Chapter 01-Introduction

# **Prolegomena**

In the modern world people have introduced software solutions as a major way of handling real world problems. Software solutions can be used to enhance the accuracy, efficiency, cost effectiveness, reusability and many more feature of a manual process. With the emergence concepts such as Internet of Things and advancements in networking people are connected with each other more than ever. Among other software technologies programming, databases, web and multimedia have been the most widely used for development of software applications in order to present solutions to various industries. Nowadays numerous software engineering technologies, tools, platforms are available for development of software applications for enterprises. This thesis presents a project to develop a software solution for the domain of motor vehicle insurance claiming procedure. In doing so, this chapter outlines background and motivation for the project, problem in brief, hypothesis, proposed solution, resource requirement and overview of the structure of the rest of the thesis.

# **Objectives**

With the aim to develop a smartphone based software solution to streamline the extant motor vehicle claim assessment and settlement procedure in order to benefit both the insurer and the client followings are the key milestones which needed to be achieved successfully during the project.

* To identify the weaknesses in phases of existing motor vehicle claim settlement procedures. 
* To investigate similar researches and projects steered to mitigate identified weaknesses with the aid of technological advancements. 
* To develop the web application linked with a central database and host in a server such that employees can access the system through a standard web browser. 
* To develop and host a web service along with web system in order to allow any platform smartphones to connect to the system. 
* To develop smartphone application to access the main system as well as the database through the hosted web service. 
* To provide means to make assessments of damages more effectively and efficiently through access to an online central database. 
* To improve customer satisfaction by the reduction of misjudged claims.

# **Background and Motivation**

Over past years, the use of automobiles have become more common with the increasing complexity of human lives. In Sir Lanka for any vehicle, it is must to have a motor vehicle insurance before using the vehicle. The growth in the automobiles usage in the country has led to the establishment of several insurance companies and it has become a competitive market segment in the industry where there is constant cash flows. In any motor vehicle insurance company, one of the key process is the claim settlement of their customers in case of an accident. It can be seen that cost savings and efficient process improvements in claims management business processes have a great impact on the key performance indicators of insurers.

When a motor vehicle meets with an accident, in the past the traditional way was to wait till the police produce a report of the accident which may take usually more than 2 weeks. Therefore sometimes vehicle owners have to bear the cost of repair on his own before getting the insurance money. As a solution the ‘on the spot’ policy was introduced. In the on the spot claim settlement process, after an accident has happened a field agent from the insurance company has to go to the accident location and do the preliminary assessment depends solely on the discretion of the insurance agent to complete the claim settlement. Whether it is a on the spot or not an assessment should be done on the accident location. Agents should use his experience and knowledge to assess the damage. There are problems arisen with this scenario which will be discussed in the next section.

# **Presenting Problem**

Insurance companies has become a major revenue generator in the business sector over the past years. Their main business is handling life and general insurance policies and under the general insurance solutions insurers usually provide motor, fire, marine, personal, engineering, medical, title, and miscellaneous insurance solutions. The growth in the automobiles usage in the country has led to the establishment of several motor insurance departments in these companies and it has become a competitive market segment in the industry where there is constant cash flows.

Even though there is several companies competing in the industry, they are confronted with a gradual decrease of motor policy renewals which has caused a decline in revenue. This has caused due to the inherent loopholes in the vehicle claiming procedure. In the current procedure of claim settlement, on the scene of an accident, an insurance agent does a preliminary assessment of the damage to the vehicle. This preliminary assessment depends solely on the discretion of the insurance agent. He uses his experience and knowledge to assess the damage. Typically, customers are not satisfied with the assessment of the damage and there are no prescribed criteria or template on which the assessment is based. In most instances assessments are inadequate and customers are left with no choice but to bear the loss.

Furthermore, the process of doing a preliminary assessment, verifying the documents and photographs in the scene of accident and the process of approving the claim and reprocessing the documents in the branch/head office to settle the claim causes hefty delays. These loopholes caused clients to leave the company effecting a decline of motor policy renewals.

To insurance companies, issues regarding the vehicle claim procedure is of utmost importance as motor policies are their top income earner and responsible for their considerable market share. As a solution for the delays ‘On the spot’ motor vehicle claiming procedure was introduced. In this methodology also several loopholes were seen similar to the earlier process due to the fact, the agent had limited access to the company database or any other resources. Hence, the need to re-engineer the existing motor vehicle claim management process using newer technologies is made apparent.

# **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.

# **Software solution for Motor Vehicle Claim Settlement**

In view of above mentioned problems the proposed solution is to develop a Tablet PC based motor vehicle insurance claiming solution (TBMVCS) in order to enhance the information communication between the office and the field agents to minimize the loopholes in the current procedure. The solution will consist of 2 main components as the online web application for the use of ground office staff and the tablet pc application for the use of field agents to assist with the assessment process. Thus the solution will allow the agents to provide real time updates and maintain the end to end connectivity with the company database.

# **Resource Requirement**

In order to execute the application in a successful manner the resources are required in technical and human perspectives. Therefore as for the technical perspectives it requires hardware and software in order to establish the application. It requires a tablet pc to run the application while central web host location to host the system and database. Apart from that for ground staff will need computers and an internet connection to connect to the system. In human perspective, it requires the people who are aware of working with the smart devices and the people who are having basic knowledge of working with a computer will be able to handle the application with the internet connection.

# **Structure of Thesis**

In context to the thesis this is an effort to represent the view of the entire research. In here these information related to the research is presented with separate chapters in order to get an easier understanding regarding the process. It includes the chapters as Introduction, Literature Review, Technology Adoption, Approach, Analysis and design, Testing and Implementation, development, evaluation and conclusion.

# **1.9 Summary**

As deliberated so far vehicle has become a necessity in our daily life making the vehicle important too in our live. Every vehicle need a motor vehicle insurance thus, insurance companies has become a major revenue generator in the business sector over the past years. In the traditional insurance claiming it was discovered that there were many loopholes. But with the help modern of powerful hardware and software, there is a need for a computerized claiming solution for motor vehicle insurance industry which will improve the efficiency, accuracy, cost effectiveness of the traditional procedure. In the next chapter it will be discussed about similar researches done on this subject.