# A
# Systems Analysis
# And Design
# Reader

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# Dedication

This compilation of work is dedicated to my beloved mentor Brenda R. Ong. Without her guidance, this would not be a successful work until now she kept on supervising the proponent for this work.

Our professor Mr. Paul Pajo who is with us by the short period of three months, yet he show us how to be a true Benildean, by practicing our rights and training us how to balance the priority in life.

To my best friend Gelsey and Anthony, which I consider as one of my family. Thank you for all the advices and reassuring that I'm always fine.

# Preface

The first impression for System Analysis is Studying a whole system of a company of a program and it is very hard to do it. Honestly, I don't have patience in reading papers that have many pages. I'll just let somebody to read the paper work and tell me the summary and done I know what to say or to do. Since I took SYSANAL, my attitude towards to paper work has change, I have learned to love reading a lots of paper works under pressure time, reading papers works with out letting other read and giving the summary . This becomes my training ground of reading a lot of papers. There is something that I have really learned in this course, that everything you do has a consequence. This is a training ground for me who is very stubborn to read thick paper works and thick book that is related to my course and finally I can say that I have used the book of System Analysis and Design that was brought from other country for our very good reference in studying the course. I have learned to do some deep thinking for every Use Case that will come up many alternatives and analyzing the main frame of the system.

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# Book Reviews

## Chapter 1

Chapter one discusses the role of the information technology in today's business environment. Information technology has a combination of the software, hardware and the most important nowadays telecommunications systems. Under Information Technology, there is a role for system analysis that develops an information system for the stake holders to use to manage their business effectively that involves the usage of hardware, software, data, and people to support the company objectives.

As IT professionals, they must understand the company business operations so it can design a successful system.

 The job of the system analysis is to analyze the business situation and identify the opportunity for the improvements of   it and design an information system and also to contribute unique skills to improve the system at its best.

A work of a system analysis is just like building a house which follows a series of steps before it completes its final stage and to launch it to the stake holder to use it. To do it first you must build an idea or concept and then draw it so you can explain it further to the stake holder because some of the stake holder dose not know the language of the IT so for further understanding it must be drawn down, as to activity diagram that is a series of activity that it is in figure stick so it can be seen easily by the stake holder and at the same time it acts as guide to the system developer to create a good system.

To sum it up the System Development Life Cycle ha four phase:

1.) Planning
2.) Analysis
3.) Design
4.) Implementation.

## Chapter 2 (System Planning)

"This is the most important step of all steps"

The most important in the phase in the system development life cycle, is the phase of planning. Thus, it helps the stake holder to prevent the same mistake that had occurred in past planning. Planning helps the stake holder to do and achieve their goal further more than what is being expected at the end of the job and projects. It actually helps the people who are using the system to minimize error. But there are some factors that should be considered in planning a system.

These are some of the reasons to be considered in making a plan:

a.) to improve service to the customer or users within the company;

B.) to add information we should add information to the system so it can be functional and usable;

C.) to perform, sometimes the company should upgrade the system so it can work well and due to the company growth the company getting more company contacts;

D.) to control strongly, definitely all company wants to have a security among the users and the customers, to forbid the unwanted piracy of their old client and other usable information; and

 E.) to reduce cost, now a days it is not too expensive for a company to own a great system that can help them tract the users and customers , in this case it the system itself should work efficiently for the price so many stake holders want to purchase the system that you had made to the market.

After those, there are also some factors to be considered that affects the system project planning. There are two types.

A.) External Factor - is the people who are out of the company that we should set standards that also work and fits to them.

B.) Internal Factor - is the system factor that involves the user of the system of the company.

Under external factors, there are seven; these are:

1.) Software and hardware vendors, this shows that most of the company had a multiple system in this case the company should only have one system to operate so the user will not be confused in the User Interface.

2.) Technology is the basic force in the business market.

3.) Suppliers, toe worlds move on so if the more popular it is the many suppliers append in the market.

4.) Customers, it received the most top priorities in most of the firms.

5.) Competitors, this drives the stake holder to think many decisions.

6.) The Economy, consider the flow of the growth, volume of the economic expansion.

7.) Government, it has own guidelines that affects the design of the system.

Under internal factors there are four:

1.) Information technology department, many recommendations that came from the IT groups within the company.

2.) Existing system, not all system that is being built is perfect and bug free, so you try to analyze and debug it.

3.) User request, they rely on the IT to work for them.

4.) Top management directives, usually when top management has their decision they usually land at a decision to build a new system again.

In doing so, there are steps in this preliminary investigation to have a new successful system.

Step 1. Understanding the problem or opportunity.

Step 2. Define the project scope and constrains

Step 3. Perform fact-finding

- Analyze organizational chart.
- Conduct interviews.
- Review documentation.
- Observe the operational to have information.
- Make a survey to the people who use the system.

Step 4. Estimate the project benefits.

Step 5. Estimate the project time and costing.

Step 6. Make a result status and a recommendation to the management.

## **Chapter 3**

"It takes a good planning"

The system analysis has four activities, which are:

1.) Requirements modeling.

2.) Data and process modeling.

3.) Object modeling, and

4.) Transition to systems design.

Under Unified Modeling Language there are three types:

1.) Use Case Diagram, this diagram uses an interaction between users and the information system. In this case, the user becomes the actor with a specific role of on how the user will interact with the system

2.) Sequence Diagram, this diagram shows the timing of the transaction between the object as they occur. This shows the possible outcome of the scenarios and also the focus of the scenario.

3.) Functional Decomposition Diagram is the presentation of business function and breaking them into sub-level of function and processes.

In the requirements modeling there are some related requirements which is output, input, process, controls and performance, to satisfy the business requirements and expectation of the users. In line with in the Output must have some requirements:

➢ Which is inventory system must produce a daily report showing the part number, description, quantity on hand, quantity available and the cost per unit of all parts .

➢ The contact management system must generate a daily reminder for all sales representative

➢ Purchasing system must give updated suppliers specification.

> ➤ Sales must have fast tracking daily item report.

Input must have:

> ➤ Users must log in to the system.
>
> ➤ Every transaction must have date, time, product codes, customers identification code.
>
> ➤ Data entry screens must be uniform, accepts the backgrounds colors, which can be changed by the user.

