University of South Alabama

JagTrack Vision

Version 1.0

Revision History

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3/14/2012	1.0	Tailored document	Robert Fornof
3/26/2012	1.1	Refined Document	Kathleen Wilson

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Vision

1. Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of JagTrack. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the JackTrack fulfills these needs are detailed in the use-case and supplementary specifications.

Purpose

The purpose of the JagTrack application suite is twofold: (1) to make it more convenient for passengers by providing information such as the arrival times of buses and their locations and (2) to provide the JagTran administration JagTran usage information such as the number of passengers on a given bus to allow them to make more informed management decisions.

The expectations from stakeholder and target users are:

1. Knowledge of Buses (for the passenger)
    a. When last bus left.
    b. When the next bus is due.
2. Passenger Information (for the administrators).
    a. How many passengers are on the buses?

Scope

This vision document is associated with the JagTrack project. The JagTrack Project is a reformation of the JagTran program – a bus system on the University of South Alabama Campus. According to the figure below, this document relies on the **Stakeholder Request** form and influences the **Software Requirements Specification**, **Glossary, Business Case** and **Software Development Plan. (**see Diagram)

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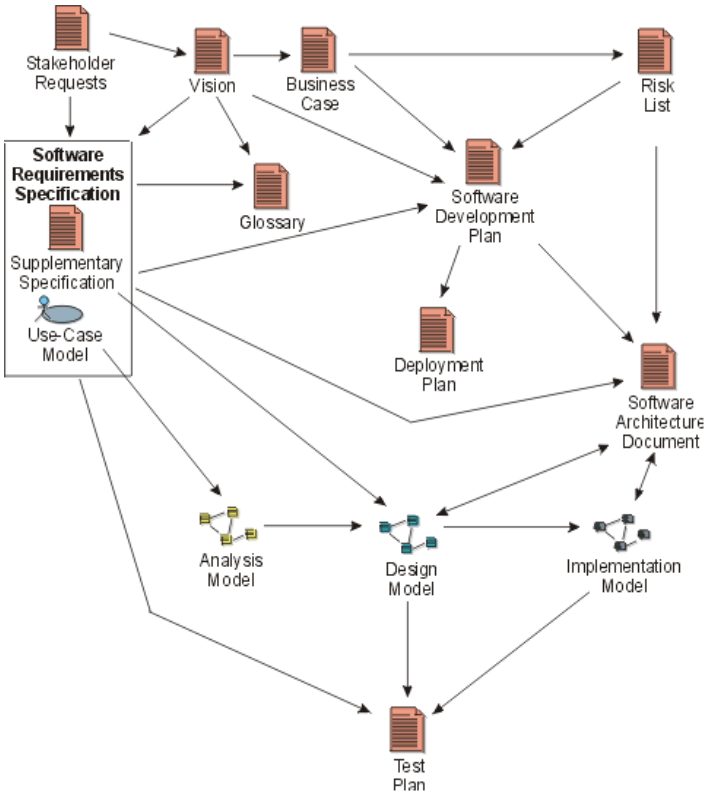

Definitions, Acronyms, and Abbreviations

See Glossary for definitions, Acronyms, and Abbreviations.

Overview

The Vision document is organized into Positioning, Stakeholder and User Descriptions, Product Overview, Product Features, Constraints, Quality Ranges, Precedence and Priority and additional Product Requirements

2. Positioning

Problem Statement

The problem of	Not knowing the exact schedule of Jag Tran i.e. not sure if Jag Tran have arrived or left the stop
affects	Passengers of the JagTran system
the impact of which is	Passengers sometimes arrive late at their destination; as a result, student usage declines.
a successful solution would be	An application that allowed students to track the whereabouts of the Jagtran which would allow students to arrive at their destination on time. Ultimately make the JagTran system more efficient.

3. Stakeholder and User Descriptions

Prime stakeholder is Dr. McDonald who has expressed interest in a system which would allow users of the Jagtran to use the system more effectively. He proposed an application

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that would allow users to access information about the location of jagtran buses along their routes and allows administrators to access information about the load of the buses to further increase effectiveness.

Stakeholder Summary

Name	Description	Responsibilities
Dr. McDonald	Head of the CSC 331. Concept teacher. Software engineering guru.	Responsible for giving us the requirement specifications that the JagTran system needs. Also is the "middle man" between us and the JagTran System who provides necessary information for tasks at hand that influence the project as a whole.
Dr. Doran	Director of Honors Program and CS professor involved in student research and other general activities.	Provide a second informed opinion on technical aspects of the project.

User Summary

Name	Description	Responsibilities	Stakeholder
Passenger	Users of the jagtran system.	The user's responsibility is to efficiently use the system and not abuse or vandalize it.	Dr. Mcdonald represents the user and the stakeholders' best interests.

Stakeholder Profiles

The USA JagTran Bus System [through Dr. McDonald]

Representative	Dr. McDonald
Description	Dr. McDonald represents the USA JagTran system. He is indirectly responsible for the needs of the students, the administration, and the workers that drive the buses
Type	Dr. McDonald is a well trained professional in this field. Over the past twenty years, he worked as computer programmer, software engineer, and technical manager, has developed part of a few large & medium scale software packages
Responsibilities	Dr. McDonald seeks for all those working on the project to understand Software Engineering and the RUP way of doing things. He also wants a tangible product by the end of the semester.
Success Criteria	How does the stakeholder define success?

