

Project 6: Calico

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What is Calico?

Calico is a free hand rapid design tool for the initial creative and typically informal stages of software design. Most software designers, when tasked with a design problem, tend to sketch on a whiteboard or using pen and paper first, to work out an initial solution approach, either by themselves or in a small group. Calico is designed to support this process, with features that are designed to amplify good creative design practices. Calico is designed to be used with touch screen interfaces, such as interactive whiteboards or tablet PCs.

Usability Problems

Customer's view:

- How often is the user negatively surprised by the tool's functionality?
- How often does the user struggle with the interface?
- How well do users adapt to the system's functionality?

Team's view:

- How well suited is Calico to the task of software design?
- Do the tools and functions behave in a predictable manner?
- Encourage users to experiment and feel safe using the system

Methods

Types of HCI methods that will be used:

- Heuristic Evaluation: Performed by team members to identify local HCI issues (Still determining which Heuristic guidelines to use)
- Usability Testing: Observe users as they interact with the system and make note of the HCI issues that are found
- Surveys: Both pre and post surveys will be administered to assess user experience before and after the user testing experiment

Methods (cont.)

How many and what types of users:

- 8 teams of 2 users each (16 total)

- Users consisting of:

1.) Novice Calico users who have a background in software development (ICS students) that either use/don't use diagrams during their software development processes

2.) Experienced Calico users (if found)

- Pair users with similar abilities together in order to ensure that both are being productive and putting in the same amount of work

Phases

- 1.) Heuristic Testing
- 2.) Pilot Testing/User Test Development
- 3.) Pre-Survey
- 4.) User Testing
- 5.) Post-Survey

User Testing Overview

- Users found by asking classmates/other ICS students and by email
- Meet in ICS 2 105 (lab)
- Two tasks
- 40 minutes to complete tasks in
- 8 teams of 2 users each
- 2 users at a time, using electronic whiteboards and the smart marker
- Recorded by two HD cameras, one on the whiteboard and the other at an angle
- Users design a Website creation system using Calico

User Testing Tasks

Task 1: Design the Wizard

- Try simplifying the task by making each part of the wizard based on a reused box from the palette
- Observe how users model workflows in Calico
- Make sure task doesn't take too long

Task 2: Design the Website maintenance UI

- Model the abilities of the UI with a scrap within a scrap
- See how users model a somewhat complex program in Calico
- Watch for users getting stuck or taking too long to get parts done
- May have more time than the Wizard so as to see how much users can do with Calico

Pre-Testing Survey

Asks users a series of questions on their knowledge going in to the test.

- How often do they use a whiteboard when working on code?
- How often do they sketch when working with code?
- How often have they designed software systems cooperatively with another person?
- Calico Experience?
- Computer Experience?
- Educational level (Undergrad (What year?))? Grad? Post-grad?)

Post Test Survey

Find out issues users had with the software by asking them to rate their experience with it. 1-5 likert scale. Questions to be double checked against book's suggestions--these are preliminary ones.

- How satisfying was this experience?
- How would you rate the experience of learning to use Calico?
- How predictable did you find Calico's behavior?
- How useful is Calico?

Schedule (*Tentative*)

| Task | Time Estimate | Group Member |
|---|---------------------------|---------------|
| Preliminary group and client meeting | 1 hour, April 11 | Melvin |
| Identify requirements, objectives, and meeting schedule | 2 hours, April 11 - 20 | Maxwell |
| Initial Presentation | 4 hours, April 21 - 23 | Saad, Maxwell |
| Find users for testing | 1 week, April 24 - May 1 | Jola |
| Carry out heuristic testing | 4 hours, April 30 - May 4 | Maxwell |
| Develop draft of report | 4 hours, May 1 - May 11 | Melvin |

Schedule (*Tentative*)

| Task | Time Estimate | Group Member |
|--------------------------------------|-------------------------|--------------|
| Interim Presentation | 4 hours, May 14 - 16 | Maxwell |
| Develop testing plans | 6 hours, May 16 - 18 | Everyone |
| Pre-testing survey | 2 hours, May 17 - 22 | Saad, Melvin |
| User Testing | 1 week, May 20 - 26 | Maxwell |
| Post-testing survey | 2 hours, May 24 - 29 | Jola |
| Develop analysis and recommendations | 1 week, May 27 - June 2 | Everyone |
| Final presentation | 6 hours, June 3 - 6 | Jola |
| Final report | 8 hours, June 1 - 10 | Melvin |