Processes must have:

> ➤ The record of the transaction that can be access by the define user.

Performance must have:

> ➤ It can support many users simultaneously.
>
> ➤ The response time must not exceed four seconds.
>
> ➤ System must be operational eight hours a day, seven times a week and 365 days in one year.

Controls must have:

> ➤ System must have separate security system.
>
> ➤ The system must have a report of the error type that occurs in the transaction with in the day.
>
> ➤ System must provide log-on security at the operating system level of an application levels.

After those requirements, you should consider the Scalability to ensure that the system can support the future growth and the expansion of the system. Also estimate the total cost of the ownership. The Scalability is the means to adjust system capacity as a business change in the future. Fact finding process includes interview, documenting review, observation, questionnaires, sampling, and research. In this case it needs a good planning and strong intrapersonal and communication skills. The system analyst must find one or more software tools during the fact-finding to be helpful.

# Chapter 4 DATA AND PROCESS MODELING

"DATA FLOW DIAGRAM IS A TOOL KIT OR AID TO EXPLAIN THE CONCEPT MORE EASIER"

At the and of the chapter of Data and Process modeling, that shows how to construct analysis technique, by using data and process modeling to construct a logical model for function and information system of  a any size and level of the complexity. Data and process modeling has a three components, these are:

1.) Data Flow Diagram.

2.) Data dictionary

3.) Process description.

The data flow diagram shows the movement of the data in the information system. The four symbols which are,

1.) Data store, it stores the data which have been apparently being used and change or newly created that it is not in the system information.

 2.) Process Symbol, show how is the data being transform from one another to other system.

3.) Data Flow Symbol, show how the data are being moved .

 4.) External Entity, it represents someone or something, contrary in the use case diagram it shows the actor.

The Data flow diagram is a pyramid like with a context diagram on top. The context diagram shows the information system scope and its external connections but it is not an internal functioning diagram. The graph 0 displays the system information most important process data stores, and the data flow .

## Chapter 5 (Object Modeling)

"The UML is widely use in information system for documentation and prediction of the system."

Unified Modeling Language (UML), is being extensively used in envisaging and documenting an information system. The UML system includes; use case diagrams, class diagrams, sequence diagrams, state transition diagrams and activity diagrams. Under Object-Oriented, there are some terms and concepts which are:

1.) Objects

2.) Attributes

3.) Methods

4.) Messages

5.) Classes

The UML is represented by a rectangle object at the top of the rectangle; there is an object name and followed by objects attributes and methods.

Attribute is described by adjectives that depict the feature of an entity, an object that portrays the objects, existing status. Methods, is an object that can be carry out, it is describe by verbs, by what and how does the object do it. A constructor scheme is a scheme that creates new objects. Query scheme this provides the information on an object aspect. Message is domination tell objects to do assured method. Classes, an object that is in the right place or category that is class, in this case class can be regrouped into subclasses. Object and classes, this enable the object to correspond and interact as they do the business function and transactions, that is required by the system, this shows that an object need to know about each other that corresponds to the alter in the other objects and the effect of membership in the classes.

Here are some new terms that identify the role of the happenings inside the UML.

1.) Dependency, which an object must inform one another to function well in the UML.

 2.) Association, this is more powerful than dependency because it is more uniform.

3.) Aggregation, an existing relationship of objects starting a part of another object.

4.) Inheritance, it allows an object to obtain one or more of the attributes from one object.

The Object modeling with the Unified Modeling Language, it is a guide that will help you to develop and document a system. There are six possible diagrams can be used in documentation, each diagram has each characteristic and expertise area.

These are:

1.) Object relationship Diagram.

2.) Use Case Diagram.

3.) Class Diagram.

4.) Sequence Diagram.

5.) State Transition Diagram.

6.) Activity Diagram.

An Object Relationships Diagram shows the object and how its interactions to perform business functions and transactions. A Use Case Diagram shows a visual summary within the system and subsystem. A class diagram is a detailed view of a use case, which shows the participants in the transactions and the relationship of each class. A Sequence Diagram is a vibrant model of a use case diagram showing the interaction within the classes during the specific time; it includes lifelines, messages and focuses of a subject. A State Transition Diagram display how the item changes of a state from one to another varied on the events that affects the mechanism. An Activity Diagram is in a horizontal view, showing the flow charts that display the action and the event of the system.

## Chapter 6 (Transition to Systems Design)

"It describes the activities in the system analysis phase which evaluates the alternative solutions, preparation of the system requirements in the documentation and presentation of the system."

 Evaluating Software Alternatives

Preparing for the transition to the systems design phase, it will examine software alternatives and select an overall strategy for the proposed system. Most important software are:

1.) In-house system

2.) Software packages

 3.) Customize software packages.

Under In-House developing software, many business operations choose this kind of development because they satisfy their business needs. There are also some reasons; such as satisfied unique business requirements, it minimizes the changes in the business function and policies. Meets the constrains of existing technology and develops internal resources and capabilities.

Software Packages, this kind of system is available anywhere commercially and this kind of software satisfies only the needs of a system, it is most useful of all systems in software packages because it is cheap, less time to implement and effective performance. The upgrading of the system is given by the dealer itself, and lastly this kind of system it is very common on all of the companies.

Customizing Software Packages, this package finds a way that will make you satisfy by your specific needs and requirements. It can be developed on your own package.

There are 5 steps in evaluating and purchasing software packages.

Step 1: Evaluate the information system requirements. It means that 1) you should identify the key features of the system that you need. 2) Estimate the volume and future growth. 3) Hardwire constrains 4) a proposal for the person in charge.

Step 2: Software Vendors Potential.

Step 3: Appraise the software package alternatives,. This would help you determine the possible software to select from. Under this case you should consider some factor.1) Existing software 2) testing 3) benchmarking.

Step 4: Do a purchasing.

Step 5 Set up the software.

After setting, up you should do an evaluation to the system.

Under the transition of systems design, there must be completion of system analysis which composes of two things.

1) System Requirement Documents

2) Presentation to management.

Transition to System Design, there is two important category

1.) System Design Overview.

2.) Relationship between analysis and design.

