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Tesis

Mobile APP Development for Recording Car Incidents in Public Transport Companies Promoting SmartCity Models

Wilson Anthony Lazo Tapia
Fiorella Katiuska Lazo Tapia

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Wilson Anthony Lazo Tapia*
Professional Academic School of
System and informatics Engineering,
Faculty of Engineering, Universidad
Continental, Huancayo, Perú
70237739@continental.edu.pe

Carlos Enrique Alvarez
Montalván
Faculty of Engineering, Universidad
Continental, Huancayo, Perú
calvarez@continental.edu.pe

Fiorella Katiуска Lazo Tapia
Professional Academic School of
Management Engineering, Faculty of
Engineering, Universidad Continental,
Huancayo, Perú
48094622@continental.edu.pe

ABSTRACT

The aim of this study was to propose the development of a mobile application that helps prevent traffic incidents, in addition to establishing a Smartcity initiative. The study starts from the WHO, which mentions that traffic accidents represent a public health problem worldwide. This project proposes the development of a mobile application by flutter allowing to record incidents in an agile way. The purpose is group all incidents or actions of public vehicles according to the transport company belonging in a certain region or city. This seeks to establish a SmartCity initiative that contributes to improvements in the accident rate and the city's road safety system. A survey of 32 people and quality plan for the functionality of the mobile app was conducted. It is concluded that the mobile app will help with the problem of transport incidents.

CCS CONCEPTS

- Information systems; • Information systems applications;
- Mobile information processing systems;

KEYWORDS

Transport application mobile, car incidents, smartcity, transport companies, QR code

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1 INTRODUCTION

Dart, appeared in 2013, is an open source, structured, object oriented, programming language developed by Google for developing

browser-based, complex web applications. Google created Dart because even though JavaScript engines (V8) are becoming faster, web apps start and work very slowly. We expect dart to help in two main ways: better performance and better productivity.[1] Whether it is for a client-side developer experienced in JavaScript or for a server-side developer familiar with Java and C#, both will find the Dart code syntax very familiar. The creators of Dart have taken special care in making the language utterly easy to pick up.[2]

About 1.3 million people die each year on roads around the world, and between 20 and 50 million suffer non-fatal injuries. Road traffic accidents are one of the leading causes of death in all age groups, and the first among 15- to 29-year-olds. In order to reduce the number of road deaths and injuries, it is necessary to adopt a holistic framework such as the safety systems approach with the aim of ensuring a safe transportation system for all road users. [3] One of the new targets of the Sustainable Development Goals (SDGs) (3.6) is to halve the global number of road traffic deaths and injuries by 2020. [4] SDG 3.6 to halve road traffic deaths and injuries worldwide and SDG 11.2 to provide access to safe, affordable, accessible and sustainable transport systems for all by 2030. In the Region of the Americas, 11% of all deaths are caused by traffic accidents, representing almost 155,000 deaths. This figure is equivalent to 13% of the total world population and 25% of the total number of vehicles registered. Americas' region has the second lowest transit death rate in the WHO regions, with a rate of 15.6 per 100,000 inhabitants. Thirty-four per cent of road traffic deaths are among car occupants, while 23 per cent are among motorcyclists. Pedestrian deaths' percentage is 22%, while cyclists account for 3% and 18% of deaths correspond to "other categories or unspecified". [5] Eleven percent of the deaths from road traffic accidents worldwide occur in the Americas region, with nearly 155,000 deaths per year. This region has the second lowest traffic mortality rate among WHO regions, with a rate of 15.6 per 100,000 people. Car occupants account for 34% of road traffic fatalities in the region, and motorcyclists account for 23%. This represents an increase of 3% over what was reported in the previous global report. Pedestrians account for 22% of deaths, while cyclists account for 3%. A further 18% of deaths are in other categories or unspecified. Only 40 countries representing one billion people have implemented at least 7 or all of the 8 United Nations vehicle safety standards. In the Americas, no country implements 7 to 8 of these safety standards. [6]. Mobile app allows the reading of a unique QR code for each vehicle unit in which data such as driver name, license plate number, affiliated transport company, recent incidents, etc.,. It allows the user to record a new type of incident, description and audiovisual evidence (optional) of what happened

*Corresponding author

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