



# On The Spot Accident Reporting System

S.Ranjith, V.Kaveevendan, N.Nilashan, S.Sugirthan, K.Thabotharan Department of Computer Science, Faculty of Science, University of Jaffna.

## Introduction

**Objective:** Develop a mobile device and a server based rapid reporting system for reporting accidents and expediting the related procedures.

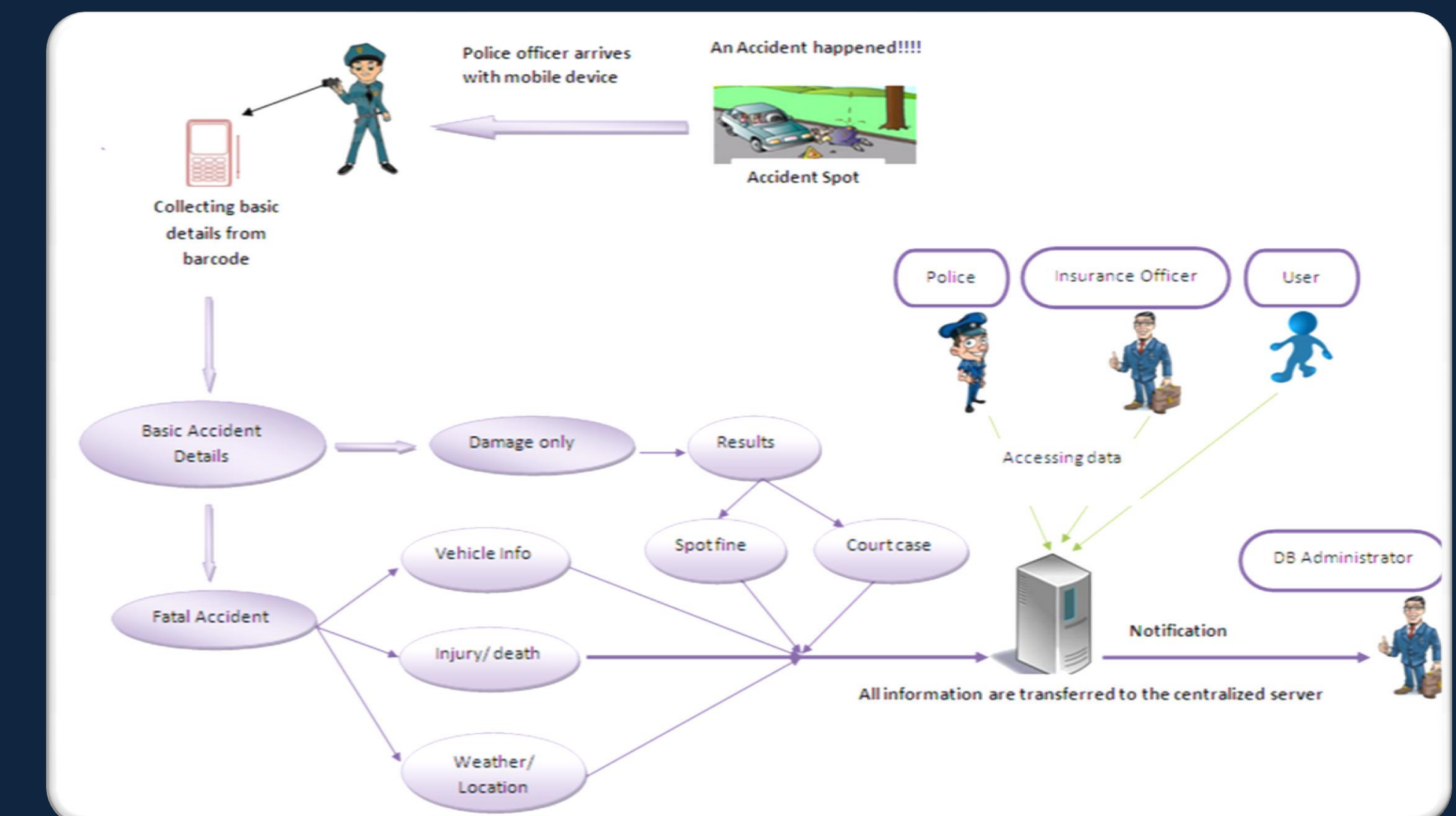
- When an accident happens, police officer will arrive at the spot with a mobile device. Then he will collect and shall send the essential details regarding the accident to a server through wireless connectivity. This information includes details of the accident and may also include photos of persons and vehicles involved.
- Then potential users such as an authorized police officer or an insurance officer can login into the server from anywhere and then they can collect the necessary details of the particular accident.
- Wireless Mobile ad hoc networking can be used for communicate between centralized server and the mobile device.