Prototyping

This is a fast constructed proposal in the information system, the proposed of the prototyping is to view the user requirements and after which it will be discarded for information and update purpose.
The approaches to prototyping are
1.) Planning,
2.) Analysis,
3.) Design,
4.) System prototype and
5.) Implementation.
 The reason why many programmers use prototyping is to avoid the misunderstanding, to create a output of the system, to be evaluateed the system easily, so it can be tested develop more further and also to reduce financial exposure for the system.
Under prototyping there are five tools that they usually use
 1.) Case tool,

2.) Application,

3.) Report generation,

4.) Screen generator

5.) Fourth generating languages (4GL), this combination create a fast and effective software.

Overview of Systems Design

There are five major components

1.) Data,

2.) People,

3.) Hardware,

4.) Software

5.) Processes.

There are some considerations in the system, first is the system user friendly and acceptable to the user. Second, do the data have guidelines; like, data should be enter only once, edited or changed entry should be accessed and controlled, data duplication should be avoided and many cases should be consider. And finally, there should be consideration on the processing. And the last step in System Design is using codes, there are eight types for making code or to let them generate.

1.) Block sequence, a codes using blocks of numbers for different classification.

2.) Sequence code, are numbers and letters assigned in a specific order.

3.) Alphabetic codes use alphabet letters to distinguish on items.

4.) Significant digit codes, it is a series of subgroups of digits.

5.) Derivation codes, different attributes or character to build the codes.

6.) Cipher codes, used a keywords to encode a number.

7.) Action codes, state that what action is to be taken in the item.

8.) Self Checking codes, verify the validity of the codes.

# Chapter 7 (user interface, input and output design)

"The user interface, input output design is the design in the business requirements."

The start of the SDLC is the user interface, input output and output design of the system.
User Interface Design
It requires a human understanding on computer interaction and a user-concentrated design principle.
Human-Computer Integration, this describes the relationship between the user and the computer to perform business task. This includes all communication and instruction to the system, able to sustain output in the display screen or printed reports.
Use – Centered Design Principles
There are eight principles:

1.) Understanding the underlying business function- know the business function how the system support the individual, departmental and the enterprise goal.
2.) Maximize Graphical Effectiveness – the graphical user interface allows the user to communicate with the system.
3.) Profile the system's Users – the user experience, knowledge and the skill level of individual users.
4.) Think Like A user – see yourself as a user.
5.) Use prototyping – this is when he/she interacts with the system this must contain feedback as much as possible and it is not complicated.
6.) Design A Comprehensive Interface – it has all tasks, commands and the communications between the users and the system.
7.) Continues Feedback Process – it has a monitoring system usage.
8.) Document Interface Design – all design should be documented by the programmers in able to have a reference in the future.

User Interface Guidelines
1.) Focus on basic objectives.
2.) Build an interface that is easy to learn and to use.
3.) Provide features that promote efficiency.

4.) Make it easy for users to obtain help or to correct error.

5.) Minimize Input Data Problems.

6.) Provide Feedback to users.

7.) Create an attractive layout and design.

8.) Use familiar terms and images.

Input Design

The six main objectives of Input Design.

1.) To select a suitable input and data entry method. -  It is how and when the data should enter the system.

Two kinds of Input

    1.1)    Batch  Input

    1.2)    Online Input

2.) To reduce input volume. – This is to avoid unnecessary labor cost, get a data into a system quickly and decrease the number of error.

3.) To design attractive data entry screens. – restrict user to access locations where the data are entered.

4.) To use validation checks to reduce input errors. - reducing of input errors to improves data qualities. There are eight data validation check to improve the input quality.

    4.1) Sequence Checks

    4.2) Existence Checks

    4.3)  Data Type Checks

    4.4) Range Checks

    4.5) Reasonableness Checks

    4.6) Validity Checks

    4.7) Combination Checks

    4.8) Batch Controls

5.) To design required source documents. – This kind of data is a form used to request and collect input data, trigger or to authorize a input action and to provide a record of the main transaction.

6.) To develop effective input controls. - This a step to ensure that the input data is correct, complete and secure.

Output Design Issues

Before doing an output design there are several question you must ask.

1.) What is the main purpose of the outputs?

2.) Why the information need, who will use the system and who want the information?

3.) Is the out printable, can only being viewed in screen or both?

4.) How the information will be updated?

5.) The confidentiality and the security exist in the system?

Six Types of output

1.) Internet – Base Information Delivery

2.) E-Mail

3.) Audio Output

4.) Automated Facsimile System

5.) Computer Output Microfilm

6.) Specialized Forms of Output

Printed Output

There are three types of printed output

1.) Detail Reports

2.) Exception Reports

3.) Summary Reports

Under printed reports there are users involvements there are six important process of information.

1.) Report Design principles

    1.1)    Report Headers and Footers

    1.2)    Page Headers and Footers

    1.3)    Column Heading Alignment

# Chapter 8 (Data Design)

"This enables you to construct a physical model of the information system"

Data Design Concepts

This shows that how the data are structured and their characteristic of file oriented and the data base system.

Data Structure

These contain things/objects that interact with the system. File oriented system process refer to file processing. Database has linked data it also referred as tables, database management system work is to add updates, manages access and enables to analyze data in data base.

The overview of file processing

This is a structured data that are being handling by large volumes of data for file processing; there are six types of files.

1.) Master Files – store permanent data.

2.) Table Files – it is a reference that is being used by the information system.

3.) Transaction Files – This stores an everyday business / organization transaction data.

4.) Work Files – This is a temporary file that is created for a single day.

5.) Security Files – This file is a back up files and recovery files purposes.

6.) History Files – These kind of files being copied and created and save for historical or archiving purposes.

The overview of database system under sales and marketing database. There are five separate information that is connected with sales and marketing database.

1.) Sales Forecasting System

2.) Inventory Management System

3.) Production Planning System

4.) Accounting System

5.) Order Entry System

There are ten specific DBMS advantages.

1.) Scalability – this can be downsize, expanded and modified easily.

2.) Better support for client/server system - this shows the distribution of the system, power and flexibility of a database design.

3.) Economy of Scale – it allows better utilization of the hardware.

4.) Sharing odd at a – can share data across the enterprise.

5.) Balancing conflicting requirements – to maintain all the data of an entire organization.

6.) Enforcement of standards – make sure that the standard operation procedures are being followed throughout.

7.) Controlled redundancy – it has only a single database in case a redundancy of field there must be a valid reason for it.

