# **Approach to TBMVCS 04**

# **4.1 Introduction**

This chapter is dedicated for describing the approach for the development of TBMVCS. With the hypothesis is stated this chapter will give a brief idea about the users of the system. And most importantly this chapter will describe the functional and non-functional requirements for the solution. It is vital to identify the input, process and the output of any solution. It is described in this section and at the end some of the key features are stated in this chapter.

# **4.2 Hypothesis**

Technology is integrating with our lives more and more with the advancements in the technology. Today’s world, even hand held mobile devices has dominant processing power cable of running applications smoothly. With these powerful hardware capabilities and software solutions combined using networks to convert traditional processes to automate processes. Therefore it is suggested that web based solution with an integrated mobile application can address the issues arisen in the claim settlement of a motor vehicle accident and hence, it will benefit both the customers and insurance company.

# **4.3 Users**

The main users of the web system will be the ground office staff. They are able to add new records, edit records, and obtain reports through the web interface. Adding new records will include records such as new policies, garage details, tow truck services and vehicle spare part details as well. All details are kept updated in the database by the ground office users. Other users’ type is the claiming field agent who will access the customer details through the tab application. They can conduct the whole claiming procedure on the spot of the accident and submit it to company database. They will be able to access all the updated, necessary customer, vehicle and spare part data through the tab application easily and in a fast manner.

# **4.4 Functional requirements**

This section contains the functional requirements required for the tablet pc based solution for vehicle insurance claim settlement procedure. In the solution there are 2 main components namely the online web application and tablet pc application. The requirements in this section specify the functions that each component must be capable of performing.

Online web application component is designed for the use of operating staff at the ground office. When a client need to buy an insurance, operating agents needs to register new customer and create account acquiring the relevant information. It will involve the following key functions.

* The users shall be able to create, view and update customer profiles by filling customer details such as first name, last name, date of birth, phone number, company details etc. 
* The users shall be able to add, view and update insurance vehicle details such as model, manufacturer, engine number etc. as per the customers’ vehicle. 
* The users shall be able to add, edit and view insurance policies in to the system database. 
* The system shall be able to add, view and update spare parts details relative to various manufactures and vehicle models. 
* The system shall be able to produce reports regarding the customers, insurance policies and etc.

The other component is the tablet pc application which will aid the field agent with the assessment process. When an accident happens, once the agents goes to the location, the person can access the following key functions using the tablet pc application.

* The user shall be accessed to the insurance policy details of the customer from the database. 
* The user shall be able to access the insurance vehicle details and the details of the clients on the system database. 
* The user shall be able to access and assess the drivers’ insurance history. 
* The user shall be able to complete the assessment of the accident by entering the details such as drivers’ details of the caused accident, accident location details, cause of accident and damages to the vehicle. 
* The users shall be able to attach photos and videos to the record using tablet pc camera. 
* The system shall be able to complete the assessment by calculating the damage by involving the database and the web server.

# **4.5 Non-Functional and Performance Requirements**

In the below discussed are the non-functional and performance requirements to be considered when implementing the motor vehicle claim settlement solution.

When considering the performance, this would depend on factors such as the network connection involved. As the field agents should move to the accident location, the network data transfer speeds will depend on the signal strength received to the particular location with the network provider.

In today’s smart devices market, there are several major OS platform which the devices work on. Since initial mobile application is developed for the Windows platform, Mobile application will require a smart device running on Windows OS platform. In considering the smart devices, another important factor which should be considered is the hardiness of the device. It is important to remember that this will be used outdoors and taken in the Sri Lankan tropical climate necessary precaution should be taken to protect the device.

System will be tested for identifying and reducing bugs to the minimum. If any bug may appear they will be debugged using demo test. Finally reliable software system will be introduced to provide real time information. The hours need for the maintenance of the system will be kept at a minimum by conducting testing thoroughly. The company database should also be updated with the current vehicle component values in the market and there should be constant updating done on the part of the head office. 

The system will have its own security to prevent unauthorized write/ read/delete access along with its authentication module. Authentication module will include a module for encryption and decryption of authorization data. Apart from that necessary steps would be taken to back up the database periodically.

# **4.6 Input**

Ground office staff employees who will interact will be added to the system with valid authentication details. Then they will be able to log into the system with their credentials. Then they will be able to create new insurance records and enter customer details, vehicle details, policy information, vehicle spare part information updates and so on. These data input will be very vital for the assessment of the accidents when conducting a claiming procedure.

# **4.7 Output**

Accidents can happen anywhere in the country. Once an accident happened claim agent have to go to particular location to do the assessment. Agent will be equipped with a tablet pc installed with claim assistant application. He will be able to get all the necessary details such as customer information, vehicle information, policy information, spare part prices and so on. He will be able to conduct the assessment at that moment itself and attach photos to the claim record whenever necessary and finally submit them to insurance database. Apart from that he will be able to access the nearest company approved garages and tow truck service within a matter of minutes.

# **4.8 Process**

When a customer needs to insurance his vehicle, ground office staff can register the user on the system adding necessary details such as customer profile, vehicle information which is going to be insured and the policy information such as amount of the insurance, what covers are needed by the customers and so on. Once the registration is complete company can issue a document with the insurance record id which is auto generated from the system. Once they are in the system claim assessment can be done via the tab application.

When an accident happens claim agent will go to the location and do the assessment via tab application. First agent needs to log into the tab application using valid credentials. Once he is logged on to the application, he can request the policy id from the customer and enter it in the tab application. Application will retrieve all the necessary data from the company database through the web system via a web system. If all the details are in order agent can proceed with the claim assessment by filling the necessary data forms, attaching photos if necessary, add the necessary costs and get the total cost and submit the data into the company data base through the web system via web service. It can be seen that the manual process is minimized to a process with only few click using this approach.

# **4.9 Features**

Features of the complete solution include maintaining all the insurance records in a central cloud database and access them from a standard browser from any location in the country. The main feature is to conduct the claim assessment through a tab application minimizing the loopholes present in the traditional claiming process. Claiming agent have the accesses to all the necessary data in his tablet pc which will help him to do the assessment in a speedy but accurate manner. Since the data is passed as JSON string format even with a slow network connection tab application will be able to retrieve data through the web service. As an added feature security will be ensured using https when hosting and enabling encryption and decryption when comes to authorization aspects.

# **4.10 Summary**

In this chapter, it is described about the one of the key area which is functional and non-functional requirements for the solution. Apart from that there is a brief description about the users of the solution and a description of the system from an input, process output perspective. It also includes a brief description of features included in the system such as central database security wise and also access to the system. In the next chapter it will be discussed about the design of the system in depth.