

Android based Solution for Personal Vehicle Sharing

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Abstract— Ridesharing can reduce the fuel consumed by grouping individuals into fewer vehicles and reducing the number of miles that vehicles must travel. The aim of this project is to develop an android application which is used for citizen for ride sharing. This Android application provides highly scalable services to be easily consumed over the android Smartphone on an as-needed basis. Sharing the personal vehicle used by a person with others wishing to travel to same destination at same time for travelling helps to save money if shared by others. The Person who wants to share vehicle, may use this app and send the request to others to specify source, destination and time of departure. Others can confirm the request if they are interested.

Key words: Android, Mobile Application Mobile Computing, Smart phones

I. INTRODUCTION

Transportation is an important part of India's economy. Since the economic liberalization of the 1990s, infrastructure development has progressed rapidly; today there are a variety of modes of transport by land, water and air. Good public transport systems are an essential part of safe, clean and affordable transport for development. From a social perspective, public transport is often the only means of transport for the poor. Without it, they would be able to look at work opportunities only within walking distance of their homes, so public transport improves their livelihood opportunities. It also gives them greater access to education, health care and recreation. For senior citizens, people with disabilities and children, public transport is also their main means of mobility. Now days, travel from place to place as for the purpose of work is a need. In country like India, fuel consumption is more on vehicles, trains, planes. According to 2011-12 stats, Indian Railways (railways owned by the state) carries over 30 million passengers daily. The Maharashtra State Road Transport Corporation abbreviated as (MSRTC, or simply ST), provides public transport on roads through all over the Maharashtra.

Buses take up over 90% of public transport in Indian cities, and serve as a cheap and convenient mode of transport for all classes of society. Services are mostly run by state government owned transport corporations. However, after the economic liberalization, all those government state transport corporations have introduced various facilities like low-floor buses for the disabled and air-conditioned buses to attract private car owners to help decongest roads. But though government is offering quality service to the customers, some people prefer their own vehicle for travelling for convenience.

II. RELATED WORK

At present, we are not aware of any published literature on ride sourcing, so we rely on related research on ridesharing and taxis to provide insights into expected usage characteristics and potential impacts. Empirical evidence

indicates that ridesharing can provide transportation, infrastructure, and environmental benefits, although the exact magnitude of these impacts is not well understood. While not specific to ridesharing alone, one report estimated that using ICT to optimize logistics of individual road transport could reduce 70 to 190 million metric tons of carbon dioxide emissions by 2020 in the India[1]. Individually, ridesharing participants benefit from shared travel costs, travel-time savings from high occupancy vehicle lanes, reduced commute stress, and often preferential parking and other incentives[2]. Despite its benefits, there are several barriers to increased ridesharing use, including reluctance to sacrifice the flexibility and convenience of the private automobile [3], desire for personal space and time [4], and personal security concerns about sharing a ride with strangers. For decades, federal and local governments have promoted various ridesharing policies. While these policies may have had some success, ridesharing's modal share declined after the 1970s [3], but according to census data has increased slightly in recent years.

Taxis have historically accounted for a very small share of urban travel and are much less extensively studied than other forms of transport. Despite their small modal share, taxis fill a critical gap by providing transportation when driving or other public transit modes are not possible [5,6]. Notably, authors have found taxis to be both complements and substitutes for public transit [7,8]. Research suggests unregulated taxi services can create public costs, and almost all large and medium-sized cities have regulated taxis since the 1930s [5]. The taxi industry has at various times suffered from numerous market imperfections, supplying the rationale for regulation [5, 7]. Lack of information is a problem in street-hail and cab-stand markets: riders cannot compare information on price or service quality before choosing a vehicle, resulting in poor service quality. Low barriers to entry in these markets tend to enable over-competition, leading to aggressive and unsafe driver behavior, poor vehicle maintenance, and congestion [7] Regulatory responses include restrictions on market entry and supply (i.e., medallion systems); fare regulation; and vehicle and driver safety standards. The literature concurs that some regulation is necessary for safety reasons, although there is a fair amount of debate over the conditions in which supply controls are needed to prevent destructive competition [3, 7]. Moreover, as technology evolves, hailing a for-hire vehicle no longer requires standing on a street corner or placing a telephone call, and rating systems might resolve the lack-of-information problem. These advances bring into question how the need for regulation may have changed.

III. EXISTING SYSTEM

MSTRC has their own website. Also various private travelling agencies like VRL, SRS have their own website. If anybody (traveller) wants to travel to a destination from a

source he can visit the website and whether the seat is available. If yes he can reserve the seat by making online payment. Due to this, users do not visit their office physically.

Private travelling agencies like Red bus, Neeta bus has their own android application also anywhere anytime user/customer can check the availability of seats. If he/she reserve the seat by making online payment.

IV. NEED

Now days there are multiple android applications for public vehicle sharing like Ola cabs, Uber cabs, Neeta bus, Red bus blabla car. All these transport agencies are business oriented. But there is no android application for personal vehicle sharing. So, we thought to develop an android application for the people we want to share their personal vehicle personal.

V. PROBLEM STATEMENT & OBJECTIVE

A. Problem Statement

This project aims to develop an android application which connects all personal vehicle owners who want to share their vehicle and passengers who want to take its advantage.

B. Objective

The main aim of this project is to share the personal vehicle used by a person for travelling which indeed helps to save money and fuel if shared by others wishing to travel to same destination.

- 1) If you are travelling a long distance, offer ride to other members.
- 2) Search for ride to your destination city
- 3) If you need to travel, choose a ride and make an agreed contribution to driving costs.
- 4) Approve the other member to travel with you.

VI. PROPOSED WORK

A. System Design

Design is the meaningful Engineering representation of something that is to be built. It can be traced to the customer requirement and at the same time accessed to the quality against the set of predefined criteria for good design. There are two measure phases to any design process: Diversification and Convergence. Diversification is the acquisition of a repertoire of alternatives the raw material of design, component, component solution and knowledge of all content in the catalogs, text boxes and mind. During convergence, the designer chooses and as agreed by the customers. This section is brief overview of the methodology use for this document.

B. Working Methodology



Fig. 1: Basic working of Personal Vehicle Sharing App

In our system first step is user have to login. If user don't have login id and password then it's mandatory to register in our system. After Successfully logging, user able to interact with our system. When user login then user can create trip or select trip according to his source and destination. When user choose create trip then user must fill up the information such as Car Name, Car Number, License Number, Pan/Addhar Card Number and other car related documents about his/her vehicle ,date of journey etc. and also he/she can create round trip. If he/she want to select trip according to his/her source and destination then trips are displayed on his/her panel, then he/she can select appropriate trip according to his/her choice.

For security purpose we are taking the his/her personal information such as Adhar card and Pan card and documents clearance.

VII. CONCLUSION

While developing this project, we will learn new things like web services and android application development procedure. This android application will be useful for personal vehicle sharing which indeed helps to save the money and fuel.

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