8.) Security – only authorize user or person can access the database, each user has a different user levels of access.

9.) Increased programmer productivity – programmer developed a good structure that concentrate in logical system.

10.) Data Independence – how the physical data are being maintained.

However, DBMS required powerful expensive hardware, software and data networking.

DBMS Components:

- Users

- Data Administrators
- Related Information System

Data Manipulation Language (DML) - This enables retrieving, updating, controlling database and storing data.

Schema – the relationship of complete database, records of a system.

Data Warehousing – this data can support management analysis and decision making.

Data mining - the software looks for meaningful patterns and relationships among the data.

Data Design Terminology

There are four categories:

1.) Entity – where the data are being collected and maintained such as person, place, events or things.
2.) Field – it is same as attributed.
3.) Record – It is a set of related fields that describes one instance or number of entity.
4.) Field and table – these are records are grouped into files of tables.

Key Fields – this to organize access and maintain data structures. The four major key fields are:

1.) Primary Keys
2.) Candidate Keys
3.) Foreign Keys
4.) Secondary Keys

Data Relationship – this shows a link between the entities on how they interact.

Entity Relationship Diagram (ERD) – this model shows the relationship among the system entities. The three entity relationships are:

1.) One – to – one
2.) One – to – many
3.) Many – to – many

Four major steps in making an entity relationship diagram

1.) Identify the entities
2.) Determine all significant events, transactions or activities that occur between two or more entities.
3.) Analyze the nature of interaction

4.) Draw the ERD

Normalization – identify and correct inherent problems and complexities in a record design. The three steps are: 1.) first normal form, 2.) second normal form, and 3.) third normal form.

Record Design – this is an easier phase that used to show recorded structure, fields and primary keys.

Steps in Database Design

1.) Create the initial EDR

    1.1)    Review the DFD and class diagrams

    1.2)    Create draft of EDR

    1.3)    Analyze each relationship to determine if it is 1:1, 1: N or M: N.

2.) Assign all data elements to entities.

3.) Create 3NF design for all records. By taking care to identify all primary, secondary and foreign keys.

Database Models

1.) Hierarchical and Network Database

2.) Relational Database

3.) Object  Oriented Database

Data Storage

1.) Logical and Physical Records

2.) Data Storage Formats

3.) Data Fields

# Chapter 9 (Identifying Boundaries)

Identifying Boundaries

Finding out what things are inside of the system, and what are outside of the system.

Identifying Actors

Actors are always external system. It is never be a part of the system.

Here are some question might help to identify the actors:

1.) Who use the system

2.) Who maintains the system

3.) Who install the system

4.) Who shut down the system

5.) Who gets information from the system

6.) Does anything happen at the present time?

Identifying Use Cases

Use Case, is a behavior of the system that produces measurable results of value to an actor.

Describing Actors and Use Cases

Each actor and use case needs a descriptive name and a brief description that is included in the use case diagram.

Handling Time

Two types of handling time

First method, treat the time as an actor.

Second method, handling the time is to treat is as a part of the system.

Potential Boundary Problems

The actor is really a part of the system. If ever you find a new requirement as you go over the process in identifying actors and use case, here are some guide questions will help.

- Are these requirements necessary for the system?
- Are these requirements something the system would logically do?
- How do the new requirements affect the current risk analysis?
- Are those requirements something our customers would expect the system to do?
- How dohese requirements differentiate the product in the market place?

It is very difficult to define a clear boundary of a system.

# Chapter 10 (Application Development)

"This process is constructing a necessary program and codes module that will be implemented in a new information system."

Quality Assurance- this is to detect the product error and detect them soon, an International Organization for Standardization (ISO). This is a standard procedure among big companies to put their product under ISO certification, because they seek assurance that their product have passed the quality standard.

Structured Application Development- creates a module that performs specific task and functions.

1.) Structured Charts – This shows the relationship among programs.

    a.   Module - a rectangle represents the module.
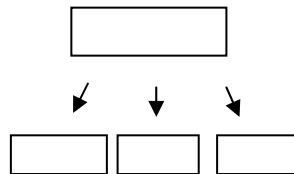
    b.   Data Couple- an arrow with empty circle represents the data couple.
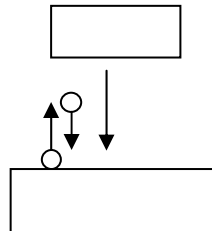
    c.   Control Couple – an arrow with filled circle that represent control couple.
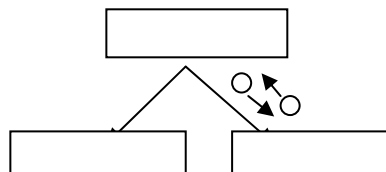
d.          Condition – a diamond with a line that represent a condition
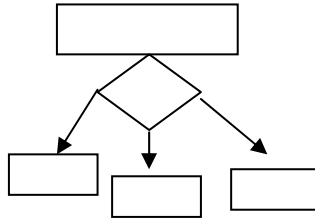
e.          Loop – a curved arrow represent a loop.
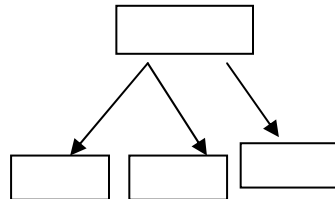
2.)          Steps in Drawing a Structured Chart

    a.          Review the DFD's and object model

    b.          Identify Modules and Relationship

    c.          Analyze the structure, Chart, The DFD's and the data dictionary.

3.)          Other Application Development tools

    a.          Program flowchart

    b.          Pseudo Code

4.)          Coding

5.)          Object-Oriented Application Development

    a.          Overview of object oriented application development.

    b.          Implementation of object oriented design.

6.)          Testing the application

    a.          Unit testing

    b.          Integration testing

    c.          System testing

7.)                    Documentation
  a.        Program documentation
  b.        System documentation
  c.        Operation documentation
  d.        User documentation

8.)                    Management approval

9.)                    Software, Limited
  a.        Mainframe Interface
  b.        ESIP Server
  c.        Completing Application Development


# Chapter 11 ( Dividing Large Systems)

"Every system must be distributed so it is not hard to be identified."