## System Overview

This system includes a number of mobile hand held devices running the spot accident (incident) investigation and reporting system. Mobile devices enable law enforcement officers to collect, illustrate and upload incident reports to the centralized server using available network connectivity. All the interested parties such as police officers, legal officers, insurance claim officers and other interested parties will have secure access to this information.



## A Typical Scenario



## The Client Application

This application is designed as web based application. Therefore the users can use or communicate with server from a remote location.

The following facilities are concerned in this application:

- User authentication.
- Searching facilities for accidents details and fatal accident details.
- Email report is created to maintain high security.
- Well sorted information to users.

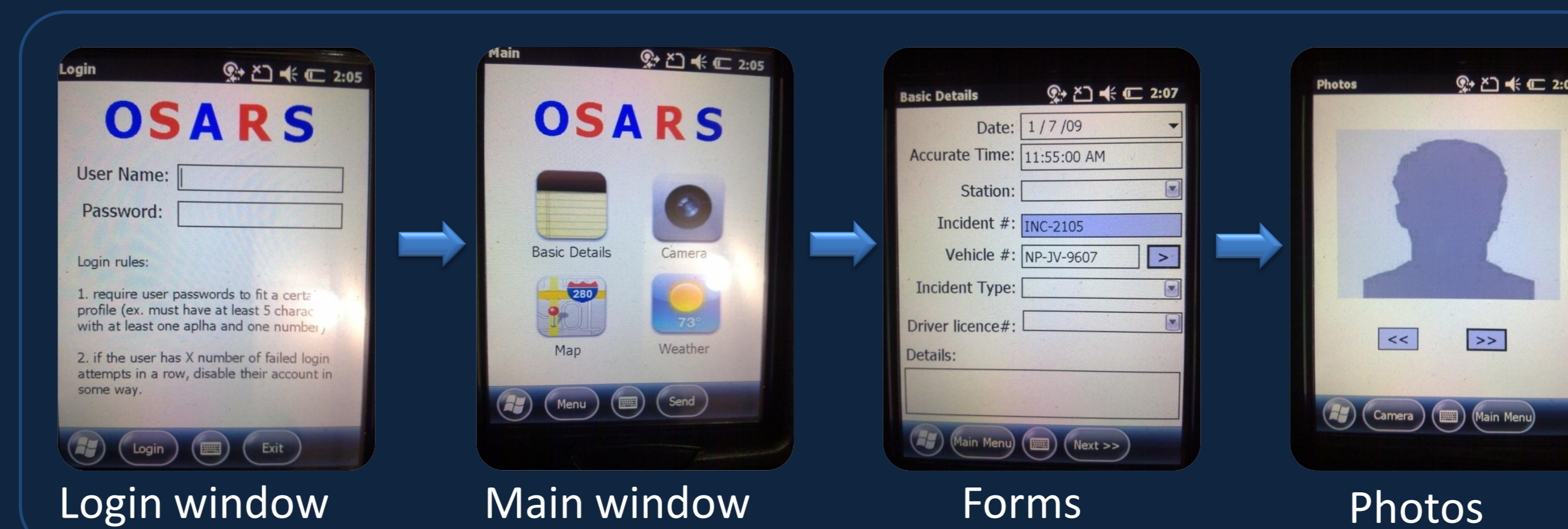
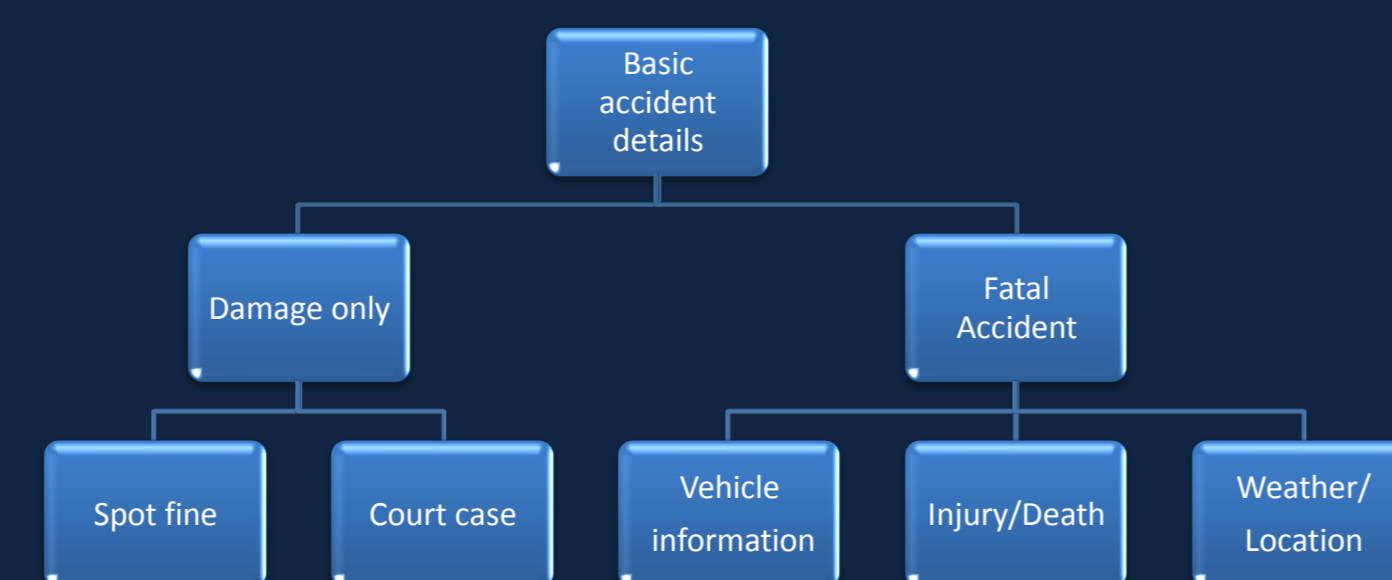


