

Implementation issues in CIIS

2.1 Introduction

All about the organization and its major services are introduced in the previous chapter. Also the existing system and its problems are discussed briefly in that chapter.

The objective of this chapter is to explain the existing system and its problems in detail. This will also describe the benefits of implementing the CIIS in a computerized environment, general features of the software system and specific features that are expected from the proposed system where other systems do not support 100%. This chapter also includes a section to compare the proposed system with other systems available and justifications why the proposed software system was selected to be developed.

2.2 Existing System

Following subsections will explain in details the different activities of CIIS listed in the previous chapter

2.2.1 Notification receiving and registration

In order to obtain the SLSI decision for any consignment of products, an Importer is required to submit a set of documents called a Notification at the **Quality Assurance (QA)** division of the SLSI. An Importer is required to submit following documents in the Notification,

7. 3 copies of the Notification form -FM – II – 01(refer appendix M) are completed by the Importer
8. A copy of the bank stamped invoice of the consignment or any other valid document ,given by the customs
9. A copy of the packing list of the consignment
10. A copy of the Bill of Lading (BL) of the consignment

Optional Documents

11. any valid Quality Certificate/s or test report/s
12. A copy of the product catalogue

Receiving clerk at the counter receives this Notification and check for the availability of required documents in the notification and ticks the fields in A – 1 section of the processing form - FM – II – GN – 03 (refer appendix M). If satisfactory, following details given in the Notification form will be entered in the database and registers the Importer's Notification in the system. Figure 2.1 describes the flow of the process of receiving and registering of Notifications

1. Name and address of Consigner(Exporter)
2. Name and address of Consignee(Importer)
- 9 Country of Origin
- 10 Number and date of Invoice
- 11 Invoice value (FOB) of the product under consideration
- 12 Number and Date of Bill of Lading
- 13 Total net weight
- 15 Description of goods
- 17 Relevant Sri Lanka Standard
- 18 The Organization that has issued the quality certificates (only for canned fish)

Once this process is completed, a system generated Entry Number is assigned to the Notification and it will be printed on the processing form along with the following details.

- date of receipt
- time of receipt
- Name of the Importer
- Name of the Exporter

Also she manually fills the following fields in A – 1 section of the processing form

- Date
- Time
- Signature of clerk
- Name

Once the registration is completed, the particular set of documents is referred to as an Entry. The same clerk or a helper manually prints the Entry number on rest of the pages of the Entry and put it into the tray, relevant to the unit that the Entry should go for the perusal.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

Figure 2.1 – Notification receive and registration process

2.2.2 Entry nomination Process for perusal

The Chief Clerk (CC) of the unit fills the 'file No' field of the A – 1 section of the processing form. In case of a new importer she gets a new file number from the register maintained in her unit. This register is maintained according to the code numbers allocated to the products that each unit handles. For example the code number allocated to Electric fans is II/40. Then file numbers start from II/40/1 and any new Importer of fans gets the next number in the register.

Secondly, the CC enters the following information from the Entry in a book called 'product register'.

It has columns for the following fields

- Date
- SLSI Entry No
- File No
- Name of the Importer
- Name of the Manufacturer
- Country of Origin
- Brand
- Quantity
- QC code
- Signature of the Perusing officer
- Sample required or Not

The four units of the QA division maintain separate product registers for every product that comes under their scope of competence. For example, my unit handles products covered by 24 standards and therefore maintains similar number of product registers.

Once this process is completed, the Entry is forwarded at the **Duty Officer (DO)** of the day along with the Importer's relevant file for the nomination of a perusing officer. The duty officer completes the section B of the processing form. In order to

complete this part. The DO has to verify the availability of competent officers in the particular subject (e.g. Electrical, Food, Cement, textile etc) before the nomination. The DO completes the relevant part mentioning the name of the appropriate officer and leaves the Entry in his out-tray. Figure 2.2 describes the flow of the process of nominating the Entry for perusal

For a particular day, two duty officers are assigned from the Executive officers of the QA division as per the roster. They serve at the Food and Non-food sections of the QA division. Each section has two units. A unit is headed by an **Assistant Director-Quality Assurance (AD-QA)**. All AD s are working under **Director – Quality Assurance (D (QA))**.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

Figure 2.2 – Entry nomination process

2.2.3 Entry perusing process

Once the nominated Entry and the relevant file are received by the nominated officer, he checks whether the documents are in order. Then he goes through the information furnished in the form FM – II – 01 and verifies them with the other documents (invoice, packing list etc) in the Entry.