Architectural Pattern

- Three- Tier Architectural Pattern- one pattern holds the user interface, then the other one hold the business ruled and last pattern hold the data base.
  This kind of system approach is good if the system have included a consistent look across all the functions, one data base that is being used by everyone and most of all having a consistent set of business processes.
- Pipe and Filter Architecture Pattern – this is a type of a pipe that one piece input same data; transform it and a few output from it.
  - Each piece is a dependent piece they don't know each other.
  - This kind of system is a god whenever you want to delete a flexibility among the system , if you want to add and delete I a system it  will not affect the subsystem
- Object Oriented Architectural Pattern -  the relationship are more flexible than the other two patterns, once identified the subsystem can work for the

system, this will approach emphasizes the dependencies between the piece of the system while showing each functions as a separate .

Testing Architecture with Use Cases

By this time you could identify clearly, what are the basis subsystem for the system. Four things that you could do a test that the architecture is defined is correct and it is working on the system.

1.) A single functionality
2.) Strong (internal) cohesion – part of strong relationship to each other.
3.) Loose (external) coupling doesn't depend too much on other system to get its job done.
4.) Minimal Communication to other subsystem – it doesn't talk often back and forth with the system.

Sequence Diagram

This diagram represented by actors and subsystems and how the behavior of the system as message between two subsystem.

Defining Interfaces between Subsystems

Previous system can show other subsystems, in this case we drew arrow to show relationship existed but also need to record what actual operations are. It introduces a new notation for interface.

Subordinate Use Case

A rule in use case is that in any particular Use Case must be contained completely in one system or subsystem.

Creating Subsystem Documentation

Each system has an actor and use cases; therefore, you can create a use case diagram for each subsystem. Detail the steps of each of the subordinate of the use case.

This use case has alternative paths activity diagrams and story boards for the interface.

Each subsystem is treated as complete system.

## Chapter 12 (Constructing and delivering A System)

"Abstractions are things that are important and meaningful in the system."

Key Abstractions of the Domain

Key abstraction, are the things that we use in our order-processing system. The domain is the subject area you are working in.

Example of Domains.

- Mail order companies
- Satellite communications
- Voice messaging
- Accounting
- Hospital administration
- Machine controllers

Diagramming Scenarios with Abstractions

To have diagramming scenarios with key abstractions, first start very simple sequence diagram, replace the system object with key abstraction. Key abstraction is represented by objects on the sequence diagram.

The iteration schedule:

- Look on the plan; know how long you have built it.
- What you are going to built.
- How you are going to test it.

Delivery and beyond

This phase shows that the system became a product. Things created in transition phase.

1.) User guides
2.) Training materials
3.) Sales kits
4.) Demos
5.) Marketing plans
6.) AD Campaigns.

# Case

# Studies

# Unit II
# Case Studies

## Max Levchin (PAY PAL)

Here are the three things that you can learned in the story.

First, there is a non-stop learning. In this field of the technology because in every move we take there is always new paradigm , so we can't pretend that we can easily learn from  it especially that involves technology because this kind of things involves many things and a lot of attention and analysis before you could get the expected result.

Second, good team. To complete a good project first you should have a good team that helps each other, they should never pull each other down, whenever there is problem within the group they are ready

Third, Sub divide and make small units and give power and responsibility. In this kind given task to them they would accomplish things according to plan and responsibly.

## Sabeer Bhatia (Cofounder, Hotmail)

First, in a start up business there is always a money shortage. Until in the long run if the business was establish well enough that's the time the company will earn million of bucks, but it it's not that just easy you will encounter many hard things and problem to solve first before you could get this million or billion bucks of dollars.

Second, first hand on experience. This comes in where before you become a CEO and other higher official in the company you will experience first the lower staffing and all this all staffing was done by yourself.

Third, there is no business plan that was recorded or wrote down for them able to guide them throughout the business years.

### Steve Woziak (Apple Computer)

Even you are not graduate of an any technology course you can make your own dream happen, it does not acquire a good school degree to built a super PC that will sell in the market and lead the technology evolution, even you did not go to school for a formal education you can do it , if you have the great passion on creating something and spending the most of your life doing something that you want.

Having no choice to choose from the decision, it will come out naturally a new hot idea that was never done before and that will be develop by the company and later part that it will sell in the market with a high demands on it, and want to make people to crave for more for their needs and had no satisfaction and earn a thousand tons of money that will funded the next project.

Even you don't have a big capital to start a business by budgeting and making some stuff working on it, you can have funds to make your own little business to start operating and make it big and sell into the market that people will adopt and start to purchase them.

### Joe Kraus (Excite)

Things do not happen the way we have thought, Sometime we don't expect the unexpected things to happen in our life and the way we plan them, when we will execute our plan that we have it before we do the actual, it will not work according to it but instead it will go other way and have a new direction and better  results that we will be more happier than we have expected to happen in our life.

### Dan Bricklin (Software Arts)

The very simple teaching in our life by the most successful entrepreneurs or the tycoons, if you don't have the guts to gamble you will not get something out of it for a long time. Know how to gamble and take the risk foe it will take a good result if you have good gamble skills and know to play and timing when you will gamble big and when is the time

you will play safe on the situation. IF you don't play by the rules you will be dead meat by the time you discover your errors in life.

## **Mitchell Kapor ( Lotus Development )**

Create something that you want and also think that what people want. This is a basic step for a company to setup a plan of product. Sometimes we create things unintentionally useful to us but in the latter part when some of or perks/ friend saw it and its attractive they would also grab one so in this case you create a market in a simple way but very powerful . What I mean is you create your own things so basically you used them and you have the for it then suddenly your perks saw that you are using a unique UI or software they also want to get one, so now you will tell them where you gat it so in that simple scenario you easily creates a small market but in the later part let the news spread naturally and boom! Your creation will hit in the big market selling.

Make a sense of a business product line and innovative product. Lets say Yeah , sure you create a product for you it has sense but if you look in the other paradigm for a business function use it will not be useful as use see them. In creating a product you should have broad of thinking, a deep analyzation of what people really want in this world that if you create it they would be selling for a million of copies.

Committed and believe in what you're doing or creating. In this kind of attitude surely you will create a good stuff or product that will deal people to crave for more and more for good production and more new UI to be created. Remember if you create something with out passion it will not be successful and of course without passion in the work there is no commitment will be made or be shown.

