|  |  |
| --- | --- |
| Logo_FPT_University_doc |  |

|  |
| --- |
| **FPT UNIVERSITY** |
| Capstone Project Document |

BUS USER INTERACTIVE NETWORK

User Requirement Specification

|  |  |
| --- | --- |
| BUS USER INTERACTIVE NETWORK | |
| **Group Members** | |  |  | | --- | --- | | Nguyễn Thành Nam | SE02942 | | Trịnh Thị Tuyết Mai |  | | Bùi Bích Phương |  | | Trần Tú Anh |  | | Nguyễn Lê Tuấn Cường | SE02789 | |
| **Supervisor** | Mr. Nguyễn Văn Sang |
| **Project code** | BUIN |

- Hanoi, 06/2014 -

# Introduction

## Purposes

This document will provide the description of general requirements and non-functional requirements of BUIN system. Also, it does describe the requirement scope of each phase of the project.

## Definition and Acronyms

|  |  |
| --- | --- |
| Acronym & Abbreviation | Definition |
| BUIN | Bus User Interaction Network |
| FU | FPT University |
| BU | Bus User |
| IN | Interactive Network |
| Q&A | Question and Answer |
|  |  |

**Table 1-1: Definition and Acronyms**

# Overall Description

## Business Process Overview

### Path finding workflow

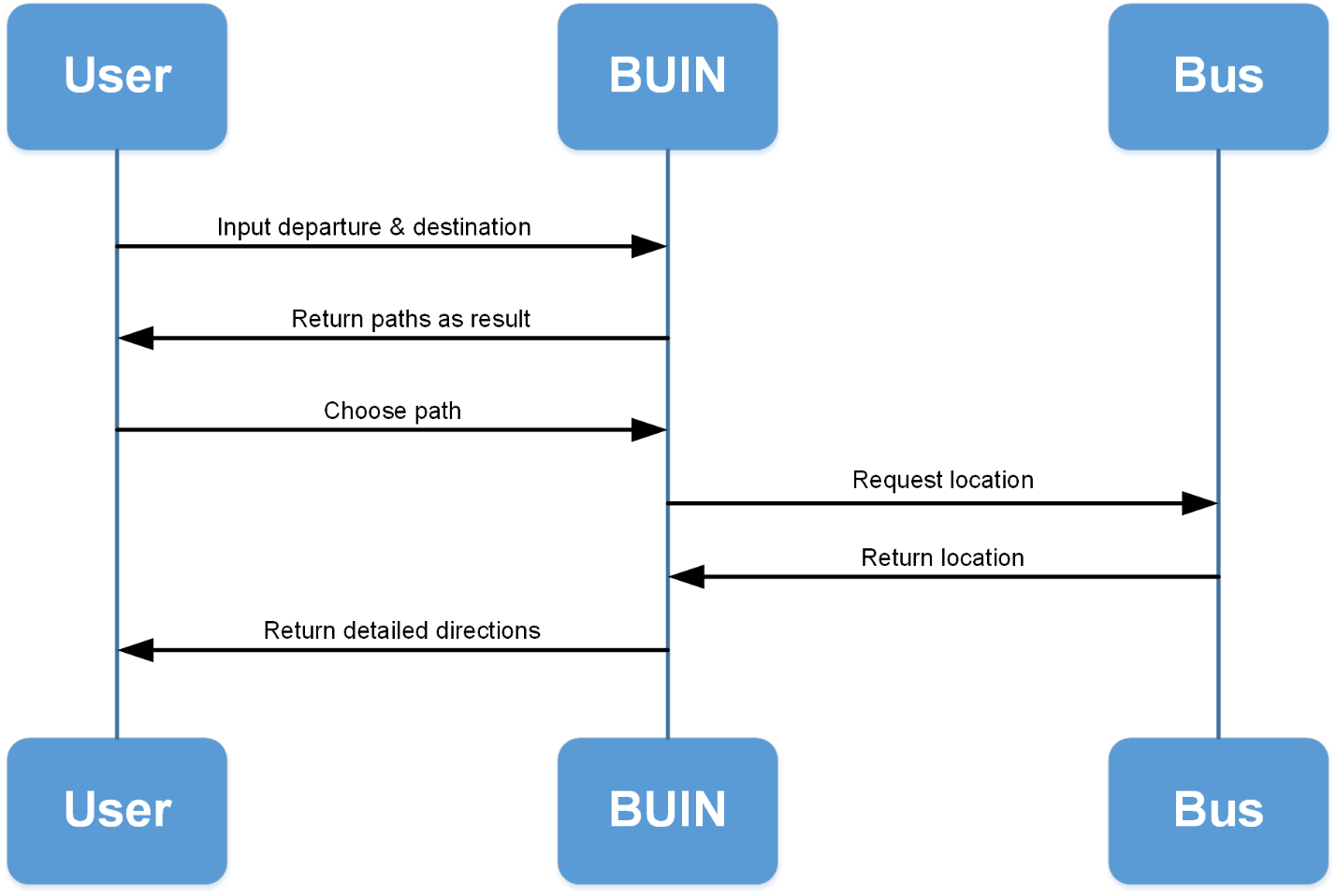


Figure 1-1: Path Finding

**Brief description**: Users input the departure and destination location to find paths available for them to travel by bus. The results will automatically be sorted based on collected personal usage data and can be rearrange or filtered to match users' preferences:

**Step 1**: User inputs departure and destination location

**Step 2**: System will calculate and return several possible paths as result

**Step 3**: User choose a path of preference

**Step 4**: BUIN system will contect buses that contributing in this path to get location of the nearest one to your place

**Step 5**: BUIN give your detailed direction to get on buses and arrive at your prefered destination.

### Bus tracking workflow

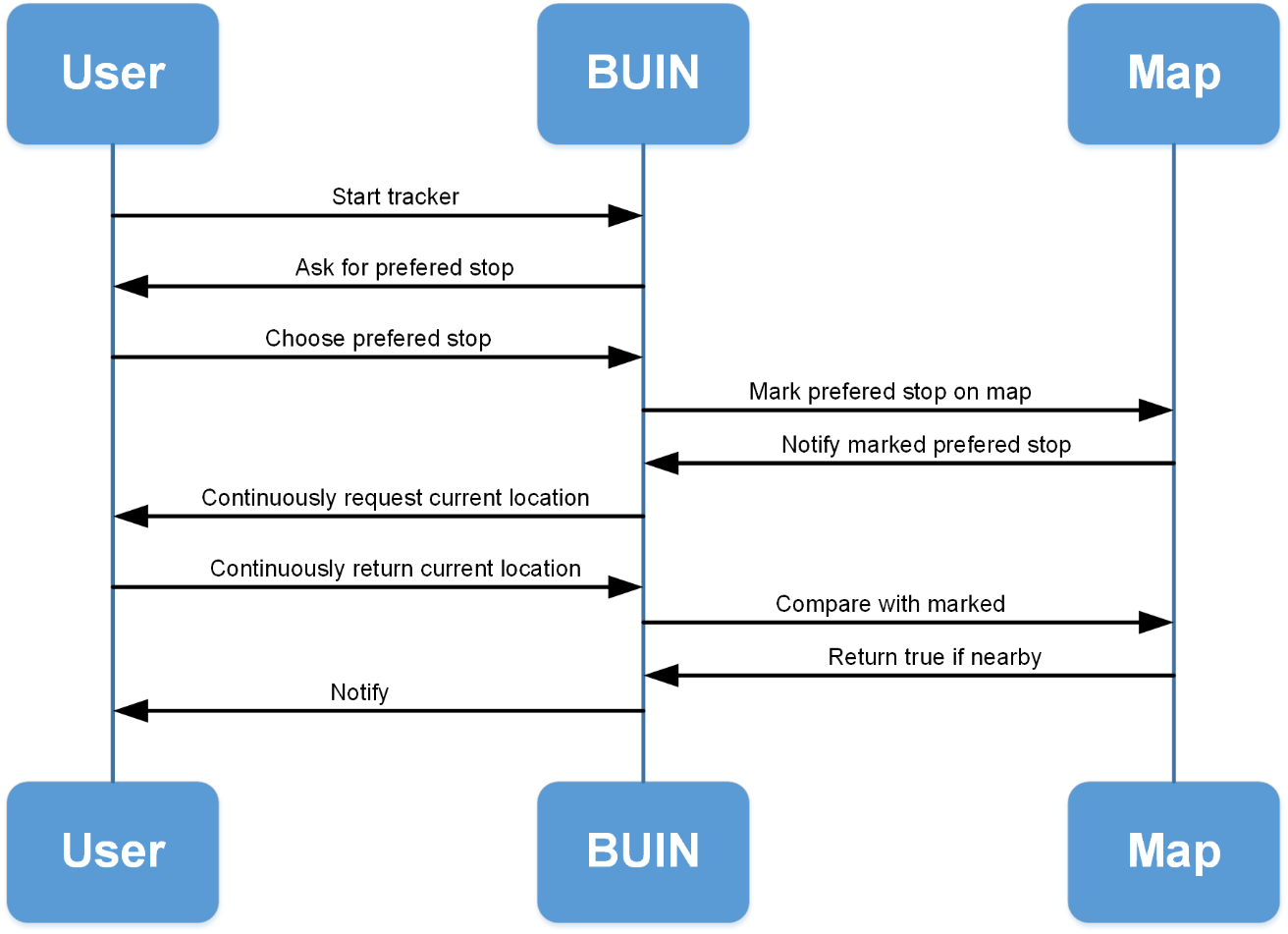


Figure 1-2: Bus tracking

**Brief description**: Once users get on a bus, they can setup an tracker which will keep an eye on the bus all the time. The user only have to choose a stop they want to get off, and leave the rest to the tracker. Whenever the bus comes near that predefined stop, it will notify them to prepare the leave:

