Design and Development of an iPad Application for Sharing Sketches

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Overview

The intent of this final project is to create an application that allows a user to keep an ongoing journal of sketches and to share it publicly with others via the internet. The user sketches pictures using a native application on the iPad; these pictures are then submitted to a web server, which stores them and displays them to other people via a web interface. These sketches are tagged with information like user, time, and location, so that visitors may view interesting subsets of submitted sketches (e.g. “show me what Scott did on Monday”, “show me drawings made on Cross Campus”, etc.)

Background

There are several factors that attract me to this project.

First, I’m curious to try developing an application for a mobile device. Developing for the iPad presents unique challenges, both in terms of technical development (learning Objective-C and device-specific constraints) and in terms of interaction design (creating a touch-based interface). I believe this sketching application is particularly well-suited to mobile development, as digital sketching is more naturally suited to touch input than to the typical keyboard/mouse setup.

Second, I believe this application is an excellent conceptual problem in design. It involves the careful planning and integration of multiple systems, on a local device and on the web, in order to ensure a smooth user experience. I will need to lay out a clear plan for how the system will work before beginning any actual development, and I will need to stick to that plan in order to keep my code organized and readable.

This project also interests me creatively, as an extension of an art project I call “hourly comics” which I have carried out for the past several years. For one month a year, I keep a journal of my life by sketching quick pictures of things that have happened to me, one for each hour that I am awake. In the past I have used a notebook to store these drawings, but it has been difficult to share them with friends and family in distant locations. My hope is that this application will allow me to share my sketches as they are sketched, and potentially to allow others to share their artwork in the same way, building artistic narratives that would otherwise be impossible.

Tools and technologies

- iPad Development
  - Objective-C
● Xcode

● Web Development
  ○ Ruby on Rails
  ○ HTML5
  ○ CSS3
  ○ PostgreSQL

● Web Hosting
  ○ Heroku
  ○ Amazon S3

Deliverables

● A final report, discussing the design and implementation of the project, problems encountered, and lessons learned
● Design documents explaining the design and use cases of the application
● A working application for the Apple iPad
● A working website to host the sketches produced by the iOS app

Timeline

Stage 1: R&D
Target date: February 17th

● Learn the basics of iOS development (Hello World, etc.) and deploy a simple application on an actual device
● Investigate other iOS sketching applications
● Draft the design of the iOS application and website
● Begin work on website to host sketches

Stage 2: Prototype
Target date: March 1st

● Develop initial iOS sketching prototype, with ability to sketch pictures and submit to website, and deploy to personal iPad
● Develop simple website for displaying sketches, with ability to view submissions chronologically, and deploy to Heroku (free web host)

Field Testing
March 1st – March 31st

● Test the iPad app
  ○ Use the application in the wild to keep a journal of hourly comics (quick sketches, one per hour, for the entire month of March – around 450 sketches total)
  ○ Possibly test with other friends
● Test the website
Ask friends and family for feedback

Stage 3: Iteration
Target date: April 1st

- Flesh out initial iPad prototype
  - location information
  - sharing via other services (email, Twitter)
  - offline support?
- Flesh out website
  - support for multiple submitting users
  - comments?
  - ability to follow/subscribe to users via RSS?

Stage 4: Release
Target date: April 15th

- Feature freeze; test application for any remaining bugs and finalize the codebase
- Finish documentation
  - Final report
  - Design documents
- Submit to the App Store?