Be passionate, committed and believe in what you're doing or creating. In this kind of attitude surely you will create a good stuff or product that will deal people to crave for more and more for good production and more new UI to be created. Remember if you create something with out passion it will not be successful and of course without passion in the work there is no commitment will be made or be shown.

### Ray Ozzie (Groove Network)

It is true that it is hard to sell new technology in the market. If people usually don't know what is the product all about and were does it came from. The people wont but it unless it was advertise by a famous people or it was tested by many people in the industry.

Never say to the people that you are doing for the money. In this case if you really told to every single person whom you talk to , they might think that your world revolves around the money and you are not happy if you don't make million or billions or even tons of money, for you to leave in this world. Because everything in this world igt is just temporary that GOD lend it to us only, the only thing we do is to preserve and took care of it.

### Evan Williams(Blogger.com)

When time come that all people left you alone don't feel that the world is going to end. This is only a test that up to what limitation that can you go, or are you going to surrender for it and tell the whole world that you are a looser after that things and the days have passed that you have done to the project and put all your life and money in a project. This serves as a good lesson that people should not loose hope if incase all the people surround you have trust then suddenly by faith they will have no trust in you and choose not to believe in you because you can't things make it happen just the way they would want to happen.

### Tim Brandy (First non-founding yahoo employee)

Always write a business plan, this is the basic step in the business to be able to function well and to do the desire goals of an organization, and also to have the desire output that they have imaginably been thinking before starting a startup company. I believe that without the business plan the organization will not have a successful output and they will be lost during in the game of the business. This also include 1) the lay-out of business domains and their assigned business activities and added value. 2) The business functions and business concepts that these business domains need to perform their assigned business

activity. 3) The high level business processes, which shows how these domains work together to achieve the organizational goals and strategies. Such business architecture shows higher level management how their strategy will be implemented in their corporation.

Strategic risk, a risk of a business in an operational and it's a form of a practical implementation of the management's strategy. There are some factors: Equity risk, or the risk that stock prices will change. Interest rate risk, or the risk that interest rates will change. Currency risk, or the risk that foreign exchange rates will change. Commodity risk, or the risk that commodity prices (e.g. grains, metals) will change. Credit risk or the risk that credit prices/ spreads will change.

Think of the possible problems, of course you want to create something you must first think that what people really need in life, can it make life easier?, can this be user friendly?, can it be product of the masses? , it is cheap enough the piece that I will sell to the market? , and there are more possible problems should be thinking of before making a product and sold them in the public. Of course you should think like the way people brains or at least create a thing that that you really think that it is possible for people to absorb them quickly.

## Mike Lazaridis (Cofounder, Research in Motion)

If you have a company, do not always relay on your staffs or your business associates to do the marketing for you and your company to survive the phenomenon or to sell the product. You should have your own strategy or gimmick on how to sell your product on market effectively, use your contact person that you think can help you establish a market and help you to sold the product, it is not bad to ask help from a friend. May be this is the turning point of your startup business became a big corporation in the later time.

Perseverance, to do things with high pride and honor. Have a good energy to do things, if you have determination to do things, surely you will overcome all text that comes to your way, a good determinations in one company always win the game and has a good results at the end of the long term goal.

## Arthur van Hoff (Cofounder, Marimba)

It is really a though experience to have a startup with no experience at all, because if one step of your move is wrong the next thing will happen all wrong it is like a domino effect. In now generation or time it is not effective anymore to start a startup company without any basic knowledge about business ethics and business policies " do's and don'ts " of a one company, because now a days we live in a trickery world, many people want to scams, tricks, fraud and many other illegal stuffs that surely will affect your business.

Managing people, it is not easy to manage people in a company, because every people have many different types of perspective in live and outlook in life so the way they work they have different habit that for some people it is hard for them to adjust, and there are some people who can adjust easily, and some people is in the middle, and lastly is some people doesn't care at all for their work, so in this kind of case there a manager should have a good personality type that can adjust easily to every person that he/she is working with and it has a good sense of leadership that drive the staff in good condition to let the company raise and have a good gross income sales.

## Paul Buchheit (Creator, Gmail )

A little project way back many years before, became a big project that many people right now is recognizing in the web because of the certain feature that is not available in the other network of engine that people are using.

To be able to have a successful project one must finish the first project before entering a new project , even you have many people to work with the project you should think first the capacity of a people if they could do many project at the same time , I believe that people is not a multi tasking so they as a human they will also have an error in doing a task, to prevent this one must plan the project then execute it one after one task is done.

It takes much work just to deal with the growth and improvements of a company. It is not easy to do a certain things in just one snap and it is done and it will be very successful. Every time we do a work we should plan it very well and have an alternative solution if incase the original plan was not execute properly there is a buck up to do it.;

It take more than a luck to built something that is successful, sometime we do it properly and do it according to plan and it is successfully done and have launch it to the public and to the media, but not all the product people will use it and became the favorite of the masses of the people who are in the certain community that are connected in something that your are developing more do be more functional. It is very seldom for a product that to be famous and be the top list of the category which people always used. In this case the g-mail became a good service product because many people are using g-mail world wide and being recognized by many people.

## Steve Perlman (Cofounder, WebTV)

Every time we built a company 1$^{st}$ thing that we see to it that we as the creator of the company should get along well, because there is always a big decision that might come not now but in the future it will come and it will affect the relationship of the each other as a friend and as a professional in the business. If you think that you can't risk your friendship at the future if ever there will be a big problem don't do it if you really treasure the friendship much.

If you are handling a company be sure that you can manage it well enough that every problem that companies encounter you can solve and attend to it. And you should have an alternative solution for it and you can also think fast under the pressure for you can save the company from the mismanagement of you as a cofounder.

For a business to function well it will not only need a good management, cofounders get along with each other but with out this the business is nothing and it can't move and be successful, funding is another key that is very important to a business function , one must

have a budget editor for the funds will not easily spend on the projects and other stuff, it should have and auditor or an budgeter to do it so the funding will not be easily be gone. For one, the company can survive what ever problem came along in their way. Two, that they have funds if ever they need to buy some things that they need in the projects. Three, so the company could be effective and efficient in the market.

