Milestone 1

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1 Executive Summary

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.

3 Client Background

What the client does? It must describe what the client does, both in a broad overall sense and in day-to-day affairs, and describe how the project will fit into the day-to-day workings for the client. Use this section to provide a general overview; specifics can be given in the next section.

4 Current System

A brief description of the current system (if any) and identify its features

5 User/Stakeholder Description

Use this section to identify your users (other stakeholders) and how they will use the system. Must contain the following subsections

5.1 User/Stakeholder Profiles

See page 439 of requirements text

5.2 User Environment

See page 439 of requirements text

5.3 Key Needs

List the key problems or needs as perceived by the user. For each user need, answer the following questions

5.3.1 What is the need?

Use the problem statement template shown in Page 46 of requirements text

5.3.2 How is it solved now?

5.3.3 What is a possible solution?

5.4 Alternatives and Competition

See page 440 of requirements text

6 Product Overview

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

6.1 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; it is not the component of a larger system.

6.2 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.

6.3 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 anytime	Web application

6.4 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.

6.5 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. Furthermore, the client will be provided with free servers through the University of Wisconsin-Madison for the finished product. The client will perform maintainence and management on their own.

7 Features

8 Solution Constraints

Feature	Status	Priority	Effort	Risk	Stability	Target Release	Reason
Browse Experiment	Approved	Critical	Medium	Medium - High	Low - Medium	1st release	Lets experiments be advertised better and to display the experiments
Store Experiments	Approved	Critical	Medium	Low	High	1st release	Store experiment for the data to be web based.
Levels of Authentication	Approved	Critical	Medium	High	Medium	1st release	Have levels of admins, workers and participants in order to control privacy issues and other sensitive data
Schedule Experiment	Approved	Critical	Medium	Medium - High	Low - Medium	1st release	Need to schedule experiments in order to browse them
Filter Experiments	Approved	Useful	Low-Medium	Low	High	2nd release	Filter the experiments when browsing according to Time, Date, Payment, etc.
View All Participants for an Individual Experiment	Approved	Important	Low-Medium	low	High	2nd release	View all of the participants by admins and workers only of individual experiments
Admin Back End	Approved	Useful	Medium - High	Low	Low	2nd or 3rd release	A back end for the admins to do their duties from
Edit/Modify Schedule Slot	Approved	Useful	Medium	Medium	Medium	2nd or 3rd release	Modify or Edit schedule from a participants view
Edit/Modify Schedule Slot	Approved	Important	Medium	Medium	Medium	2nd release	Modify or Edit schedule from a workers/admins view
Notify Participant Reminder	Approved	Useful	Medium	Low	High	4th release	Send an email or text reminding participants for their experiments
Form to get User Info	Approved	Useful	Low	Low	High	4th release	A form to gather participant Info
Admin Report	Approved	Useful	High	Low	High	4th release	Reports on experiments scheduled with an option for Individual experiments reports
Ease of Participant Scheduling	Approved	Useful	Medium	Low	Low	4th release	Make scheduling a near 1 click process
Overall Schedule	Approved	Useful	Medium	Low	Low	4th release	Have an overall schedule viewer
Cancel Schedule Slot	Approved	Important	Low	Low	High	4th release	Allow for participants to cancel schedule slots for appointments
Remove Experiments	Approved	Important	Low	Low	High	4th release	Allow for workers or admins to remove schedules
Tracking of Consent Payment Forms	Proposed	Useful	Medium	Low	Medium	5th release	Allow for workers to check off participants when filling out consent/payment forms
User Report	Proposed	Useful	Medium	Low	Medium	5th release	Allow participants to have a report on new experiments
Accounts	Proposed	Useful	High	Low	Medium	TBD	Accounts for users
Prevent Scheduling Conflicts	Proposed	Useful	High	Low	Medium	TBD	Prevent participants from scheduling 2 experiments at once
Prevent Scheduling Conflicts	Proposed	Useful	High	Low	Medium	TBD	Prevent 2 rooms from being scheduled at the same time
Install Scripts	Proposed	Useful	High	Low	Low	TBD	Install scripts for installation
Documentation for Maintenance and User	Proposed	Useful	High	High	Low	TBD	Documentation

Source	Constraint	Rationale
Systems Mandate	Must be able to be ran on Red Hat Enterprise Linux Server 6.1.	This is the operating system that the client currently uses.
Technology Mandate	Must use PHP or Python as the programming languages	These are the languages supported by the client
Databases Mandate	Must use MySQL or PostgreSQL database management systems	These are the database management systems supported by the client.
Time	The time constraint on the project is the end of Second Term (Rose Hulman time)	At this point the group is reduced to 1 person.
Equipment Budget	No new equipment can be bought for the project	The software will be place on an existing server and we have no budget.
Privacy	Participants must not be able to see who else is participating in a project.	Privacy is key for the experiments.