University of Pretoria

COS 301 - Software Engineering

The Savage Ru's

Software Requirements Specification and Technology Neutral Process Design

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Contents

1 Introduction

This is the software requirements specification for the vizARD Augmented Reality application being developed for EPI-USE Labs by The Savage Ru's.

2 Vision

2.1 Background

It is much simpler for us to recognize patterns and make quick analysis of data if it is presented to us in visual form. A simple example for the use of such an application would be a principal at a school who is presented with the Mathematics results of a particular grade for several quarters, such an application would make it very simple for him to quickly visualize the numeric data and see the trend.

The problem at hand is that there is a lot of information to go around and so little time to process. In a society that demands us to make decisions quickly, it would be wise to have a tool that aids the decision making process by making the information easier to digest and that is what vizARD intends to do.

Potential users could range from students, researchers, people in business, managers at stores and anyone else who would like to visualize data on the go.

3 Architecture Requirements

3.1 Architectural Scope

3.2 Access Channel Requirements

3.3 Quality Requirements

3.3.1 Performance

3.3.2 Reliability

3.3.3 Scalability

3.3.4 Usability

3.3.5 Auditability

3.3.6 Security

3.4 Integration Requirements

3.5 Architecture Constraints

3.6 Use case prioritization

3.6.1 Critical

- Taking a picture
- OCR (Optical Character Recognition)
- Automatic Graph Suggestion Algorithm
- Graph Generation
- Mapping Graph to Page

3.6.2 Important

- Live Augmented Reality Mapping
- Editing Graphs
- iOS Application
- Social Media Sharing

3.6.3 Nice to Have

- Opening Previous Graph

3.7 Use case/Services contracts

3.8 Required functionality

3.9 Process specifications

3.10 Domain Model

4 Software Architecture

4.1 Architectural Patterns or Styles

4.2 Architectural Tactics or Strategies

4.3 Use of Reference Architectures and Frameworks

4.3.1 Web 2.0 Reference Architecture

4.4 Access and Integration Channels

4.5 Technologies

5 Open Issues