## Methodology

### The Mobile Application

The Mobile application is created to send relevant accident details including photos from mobile device in the accident spot to server. The details are sent through Wireless Mobile Ad hoc Network.

The details can be categorise as following:



## The Server Application

The server application is created to receive the data that is sent from mobile device through wireless mobile ad hoc network and to response the request that is sent by client or users.

The server application provides the following facilities :

- User authentication.
- Ability to receive data sent from mobile devices.
- Ability to respond for client requests.

Receive data and respond to client requests



## Product Features

- **Quick reporting of accidents details.**
  - The details are sent through the wireless communication by using an advanced mobile device.
- **Accurate and reliable details.**
  - Enables an officer to collect critical & timely information at the scene of the incident without missing any important information.
- **Public service alert.**
  - Enables general public to be notified by the police information center of the incident to avoid congested roads, possible hazards and law enforcement agencies too could be notified of stolen vehicles etc.
- **Electronic illustration.**
  - Built in sketching tools can support the incident reporting officer to illustrate the incident with the aid of multiple sketching and illustration tools to accurately describe and illustrate the incident scene.
- **Accurate accident location.**
  - Enables translating incident location co-ordinates into geospatial values for future mapping analysis & reporting for Google Maps.
- **Reduce redundant administration paper works.**
  - Avoids officers having to create multiple, handwritten notes on scene and transcribing those notes into electronic format.

## Conclusion and Future works

➤ This system was designed for the transfer of incident reports using wireless connectivity. But the police stations in Sri Lanka do not have the facility of mobile devices with these types of advanced features. It is most expensive to buy those devices. Now police stations have the devices to communicate by using radio waves. Therefore it is needed to change the system to use radio network connectivity.

➤ The mobile devices which is used in this system have more advanced features. When we buy those types devices to communicate to server or send the details by using this device, we use only one feature of it. Therefore we need to modify the system to use the all facilities of that device.

## Supports and Acknowledgements



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