## Mike Ramsay ( Cofounder, TiVo )

You should not give up easily along the way in the process of the problem that you and your company encounter because in every problem that you have encounter along in the process of the success think that it is a challenge for you and your company, so you could see up to what strength that I can hold on and do a reverse strategy to win the game. If you give up at the middle of the game people will think that you are weak and you are such a loser in the face of your employee. Do no let problems affect you decisions and future plans to be done , if you take your problems as a big challenge to the way of success for sure if the problem come again you will not easily be down because of the problem but instead you will fight and crave for more.

In doing a business you will encounter a business rivalry in the market in which what you are doing ever since you will have a competitor in the business market it nice to have a rivalry so you have the capacity to create something new that your competitors don't have yet so if you launch in the mark it will be seller and you will having a high income of the month so in this case the other company will revise and do the same thing that you have launch but in a better version that it has an additional features. It is nice to have competitors in the market because your imagination will become wild and will create something that is very extra ordinary.

## Paul Graham (Cofounder, Viaweb)

Originally the idea was making all the art galleries online. They make the life in the market easier when it comes to marketing strategy on how to sell the company product. Soon the program was successful and it has a high demand on the market so many people want it.

How to deal with customers is one very important aspect in the business world. If you don't have a good customer relation, you will not gain customer satisfaction and you will have no customer returning in your company to order the product that you are selling.

Telling the truth is one big best part in a service provider, but under these circumstances you don't have to remember and make a note to remember on what you've said to the customer and this also makes a new customer relationship.

Making a product you should make a profit out of if, but remember if you have a profit of 20-40 percent in your capital you must be satisfied because if you will sell your product and you earn 100 percent of you capital , the selling price is too high and no body wants to buy a product from you anymore.

Make things according to the user satisfaction and will definitely make them happy.

## Joshua Schacher (Founder, del.icio.us)

Make thing not in a hurry mode because if you make things in a hurry all the important details you will miss it. And you will start from scratch. Only this will work for many months but sometime it will work for a year to make the goal.

People who understand how the system work will surely understand it for better if they in a situation at the same time it is a challenge for them to surpass it.

Responsibility is one big important in a mans life, because all people can't live with out this kind of character, the character of responsibility. This character will teach you on how to deal with many important things in life and help you to organize the important work to the least important. This will also strengthen your character.

## Mark Fletcher (Founder,ONElist,Bloglines)

If you have many problems to deal in a day, make an outline list for your priorities for the day, and one by one solve them carefully, but before that you must sort what is the very important things to do.

Start up is one big responsibilities in life, if you are making or planning to start one start up company , make sure you do it at the life bracket of bachelor and no family because this is a big responsibilities and if you don't take care of it you will lose it and all your effort will be gone.

If you have a certain product you must release it n the public as early as possible because in a business market, they will not wait for you when you will launch your new product and the stuff that will make the business market index rise and make the country have a high gross rate income and high GPD index in a year. In the business world is like a war you should know how to strategize for your product will we easily sold out.

## Craig Newmark (Founder, Craiglist)

Always be open to the possibilities of a new suggestion in your group or to other people, don't close the door you'll never know this might be the stepping tone of having a good start up or a career or a shinning of your works. Not all beautiful things may come from you, because all people have different ideas and taste when they are purchasing things.

A start up company is a great idea to ear your own money and also to have a own company to manage but it take with a great ideas in the long run to run it smoothly and be alive in a competitive market. In the long run your company that was run by a VC's money will become a corporation and the other source to make it alive, so you should make a competitive product that will last in the market.

Sometimes you should listen to the lawyer when it comes to legal matters, because we or the company hires lawyers to seek for advice for legal purpose and not all things you think that you know will work on your own way, sometimes it is better to ask lawyers to work the stuffs for you even it takes time. In this kind of situation you will avoid mistakes and less lawsuits case.

## Caterina Fake (Cofounder, Flicker)

Expect the unexpected things will happen along the way in the original plan that you have made and that will be persecuted. A real plan was executed later but it will change direction. Since they want to develop instant messaging gaming, but it went out of plan thus t became photo sharing to a million people around the world. From this case, whole things came and became surprise to them, and became the most popular site as of now in the world of sharing millions of photos that is moment of life.

It is not bad that women working on a big major project that in the future that people will use on. I believe in the power of women because when the women work in a big project they will work naturally without pressure in life and they can work things according to the plan and they also give beautiful ideas in life.

Brewster Kahle ( Founder, WAIS, Internet Archive, Alexa Internet)

Going to be broke is one of the toughest problems that a start up could encounter. In this way all people will panic because they will find a new VC's that will trust them and make a investment that is worth for them to have it. Now days it is not easy to have a VC to invest in a start up company because there are a lot of scams that are spreading.

I have discovered that they built a site that make a ranking according to the users demand in the internet world. This is a good start up because this site can't be monopolize by anyone elese.

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## Charles Geschke (Cofounder, Adobe Systems)

The Founder of the Adobe System is Charles Geschke, and the co-founder was John Warnock. They are trying to develop a retails sales channel to the people. The main reason they did this star up because their idea of making a computer could talk to any printer it will bi after in seven years before it will be launch, its quite a long time to wait, and one day John said he will find a way to do the idea to start their own business.

The motivation was the frustrating of waiting with in seven years before they could launch their project in the market. He start up addressing that they should write a business plan that focuses on providing what customers want. That they have developed a system that change the point of view of the people in the market and make the people hunger in the product because it is cool to deal with. The founder built the thing called PostScript shortly after they started their own business; it is the product of a laser printer that can print ten pages in a matter a minutes or less.

In the history of the internet the big impact of a start up was able to build a printer that made the life inside of the office faster and easier. There is no start up that influence their start up because it only lies in the story of frustration that if they developed a product under Xerox company it will we launch after seven years, that moment of frustration made them to decide to start a start up company.

The approach of the system has done before because Xerox company was building a printer but he was task only to developed a new product that can get the attention of the people when it launch in the market. The startup was as proposed system , the existing system was the which manufactures and sells a range of color and black-and-white printers, multifunction systems, photo copiers, digital production printing presses, and related consulting services and supplies. If I would be the co founder's shoes I would also take a risk of getting out of my job and do the thing that I want to and developed it. Yes, The startup would be possible in the third world county.

I have learned in this story that it is not bad to have an advance thing, a thinking to a future can make a huge change and success to man's life.