Then he/she starts completing the section ‘D’ of the processing form.

Figure 2.3 describes the flow of the process of perusing an Entry

How to complete the Section ‘D’ of the processing form

In the sub section D.1 there are five clauses along with a Yes/No check box. They are

- I. Approved Manufacturer
- II. Acceptable Quality Certificate Attached
- III. Acceptable test report(s) attached
- IV. Valid Product certification Mark
- V. Other valid document

The perusing officer ticks the appropriate cage of the check box appearing against each of the above clauses.

In case the check box of any of the above clauses gets “yes” ticked, then he moves to the subsection D.2. In order to complete this section details of the previous consignments are taken from the importer’s file and product register. There he indicates the date of the last sampling done and the number of consignments released thereafter without sampling.

Any additional comments or the observations of the perusing officer are indicated in the space reserved under ‘Remarks’

Section D.3 is applicable to canned fish. In case of a failure of samples or a new processor, consignments are monitored by conducting visual Inspection or full test by sampling for five consecutive consignments.

Once this part is completed by the perusing officer, the perusing process is over and the Entry and the Importer’s file are passed to the AD of the unit for his decision.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

5. For not covered items, the consignment will be released under Not covered Items(see fig 2.9)
6. For small quantities , the consignment will be released under No objection (see fig 2.10)
7. Approve the consignment based on the satisfactory test results(see fig 2.11)
8. Reject the consignment based on the unsatisfactory test results

If the consignment is released from the port under any circumstance described from clause 2 to 6, it is required to get the prior approval from the D (QA). For this purpose, the Entry will be forwarded at the D (QA), appropriately completing the section F of the processing form by the respective AD (QA).There, he will indicate the reason for release of the consignment by ticking the relevant check box or boxes. The D (QA) indicates his decision by completing the section G of the processing form and sends back the Entry at the relevant AD (QA) for further actions.

Figure 2.12 describes the flow of the process of Decide method of approval.

Assistant Director’s decisions are indicated on every copies of the Notification form by placing relevant rubber stamps on them as follows,



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

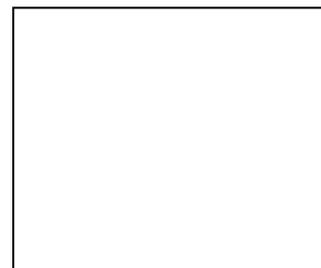
1.0

First, AD should look at the sub section D.1 of processing form. If he observes that if every check box of “NO” column is ticked, he decides to take samples from the consignment and approve it, based on the test results. In case if it is the first consignment of the Importer, the Importer is not allowed to clear the consignment from the port till he receives the SLSI approval.

Following Rubber stamps(Fig 2.4 & 2.5) are used to endorse the decision on three copies of the Notification forms



Figure 2.4 – Rubber stamp layout for sample required



((In case of verification at the port))

Figure 2.5- Rubber stamp layout for inspection required

1.1

In case, previous consignments of the same product of the same manufacturer are satisfactory, then the importer has an opportunity to request the consignment to his warehouse by giving a guarantee letter saying that he will keep the particular item in his warehouse till he gets the approval from the SLSI. This option saves the Importer from paying demurrages. Then the consignment will be sampled at the Importer's warehouse. The relevant rubber stamp used is shown in the figure 2.6

