Problem domain

2.1 Introduction

This chapter describes the problem domain of software project; "Activity Management and Monitoring System for Product Certification Division". Back ground information base on literature survey, others' approach to solve the similar problem and problems identified relevant to this software project, and citation to refer to item in the list of references are the content of this chapter. The director of the product certification scheme is responsible to manage the activities of product certification scheme with its staff to meet the targets and plans in every year. The director wants to manage its activities efficiently using software system.
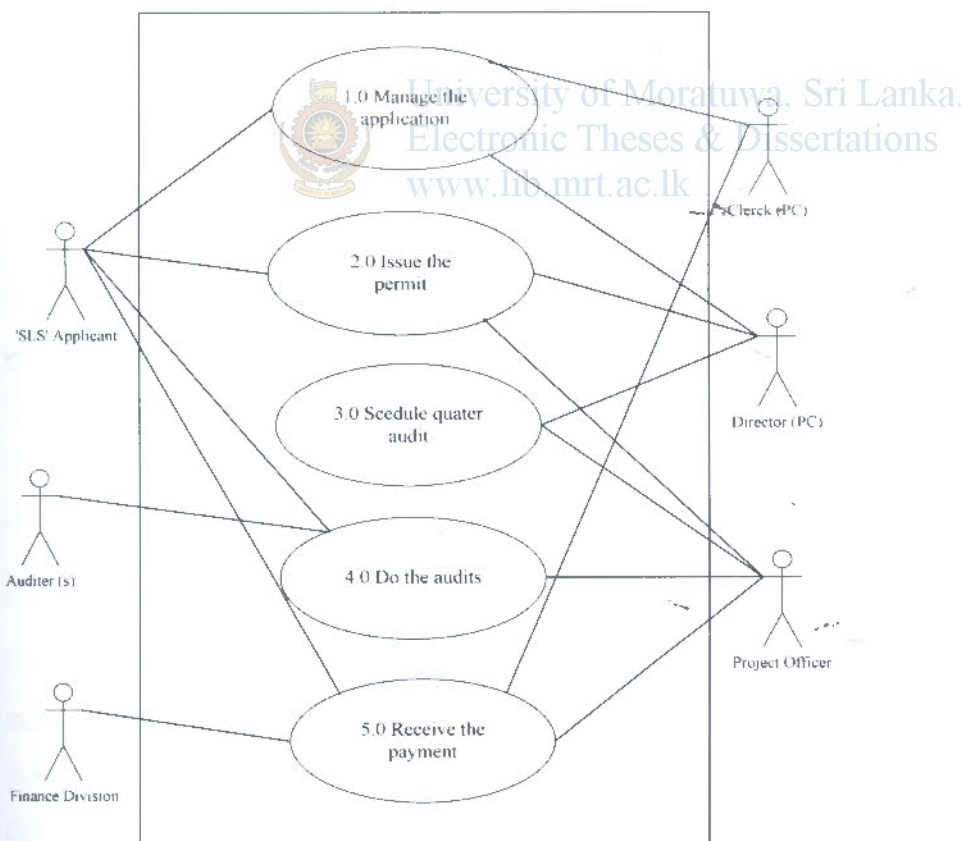
2.2 Current System

Figure 2.1 – System over View

Main activities relevant to the product certification scheme; application receiving and recording details, allocate application to the project officers, keep details of 'SLS' mark holders, audit scheduling, and annual fee recovery, are done by manually using lot of circulars, letters, and memos in standards formats.

2.2.1 Receiving application

Separate applications are available for local and foreign applicants. Manufacturer has to fill and submit the 'SLS' mark application. If it is local, thousand rupees have to be paid as the application processing fee and if it is foreign, hundred dollars has to be paid. Then this application is allocated to project officer with a project file number. If it is local file, file number starts with FI/PC/--. If it is foreign it starts with FI/PC/F/--. Here company name, date of submission, processing fee details, file number, project officers name, date of allocation are the important fields which are to be recorded. Clerk of the product certification scheme records details in a record book and that application is repaired as the project file given a project file number. Then clerk forward the project file to director of product certification to allocate a project officer to the project file.

2.2.2 Processing the Application

After allocating the project file to project officer, project officer has to scrutinize the project file and he has to check whether the application is correct. If mistakes are found applicant should make the correction. According the procedure of product certification scheme, two consequent samples have to be passed to arrange final assessment audit. Before arranging the two preliminary inspections for samples, project officer should recover LRK 5000+VAT as the inspection fee. Also testing fee has to be recovered by the project officer, if testing is done at laboratories in SLSI.

