



## **JAGTrack Project Supplementary Specification**

**Version <1.0>**

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## Revision History

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# Supplementary Specification

## 1. Introduction

The University of South Alabama's campus transportation system, JagTran, was created to provide easy, safe and efficient transportation for USA students, employees and visitors. JagTran vehicles run continuously throughout the day, starting at 7:10 a.m. on the main campus. No tickets, money or reservations are needed. Students park their cars in color coded lots, which they choose, and then walk or ride JagTran.

We have decided to investigate the use of *JagTran System*. This system would be used by members who may be students or professors of the University of South Alabama to transport people from Point A to Point B. The purpose of this document is to analyze and elaborate on the high-level needs and features of the *JagTran System*. It focuses on the capabilities and facilities provided by transportation. The details of what all are the needs of *JagTran System* and if it fulfils these needs are detailed in the use-case and supplementary specifications.

### 1.1 Purpose

The purpose of Supplementary Specification document is to describe the external behavior of the JagTran System. Requirements Specification defines and describes the operations, interfaces, reliability, supportability, performance, and quality assurance requirements of the JagTran System. The document also describes the nonfunctional requirements such as the user interfaces. It also describes the design constraints that are to be considered when the system is to be designed, and other factors necessary to provide a complete and comprehensive description of the requirements for the software. The Supplementary Specification captures the complete software requirements for the system, or a portion of the system.

### 1.2 Scope

The Supplementary Specification captures all the requirements in a single document. The *JagTran System* that is to be developed provides the members of the passages and employees of the JagTran with tracking information, line information, buses information , stops information and many other facilities. The JagTran System is supposed to have the following features.

- The product provides Online JagTran System is up and running all day.
- The system provides logon facility to the users.
- The retrieval system allows the members to land system 24 hours a day and all the through the semester.
- The system lets the staff to check which limits of authority members have and whether they can use.
- The system allows the staff to create the management operating system, tracking journal.
- The system updates the billing system as and when the member borrows or returns a book.
- We also have an order department, which manages to dispatch buses, etc.

The features that are described in this document are used in the future phases of the development cycle. The features described here meet the needs of all the users. The success criteria for the system is based in the level up to which the features described in this document are implemented in the system.

### 1.3 Definitions, Acronyms, and Abbreviations

- USA – University of South Alabama.
- SS – Supplementary Specification
- Provided wherever necessary in the document.

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- PIN – Personal Identification Number

## 1.4 References

The *SSPC document* uses the following documents as references:

**The JagTran System:** To provide the user interface system being developed and the system currently in use to update the line and route information, etc.

## 1.5 Overview

The SS will provide a detailed description of the JagTran System. This document will provide the outline of the requirements, overview of the characteristics and constraints of the system.

The section will provide the general factors that affect the System and its requirements. The items such as system perspective, systemt function, user characteristics, constraints, and requirements subsets are described in this section. Besides, the section also contains all the requirements mentioned in detail sufficient enough to enable designers to design the system to satisfy the requirements and testers to test if the system satisfies those requirements.

## 2. Functionality

The functions of the system include the system providing different type of services based on the type of user.

### 2.1 Logon Capabilities

The system shall allow the users have logon capabilities.

### 2.2 Mobile Devices

The JagTran System should be supported on mobile devices such as Iphone.

### 2.3 Regulation

The system can deal with emergency efficiently in case of any problems.

### 2.4 Tracking

The system should be able to track people on the bus.

## 3. Usability

- The system shall allow the users to access the system from the Internet using HTML. The system uses a web browser as an interface.
- The system is user friendly and self-explanatory.
- It needs a Line Map to display the area and routes and tell the user where to go.
- It needs a Time Chart to display the working time and beginning/ending time of buses.
- Station should be set near the building where usually stay and to go.

## 4. Reliability

The system has to be very reliable due to the importance of data and services.

### 4.1 Availability

The system is available 100% for the user and is used 12 hrs a day and school days a year. The system shall be operational 12 hours a day and 5 days a week.

### 4.2 Mean Time Between Failures (MTBF)

The system will be developed in such a way that it *may* fail once in a semester.

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#### **4.3 Mean Time to Repair (MTTR)**

If the system fails, the system will be recovered within an hour or less.

#### **4.4 Accuracy**

The accuracy of the system is limited by the accuracy of the speed of buses and road condition.

#### **4.5 Maximum Bugs or Defect Rate**

Not specified.

#### **4.6 Access Reliability**

The system shall provide 100% access reliability.

### **5. Performance**

#### **5.1 Response Time**

A passenger at a JagTran stop requesting current information about current bus locations or arrival times should wait no more than 5 seconds for the system to respond.

#### **5.2 Throughput**

The number of transactions is directly dependent on the number of users, the users may be the students, professors and other the people who use JagTran to transport.

#### **5.3 Capacity**

The number of passengers or transactions the system can accommodate.

#### **5.4 Resource Utilization**

The resources are modified according the user requirements and also according to the buses requested by the passengers.

### **6. Supportability**

The system designers shall take in to considerations the following supportability.

#### **6.1 Internet Protocols**

The system shall be comply with the TCP/IP protocol standards.

#### **6.2 Maintenance**

The maintenance of the system shall be done as per the maintenance contract.

#### **6.3 Standards**

The coding standards and naming conventions will be as per the American standards.

### **7. Design Constraints**

#### **7.1 Software Language Used**

The language that shall be used for coding System should be Java because that is what the Android OS uses.

#### **7.2 Development Tools**

It will make use of the available Java Development Tool kits for working with Java Beans and Java Server Page.

### **8. Online User Documentation and Help System Requirements**

Online help is provided for each of the feature available with the JagTran System. All the applications

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provide an on-line help system to assist the user. Online help is provided for each.

## 9. Purchased Components

*[This section describes any purchased components to be used with the system , any applicable licensing or usage restrictions, and any associated compatibility/interoperability or interface standards.]*

## 10. Interfaces

### 10.1 User Interfaces

It will make use of the existing Web Browsers such as Microsoft Internet Explorer or Netscape. The user-interface of the system shall be designed as shown in the user-interface prototypes.



### 10.2 Hardware Interfaces

The Network will be used for collecting data from the users and also for updating the system information and tracking journal.

### 10.3 Software Interfaces

A firewall will be used with the server to prevent unauthorized access to the system and it is necessary to set up management operating system.



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#### **10.4 Communications Interfaces**

The Online JagTran System will be connected to the World Wide Web

### **11. Licensing Requirements**

*[Defines any licensing enforcement requirements or other usage restriction requirements that are to be exhibited by the software.]*

### **12. Legal, Copyright, and Other Notices**

*[This section describes any necessary legal disclaimers, warranties, copyright notices, patent notice, wordmark, trademark, or logo compliance issues for the software.]*

### **13. Applicable Standards**

The ISO/IEC 6592 guidelines for the documentation of computer based application systems will be followed.

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Reference: Online Library System Supplementary Specification