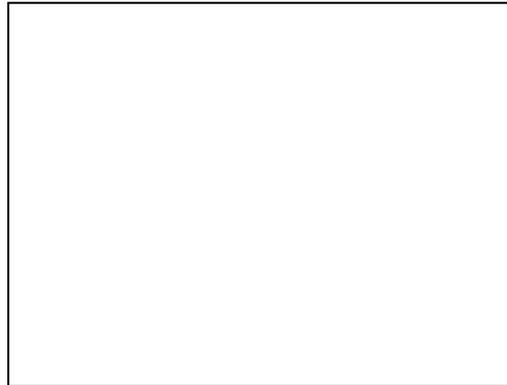


Figure 2.6 – rubber stamp layout for warehouse releasing

2.0

In case the first two check boxes of the “yes” column are ticked, every consignment will not be sampled. Only random consignments will be sampled. After sampling, the importer is permitted to sell the product. This option is called “Consignments imported under the manufacturer registration”. In this option, it is a mandatory requirement to submit manufacturer's Quality certificates of the product along with the Notification.

Following rubber stamps shown in the figures 2.7 & 2.8 will be placed appropriately on the Notification.



Figure2.7 – Rubber stamp layout of warehouse releasing the consignment with permission for sale after sampling



Figure2.8 – Rubber stamp layout for approving the consignment without sampling

3.0

In case rest of the check box (s) of the “yes” column is ticked, every consignment will not be sampled. Only random consignments will be sampled. After sampling, the importer is permitted to sell the product.

Same rubber stamps shown in the figures 2.7& 2.8 are applicable.

4.0

In case the product is found to be not covered during the Entry perusal, the consignment will be released under the release of Not Covered Items.

Following rubber stamp shown in figure 2.9 is applicable.

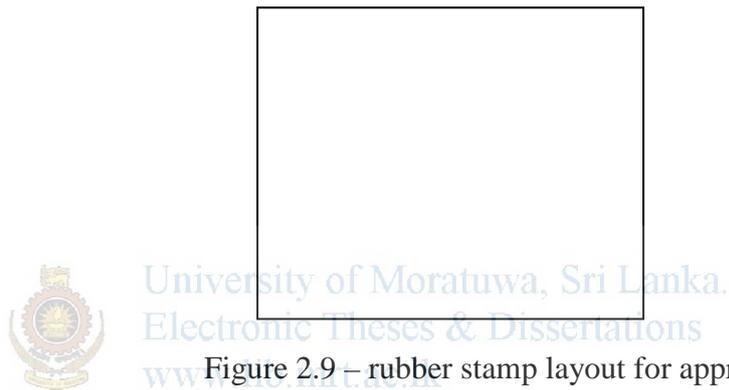


Figure 2.9 – rubber stamp layout for approving the consignments of not covered items

5.0

In case of consignments of small quantities depending on the nature of the product, they will be released under No objection recommendation

Following rubber stamp shown in figure 2.10 is applicable

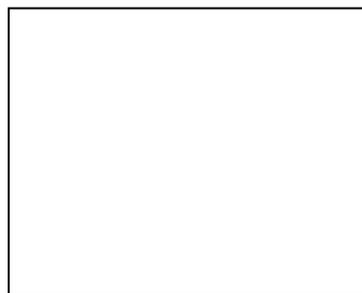


Figure 2.10 Rubber stamp layout for approving the consignment due to a small quantity

6.0

When consignment is approved based on the satisfactory test results of the samples tested, the following rubber stamp shown in figure 2.11 is applicable,

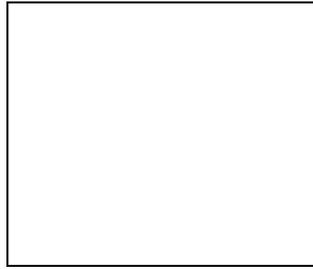


Figure 2.11 – Rubberstamp layout for approving the consignment based on the final test results

7.0

In the event of the tested samples being unsatisfactory, and the consignment rejected, the SLSI decision for rejection will be communicated to the importer and following parties sending a letter under registered post.