2.2.3 Issue 'SLS' Marks

If two consecutive samples are passed, project officer has to fill the first part of the final assessment report and get approval from the director to go for a final assessment audit. At the same time project officer has to get nominating an audit team by writing a letter. In this case Director has to refer the audits list allocate the audit team. At this moment Director does not check whether the auditors are busy or not. If nominated auditors are

busy, project officer gets reallocating the team again. At the final assessment audits, if there is no any non conformities, product certificate committee members approve to give 'SLS' mark.

2.2.4 Arranging Audits

"SLS' mark is provided only for three years period. After three years this validity period has to be extended by arranging the reassessment audits. Within this period at least three audits per year have to be arranged to observe the product conformity.

At the beginning of a quarter, director circulate a letter requesting audit requisition from project officers. Then project officers send company names including factory addresses, product names, and brand names for which audits have to be arranged within the quarter. Director nominates the auditors for those requisitions and circulates the audit schedule in each division. Project officers negotiate the dates for audits with 'SLS' mark holders and team of auditors. Audit schedules, letters communicated with client are kept in project files and if any case those details are required to director, project officer will provide the project file to director for reference.

2.2.5 Recover the Fee

Considering previous sales values, project officer calculate the annual fee and the first month of the year 'SLS' mark holder should pay the annual fee. If it is not done, he has to pay penalty charges for the delay payments. If manufacture wants, he can pay the annual payments quarterly. Project officer updates the project file with detail of recovering of fee.

2.3 Problems and Weaknesses of the Existing System in Details

Problems and weaknesses of the existing system are listed as follows;

1. Some limited number of details of manufacturers like company name, company address, product name and brand name are kept in an Excel work sheet and when details are required, they are found one by one until it is found. When the managements want to know some necessary details like next renewal date, due payments, quality status, only the way is to inquire them from project officer who is handling the file.

2. Records of the project officers to whom project files are allocated are not maintained in the product certification division.

3. After receiving an application, it is allocated to project officer by director of Product Certification Division as a project files. When project files are going to be allocated, Director of Product Certification doesn't have list to check how many project files are handled by each officer and what their qualifications are. Hence allocations of the project files are not done the fair way.

4. Monitoring system to check the status of the payment is not available in current system. 'SLS' mark holders should pay annual payment to SLSI during the first month of the each quarter. Responsibilities go directly to the project officer and no one will check the status of the payment. If 'SLS' mark holders do not pay the payments in time, they will have to pay penalty charges for delay payments. According to the fee structure, amount of penalty fee increases with the delay time of the payment. Until internal auditor check the payment status, no one know about the payment.

5. According the prevailing system, nomination of auditors is very difficult task without a list of auditors. When the director receives the request letters, the team of auditors is nominated just by memorizing the officers' names and qualifications. These nominations are verified further discussing with other officers or project officers. Then it takes time to do this.

6.   Renewal audits and surveillance audits have to be scheduled quarter basis. The director of product certification circulates audit requisition forms. Then every project officers should include manufacturers' names and audits status which have to be carried out. After receiving these requisitions, director assigns the audit team and circulates the schedules as discussed earlier. Eight sets with twenty pages are distributed among the divisions and this is wasting of lot of pages. Also director does this nomination referring old list and memorizing the auditors' names. This one will not be a fair nomination.

2.4 Comparison of Proposed System Verses Some Different Systems Available in the Market

Feature Expected	Proposed System	Track – it [1]	AG – Personnel [2]	Orange HR 2.4 [3]
Specific Functionalities Requires	100% Compatible	Not as it is	Need to conduct a proper survey	Not as it is
Additional software	No need of additional software.	Need to conduct a proper survey	Need to conduct a proper survey	No need of additional software.
Additional hardware	No need of additional hardware	Own server should be available	Own server should be available	Own server should be available

License	No licenses required as system ill be developed by using open source software	Need licenses	Need licenses	No licenses
Maintenance	No need of such an agreement.	An agreement has to be signed with the vendor	An agreement has to be signed with the vendor	No need of such an agreement.
Initial Cost	Very law	high	high	Very law

SLSI is a semi government organization and it has with limited resources and budget allocation. Thus SLSI agreed to implement the proposed system with out seeing for available solutions.

Having compared to the proposed system with the systems currently available in the market and the above facts as listed out in section 2.3, I could be able to come to a conclusion that the proposed AMMS is a very effective solution to the current problem.

2.5 Summery

Problem domain was identified and listed trough the feasibility study. Each and every process activities were studied and problem and weaknesses relate to those activities were listed. Limited to the information technology solution for the problems in problem domain was identified as the feasible solution with respective to the cost, time and resources.