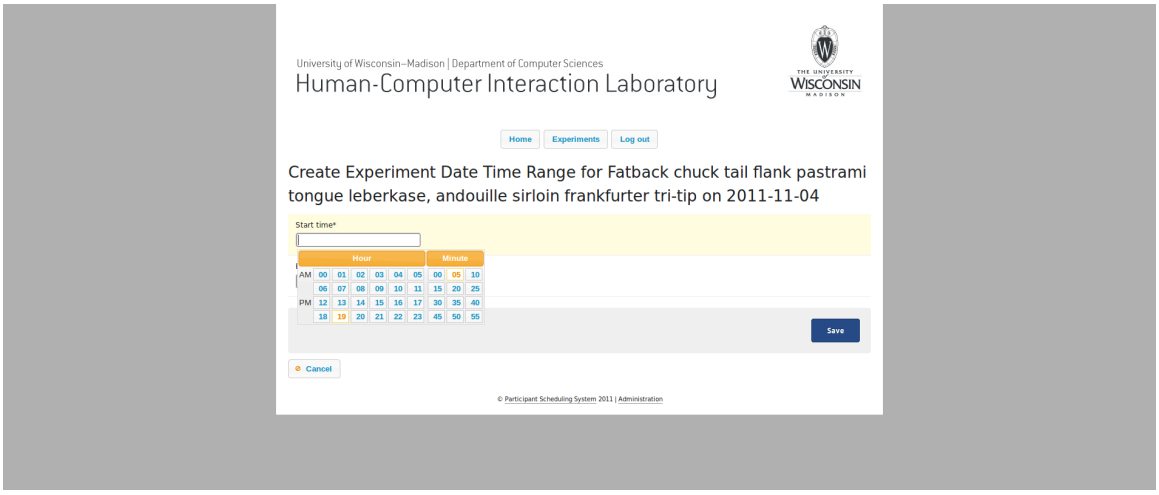


9.15.2 Revised

The table will be filterable and sortable. Experiment date time ranges will be able to be mass-deleted from the table. The create button will be duplicated above the table as well. The cancel button will be changed to a back button with an appropriate icon.

9.16 Create Experiment Date Time Range

9.16.1 Initial

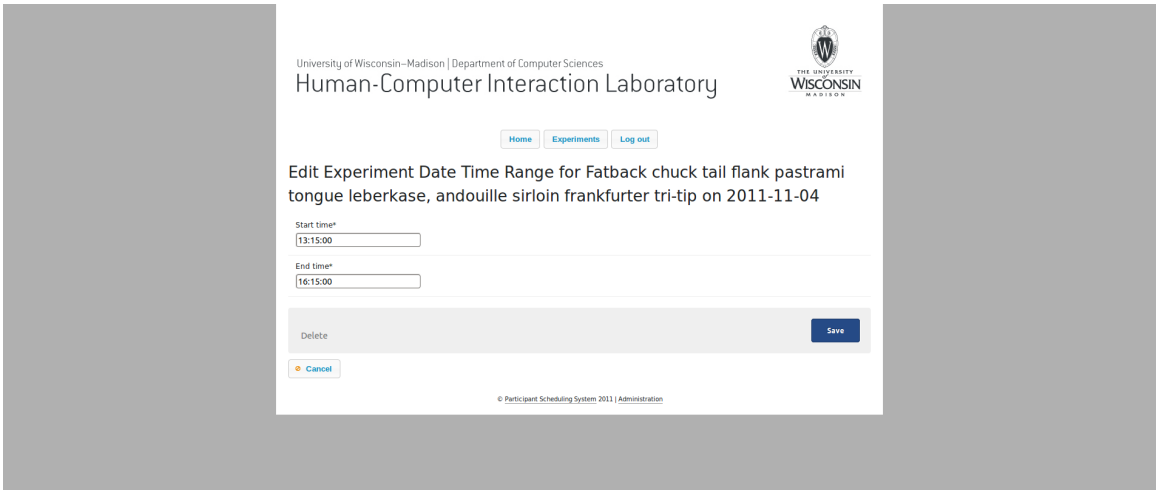


9.16.2 Revised

The time widget will not have the AM or PM labels since it uses 24-hour time. Help text explaining the time format will be added. The widget will not automatically appear on page load. It will be clear that the cancel button discards all unsaved changes.

9.17 Edit Experiment Date Time Range

9.17.1 Initial

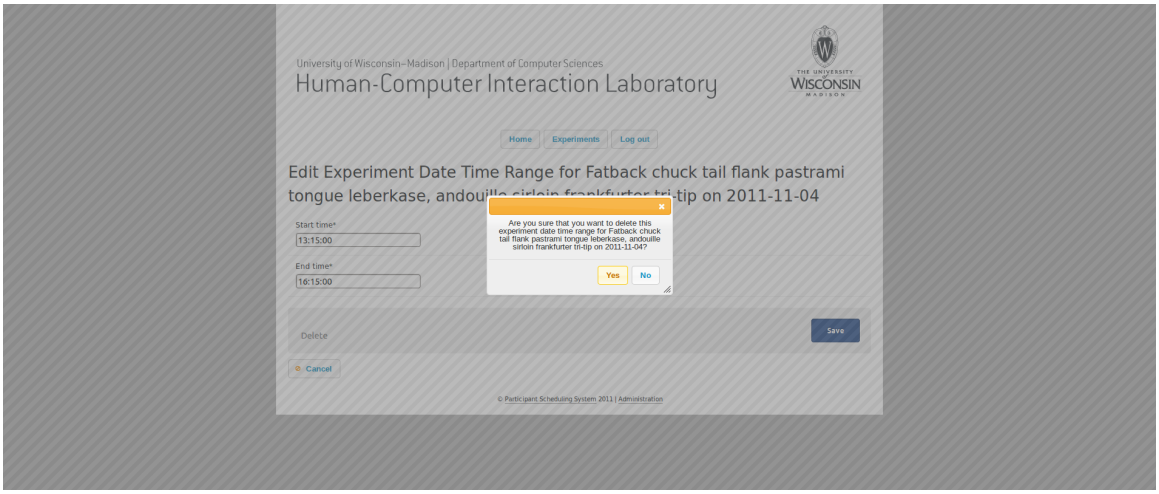


9.17.2 Revised

The delete button will not be so subtle. Also, see **Create Experiment Date Time Range**.

9.18 Delete Experiment Date Time Range

9.18.1 Initial



9.18.2 Revised

The jQueryUI CSS theme will match the existing CSS, so the dialog box will not appear so out of place.

10 References

[1] University of Wisconsin-Madison. Human-Computer Interaction Laboratory, 2010.

11 Appendix

12 Glossary

SQL Structured Query Language is a programming language designed for managing data in relational database management systems. 6

Index