- I. Director General – Consumer Affairs Authority
- II. Controller – Imports and Exports
- III. Deputy Director – Sri Lanka Customs
- IV. Director General – SLSI.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.ho.mrt.ac.lk



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations

Figure 2.12 –Process of Deciding Method of approval

Issue Importers copy of the notification

Once the method of approval is decided by AD and confirmed by D (QA), the Entry is again sent to the CC of the unit for the calculation of the charges involved.

The CC of the unit fills the section C of the processing form indicating the fee in spaces provided against the applicable charges. Once the charges are calculated, an invoice is raised indicating the payment to be made by the importer. Figure 2.13 describes the flow of the process of issuing the importer's copy of the Notification

Importer or his representative takes the invoice at the cashier and makes the payment and brings back the copy of the invoice to the CC of the unit. The CC verifies the payment made and issues a copy of the notification form to the Importer which he needs to produce at the Customs. The customs will implement the decisions indicated on the notification form accordingly.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

3. Poor use of Organizational resources

Use of human resources available in other divisions is nil compared to the other schemes implemented by the Organization

4. No feedback to the Importer.

Importers have to wait hours without knowing the progress stage of their Entries submitted and make a lot of telephone calls verify the situation.

5. Document misplace

This is a common issue due to improper handling of documents by untrained casual employees, which creates serious issues specially if an investigation is conducted against the importer

6. Difficulty in evaluating individual performance

Present manual system is very poor in giving statistical support for performance evaluation

7. Forged Notifications

In case the Importer produces a forged copy of a Notification form pretending it has been issued by the SLSI the Customs doesn't have immediate option to verify it's authenticity unless they inquire from the SLSI.

8 Poor follow up activities

If a consignment is rejected, a letter is issued to the importer asking for re-exportation of the consignment, giving a dead line. Most of the time, this decision will be highlighted only when the importer brings down the second consignment.

9. Higher operational and overhead cost

Among the other schemes operated by the SLSI, the CIIS has the highest operational cost.

(Refer appendix B for more detailed explanation of problems and weaknesses of the current system)

2.4 Others approach to solve the problem

Table 2.1 compares the others approaches to solve the problem



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk



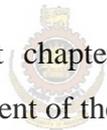
University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

SLSI being a state organization, has many budgetary constraints. Therefore, it has no strength to go for commercially developed products like what has been described in the table 2.1 because the development cost and maintenance cost are very high. Since the proposed system is developed by me without any cost, using an Open source environment, organization has decided to implement the software. Also the organization does not need to spend for maintenance requirements of the software

2.5 Summary

In this chapter it has been discussed about the existing system in details, problems and weaknesses of the existing system, benefits and features of having a computer based Entry processing system, specific features expected from the proposed system, comparison among other systems and proposed system and a justification of why the proposed software system was selected to be developed.

The next chapter describes the possible technologies available for design and development of the proposed software solution.



Selection of Technology

3.1 Introduction

The main focus in this chapter is to discuss the technologies available for design and development of the proposed software product. It will also elaborate why the selected techniques are appropriate to the proposed software process. In doing this project the selected technologies can be categorized into four major areas as follows

- I. Software process models
- II. Domain analysis and design methodology
- III. Modeling language
- IV. Development Environment

3.2 Software Process Models

As per Professor Ian Somerville; “Software process model is an abstract representation of a software process.” [16]

The importance of a software process model is to explain the approach taken to develop the software. Three generic software process models are

1. The waterfall method
2. Evolutionary development model
3. Component based software Engineering model.

3.2.1 Waterfall Model

In this approach, fundamental process activities of Specification, Development, Validation and Evaluation are taken as discrete phases.

The advantage of the waterfall model approach is the documentation it produces at phase and that it fits with other engineering process models [16]

The major disadvantage of the waterfall model is the difficulty in accommodating the requirement change at a later stage since the commitments have already been made at the early stage in the process. Therefore, the waterfall model is more suitable for the systems where the requirements are well understood and rarely change during the system development.