Design and Development of an iPhone Application for Ice Skaters
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Overview:

Since its inception in 2007, the iPhone has gained incredible popularity and exponentially more users each year. This smartphone draws its customer base from students to professionals, from athletes to academics. In addition to its touch screen technology, 3G capability, and sleek physical appearance, the applications that customers may add to their iPhones offer specialized services for each user. This unique characteristic of the iPhone allows it to attract users across all age groups and professions.

In this project, I hope to develop a domain-specific iPhone application for ice skaters. I plan to tackle this from both a design and development perspective. As discussed in the CPSC 427 course last fall, software development is both conceptual and technical. The developer must not only understand the customers’ needs, but also be able to build robust and extensible code. I hope that this project will allow me to experience all components of a software development cycle.

From the design perspective, I plan to do extensive research on existing iPhone applications to determine what has worked and what has not. I hope that this research will contribute to design decisions I make for my own application. Furthermore, through interviews and conversations with current ice skaters, I hope to outline many use cases for the application and be able to test my design and user interface decisions with the customers. By allowing them to “try out” the product, I will be able to determine which aspects satisfy the customers’ needs and which aspects need improvement. The result will be presented in the form of a design document which details different use cases and experiential situations of the customers.

From the development perspective, I plan to become familiar with the iPhone OS and its SDK development platform. I hope to then utilize the tools from the SDK to develop a software prototype of the application of interest. In addition, by understanding what the SDK is capable of doing, I can work with some customers to alter aspects that need improvement and specify aspects that the iPhone SDK does not currently support. The result will be presented in the form of a software prototype that hopefully has basic functionality with the ability to be extended in the future.

By the end of this project, I hope to produce a working prototype of a useful application for ice skaters. The specific application is yet to be determined as it will depend on further conversations with the skaters and further investigation of the capabilities of the iPhone SDK. In addition to the software prototype, I plan to provide a detailed design document and final report.
Timeline:

By Monday, February 22: [3 weeks]
- Finish initial research of other iPhone applications
- Collect thoughts and further specifications from Jenn Wester (professional skater)
- Complete draft of design document with use cases and scenarios
- Get accustomed with the iPhone SDK platform for development

By Monday, March 8: [2 weeks]
- Develop preliminary prototype of application (with basic functionality, subset of the final product)
- Discuss issues and obstacles with Jenn Wester and alter specifications
- Finalize design document with additional cases

Monday, March 8 – Monday, March 22: Spring Break

By Monday, April 5: [2 weeks]
- Develop initial prototype of application (with full functionality)
- Begin drafting final report with discussion of issues and obstacles faced from design and development perspectives

By Monday, April 19: [2 weeks]
- Test initial prototype with Jenn Wester, collect feedback, and make necessary changes to software
- Continue drafting final report and include results of customer testing

By Monday, May 3: [2 weeks]
- Test final prototype for functionality in use cases from design document
- Complete all deliverables: final report, design document and software prototype

Deliverables:

1. Final report: discussing the project from both a design and technical perspective, detailing the development process, and commenting on obstacles that were faced.

2. Design document: detailing different use cases and experiential situations of the customers who will use this application.

3. Software prototype: demonstrating the different capabilities of the software and commenting on potential for future development.