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	1. Software Engineering Concepts are learned in the course 2. Project team develops artifacts that can successfully be implemented in later classes 3. A working code can be demonstrated at the end of the semester that reads in and out of a database. 4. A real experience of what it is like to work alongside a team in the "real world"
Involvement	Dr. McDonald helps us review and revise requirements, Assign roles, and helps with any questions we may ask. Dr. McDonald is also involved in distributing grades dependent on performance in the class as a whole.
Deliverables	A working backend by the end of the semester.
Comments / Issues	I [Robert Fornof] wish we could have better communication and more direct accountability. I see time constraints and scheduling difficulties as possible issues that may hinder success.

User Profiles

Passengers

Representative	The entire class would be representative of a user of the JagTran system due to a requirement to use the system as a measure of its effectiveness- see Dr. McDonald stakeholder definition above.
Description	These are people who use the JagTran bus system.
Type	Casual User – those who occasionally use the JagTran Heavy User- uses JagTran often throughout the semester.
Responsibilities	The user's key responsibilities using the JagTran system is to be respectful of school property and get to class on time
Success Criteria	Success is when the passenger can accurately depend on the bus to take them to a certain place on campus at a set amount of time at regular intervals that do not prevent the user from reaching their destination in a requested amount of time.
Involvement	The user is involved in Testing the application when we send it into "Beta testing"
Deliverables	The user can produce survey or verbal feedback.
Comments / Issues	

Key Stakeholder or User Needs

JagTran usage doesn't seem to be as much as it should be. The problem with the system is the lack of efficiency in it. Students are not arriving to class on time, so to increase usage efficiency must also be increased. The stakeholder wants a system implemented that will allow both users of JagTran and administrators to benefit. The Users will be more willing to use the jagtran if it was more efficient and the

school will save money if administrators could pinpoint exactly when buses need to be added or taken off of a particular route.
Alternatives and Competition

Alternatives and Competition

Currently no alternatives or competition exist to accomplish these goals

4. Product Overview

Summary of Capabilities

Customer Benefit	Supporting Features
Passengers are on time	Knowledge of where each bus is helps the system give accurate information and guidance suggestions to the passenger.
Administrators have an efficient system	Knowledge of how many passengers are on each bus will allow administrators to add more or remove buses to accommodate passengers.

The system will provide (1) convenience for passengers by providing information such as the arrival times of buses and their locations and (2) usage information such as the number of passengers on a given bus to allow them to make more informed management decisions.

Assumptions and Dependencies

- We assume the Android Operating system will remain stable throughout our development.
- We also assume that everyone wants to take responsibility for this puppy and see it succeed
- Success ultimately depends on willingness of class as a whole to contribute along with communication throughout groups of the class

Cost and Pricing

Since our scope is just the software side, the major costs incurred throughout this project is time from students along with the possible grades they receive. Since actual hardware has not been picked, a monetary price would be difficult to obtain currently.

Licensing and Installation

Licensing - Will use the standard Android licensing for the Android application and a GPL license for the web application since it uses MySQL.

5. Product Features

Load Balance

This feature will provide administrators the knowledge of how many passengers are currently on each bus which will allow them to take away buses that are no longer needed to meet user demand.

Bus Arrival

This will allow users who are going to ride the JagTran the ability to know when the last bus left along with when the next bus is coming so that they can get to class more quickly. They can make a decision of whether to ride the tran or not according to more specific information.

6. Constraints

Constraints of the system depend on the hardware implemented to tell where each bus is located along with how the passenger load is calculated.

7. Precedence and Priority

The ability to tell the bus load and to track when the last bus left and next bus will arrive are the major usages of the application currently and therefore they take priority over other implementations of the system. Other future implementations could allow ability of real time tracking of the bus

8. Product Requirements

Applicable Standards

This application must be able to run on the Android OS.

System Requirements

For the backend, MySQL and PHP are needed. For the front end Android OS is needed to produce a GUI for the java interface. Currently, the database and PHP application are hosted on DotCloud. Other considerations such as wireless components and ISP have not been discussed.

Environmental Requirements

We need to track the buses and amount of users on each bus.

9. Documentation Requirements

User Manual

The Purpose of the User Manual is to help a user with simple functions of the JagTrack GUI. Level of detail will be simple. Desired length would be about 3 pages including screenshots. This would be best made as a tutorial guide rather than an in depth API reference. The API reference should be created automatically with JavaDoc.

Another implementation of a User Manual could be built into the application itself allowing all users who download it to immediately understand concepts of the system and use it fluently without the need of extra paper. Also, this helps the environment. Go Green!

Online Help

Online help could be provided through the use of a page on the South Alabama website allowing users access to a FAQ along with a way for them to submit feedback.

Installation Guides, Configuration, and Read Me File

An install guide should be included in case users are unsure of how to install this.

Labeling and Packaging

The USA Jaguars Logo and the School of CIS logo should be implemented to brand the JagTran system.