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| *Comet Park* |
| **Vision Document** |
| **SE 6387 Advanced Software Engineering Project**  **R.Z. Wenkstern**    ***02/18/2014*** |

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| **Group *B*** |
| **Arunkumar Manickam** |
| **Hariprasad Natarajan** |
| **Rekha Muthulakshmi Nachadalingam** |
| **Prasanna Venkatesh Venkitasamy** |
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# Revision History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Decription** | **Authors** |
| 1.0 |  | Completed initial draft |  |

Contents

[Revision History 2](#_Toc380344282)

[1. Introduction 1](#_Toc380344283)

[2. Positioning 1](#_Toc380344284)

[2.1. Business Opportunity 1](#_Toc380344285)

[2.2. Problem Statement 1](#_Toc380344286)

[2.3. Product Position Statement 1](#_Toc380344287)

[2.4. Alternatives and Competition 2](#_Toc380344288)

[3. User Description 2](#_Toc380344289)

[3.1 User/Market Demographics 2](#_Toc380344290)

[3.2 User Profiles 2](#_Toc380344291)

[3.3 Key User Needs 2](#_Toc380344292)

[3.4 User Environment 3](#_Toc380344293)

[4. Product Overview 3](#_Toc380344294)

[4.1 Product Perspective 3](#_Toc380344295)

[4.2 Summary of Capabilities and benefits 3](#_Toc380344296)

[4.3 Assumptions and Dependencies 4](#_Toc380344297)

[4.4 Cost and Pricing 4](#_Toc380344298)

[4.5 Licensing and Installation 4](#_Toc380344299)

[5. Other Requirements and Constraints 4](#_Toc380344300)

[Appendix A: Glossary 5](#_Toc380344301)

[Appendix B: References 6](#_Toc380344302)

# **1. Introduction**

**1.1 Purpose**

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

**1.2 Scope**

This Vision document applies to Comet Park System, which will be constructed for use by University of Texas of Dallas.

# 2. Positioning

## 2.1. Business Opportunity

The Comet Park System targets all the administrative staffs and students who commute to the University of Texas of Dallas via car.

## 2.2. Problem Statement

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| --- | --- |
| The problem of | finding a vacant parking spot in the nearest parking lot |
| affects | all the administrative staff members and students who commute to UTD by car |
| the impact of which is | Wasting a significant amount of time, gas and energy in finding a free parking spot to park their car |
| a successful solution would be | Making use of IoT devices together with mobile application to find a vacant parking spot. |

## 2.3. Product Position Statement

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| --- | --- |
| For | Students and Administrative Staffs of UTD |
| Who | Commute to UTD via car |
| The Comet Park | Is a software and hardware product |
| That | Assists users to spot nearest vacant parking spot |
| Unlike | Manually inspecting each spot that result in time, money wastage |
| Our system | Will help the users to find a spot for their car with the help of IoT devices and mobile applications. |

## 2.4. Alternatives and Competition

The alternatives includes displaying a LED board to display the number of vacant parking spots in the lot which are cost inefficient and does not show the exact vacant parking spot.

# 3. User Description

## 3.1 User/Market Demographics

Almost all students and staff members who commute to UTD via car face the problem of finding a parking spot to park their car. Out of those, the people who have Android Smartphone are the target audience.

## 3.2 User Profiles

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| **Users** | **Description** |
| Students | General term used for person who attends UTD |
| Administrative Staffs | General term used for someone employed by UTD |
| Administrator | Term for the individual who is responsible for maintaining the Comet Park system. |

## 3.3 Key User Needs

What are the reasons for this problem?

The students and staff members need to manually check for vacant parking spot, thereby wasting their time, money and gas and getting exhausted.

How is the problem solved now?

The implementation of a system that will solve the problem by showing the available vacant parking spot to the user in their mobile device.

What solution does the user want?

Conveniently find a vacant parking spot.

## 3.4 User Environment

The system targets the users who are geographically closely located. The parking spot information is available in the cloud server. To access the information, the user requires an android mobile device. The system is not critical for the users business.

# 4. Product Overview

4.1 Product Perspective

## 4.2 Summary of Capabilities and benefits

*Summarize the major benefits and features the product will provide.*

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| --- | --- |
| **Feature** | **User Benefit** |
| Finding nearest vacant parking spot for a user | The user can significantly reduce the time and effort in searching for vacant parking spot |
| Closure of an entire parking lot or specific parking spots in case of emergencies and special occasions. | The Administrator can notify the closure of a parking lot through the system instead of using other means like printing notices, sending e-mail to everyone in the university including those who do not commute via car. |

## 4.3 Assumptions and Dependencies

* Assumptions are that all users have an Android based Smartphone.
* Cometnet Wi-Fi is available throughout the campus.
* CometPark System is dependent on AWS.

## 4.4 Cost and Pricing

Cost for individual components in each parking space: 28.57.

Cost for Controller components: 44.99

## 4.5 Licensing and Installation

The System shall require acquiring license to use AWS as server and installation of the same.

# 5. Other Requirements and Constraints

# Appendix A: Glossary

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| **Term** | **Definition** |
| UTD | Refers to University of Texas at Dallas |
| AWS | Refers to Amazon Web Service(The cloud service provider for our project) |
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# Appendix B: References

1. <http://pic.dhe.ibm.com/infocenter/clmhelp/v4r0/index.jsp?topic=%2Fcom.ibm.rational.rrm.help.doc%2Ftopics%2Fr_vision_doc.html>