**Step 1**: Start the tracker and choose a prefered stop on a bus’s route

**Step 2**: System will mark the location of the chosen stop on the map and continuously contact the app to request for it’s current location

**Step 3**: The app will return its current location to server each time it’s been asked

**Step 4**: BUIN system will continuously compare user’s location with the marked location on the map. If the distance is less than 200m, it will notify user to get off the bus.

### Bus Reminder

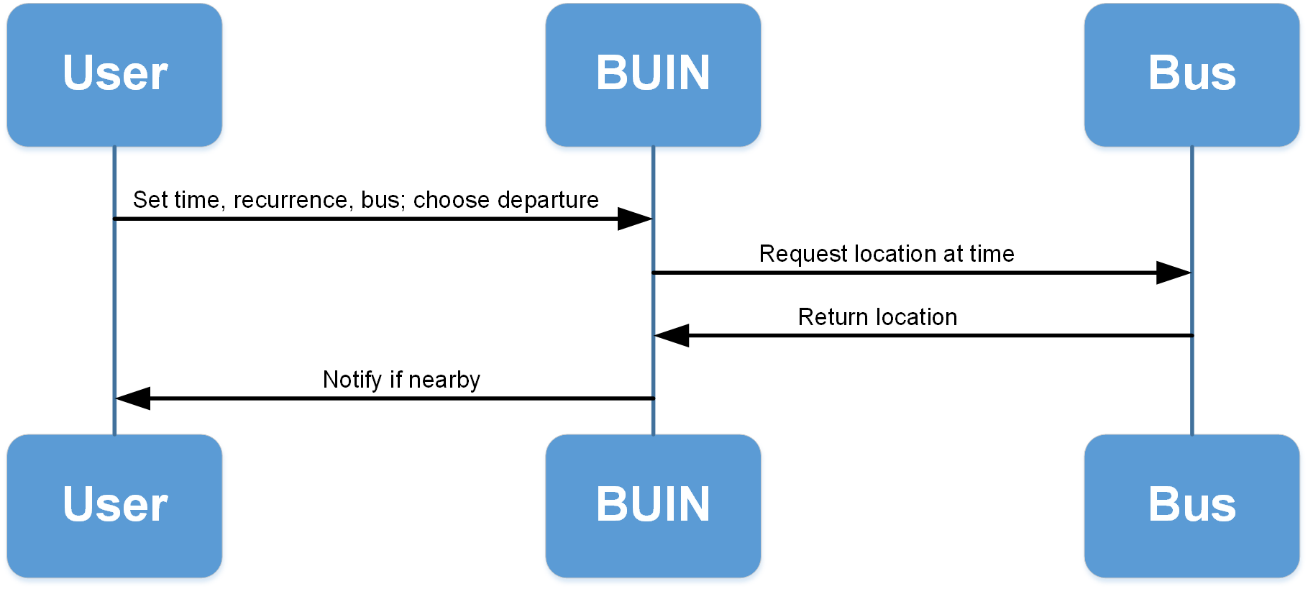


Figure 1-3: Bus tracking

**Brief description**: the app functions similarly to an alarm yet with greater effort by integrating map information and bus information into users' schedule. To use this feature, the user first sets up a time frame at about which they need to hit the road. User then chooses a departure location and a bus that they should get on. About time, the app will notify user if there are buses of the preferred kind which about to get to the nearest bus-stop of the departure location. This feature function well in combination with **Path finding** and **Bus tracking** features:

**Step 1**: the user sets up a time frame at about which they need to hit the road, then chooses a departure location and a bus that they should get on

**Step 2**: About time, the system will contact buses to know if there is any bus of this kind is near the departure location.

**Step 3**: If there is, the app will notify user, and keep repeat from step 1 until user manually dismiss the reminder.

## Product Features

## User Characteristic

There are 2 kinds of user that BUIN supports:

* Synchronized user: user whose usage data is synced to server and can be retored at anytime on many devices.
* Unsynchronized user: user whose usage data is not synced to server and will be lost in many cases.

Both kinds of user can freely make use of all features that the system offers.

# Functional Requirements

## Common Module

# Non-functional Requirements