## **Ann Winblad (Cofounder, Open Systems, Hummer Winblad )**

The founder of Open Systems, Hummer Winblad is Ann Winblad, she founded the Open Systems that started in 1976. Her success was starts because of a small project, She was chosen to do a project of a student accounting for a vocational school in Minnesota, which she developed an accounting system. She works in Federal Reserve Bank, while working in the morning she is studying at night. They worked with a language vendor that they Originally Equipment Manufactured, so they sold their product with the helped of an interpreter for them not to have contact with Microsoft's little languages. I think people used the service of the startup was the automated accounting system which made their work easier. People would also want an automated accounting because it is very hard to do an debit and credit of a corporate company report and the other stuffs that deals with the mathematics methods. There was a big impact of the startup in the market. The startup was influence, when she borrowed 500 dollars from his brother and also the advent of the microprocessor and the first affordable PC.

The unique about this start up was she was able to give a price on hand to the investors that they give to her and it was a good timing for her to do the project with the money on hand. Because turning point, is when their office in an apartment building had been in fire because of faulty wiring they sold the Open Systems for about $15 million and in 1989; and she did again, she co-founded a venture firm that focuses on software which is the Hummer Winblad.

 I have learned in this startup that in the actual field all the theories that are being taught in the schools are not always applicable in the true life learning. Do not under estimate the woman because women can also prove that there is a thong worthy out a situation and they can also do a thing that men mostly can.

## David Heinemeier Hansson (37 Signals)

This is a company is a  web design shop, and founded by Jason Fried. This company is consulting and from consulting it went to a product company that creates the Base Camp. They built the base camp by having fist the audience and then the next move was to figure out what product that will suits the client. The purpose of Base Camp is to help their client in dealing a project faster and efficient, and also they have a lot of client they want to lessen their work so they develop this kind of system.  And after the Base camp Project, they saw it was a successful project they  crated Ruby on Rails. He created the Ruby on Rails and headed the project. Ruby on Rails become famous tools among the web developer, he won the award of The hacker of the year at OSCON in 2005. Base camp was created on their vacant time, this application help to manage the work of their client.  While doing the project of Rudy on Rails at the same time he is studying and finishing his bachelors degree.

Before they landed at a successful stories they had made a huge mistakes, the things that I have learned in this story is you don't have to be a founder of a company to create a good project that will change the industry.

## Philip Greenspun (ArsDigita)

ArsDigita is founded by Philip Greenspun in 1997, Started at 80's, he started to do an internet application. He is a multi-user application and taught to connect people all over the network and it would be the best usage of the computer system. Taught he needs to build that is on the server side and it will just be implementing by browser where there is many users. Philip's mentor skilled to do things that have a great aspiration on it and a thing that he is craving for it. While driving in Alaska and he wanted to send letters to his family and friends that he had composes right then and there. When he came home he put all the

emails in HTML format and scans all the photos and put them in all website for his friends to see it. Then, he decided to do a public exchange with server, at the later part it became an online community of photographers. So the community had progresses he did not stop there, he write many software so it can be more manageable. He creates a toolkit for his own use. He starts to name this program ArsDigita Community System. This is the climax of the story where many big corporate companies are interested in his product and wanted to be his partner. They got all big companies like Levi Strauss that let them built whatever they want and they have a big budget for it. The most tragic event in this is when the VC's fired the founder of the company for them able to take over the whole emerging successful company but that success did not prolong after how many year the company was abolished and this finish the race of the ArsDigita in the market.

## Joel Spolsky (Fog Creek Software)

Fog Creek Software is founded by Joel Spolsky with friend Michael Pryor in 2000. They don't know what kind of product they would sell to the market when they establish the company. They are working in an apartment it serves as an office space for them to work on the projects. The time they start, he is creating Software at the same time he got three consultations on clients. The market had already mesmerizing at the year 2000 but many don't notice it until the April of 2001 that the volume market where they belong is was gone like an ash. They want to be a leading software company, so FogBugz came up, this is an internal bug-tracking application, and they got a monthly income of approximately 10,000 dollars. They transferred the office in Manhattan. Then the FogBugz grow more and more, it is weird even they even increase the price of the product they make their sales double, during the released of their product.

I have learned in this case that you should have a proper client handling and get their trust so you could give them a satisfaction and you should choose a right person who will handle your entire client and that person will treat the company as their own so they would value it as much how you will value it. Sometimes it is too risky to have an money to loan and worked with it because if you don't know the bankers rule all the hardship you have done it will be gone by the time you have realize how much is the interest had gain in your simple

load. As much as possible if you will borrow try to borrow money from a friend but not at the bank.

## Steve Kaufer (TripAdvisor )

The founder of TripAdvisor is Steve Kaufer, and the Cofounder was Langley Steinert, nick Shanny and Thomas Palka. This is an online travel site, founded in the year 2000. This site contains useful information for the travelers and people who are searching has a relevant content on the web and what they really want. They let personal attribute to be posted on the site. By the time of 2004, their site became the largest online traveler guide. It has more than five million online users. When they start the company they move to the place where his wife was renting for her office space, he starts with 15 people only. He mostly hired people a top-nacher to do the work. They start manually to grab articles about the hotels, resorts and other destination thru magazine, news papers and website to have a free access. After the successful launch of the site in October 2000, after two years they made a world geographic site where all the beautiful spot and famous destination hotels and others that are being listed in their site that can be access.

They had their first client Expedia and soon the company had expanded and they have many clients like Travelocity, Orbitz and other clients. They don't have direct competitors in the market but they have a sort problem in dealing with people that they will not use their services that they are offering to the people.

Funding a new company and own team make a great difference, first you should know what your plan really is, because when you start there is no point of turning back again. Second having different kinds of co founder and different kind of specialty and interest makes a big chance that a company will survive because it has an focus on the specialty where he/ she is good at. Third do not stay too long on your vision as a company, because there are no permanent in this world. Fourth you should have guts to take a risk. And last hire people who is interested in the thinks that you guys are doing.

## James Hong (Hot or Not)

James Hong is the founder of the website hot or not.com and the co founder is Jim Young and brother. James was the first MBA graduate to make in the Wall Street Journal among his classmates. They launch this kind of web site just for fun they did not intend something else. The hot or not site lets the user scale a picture randomly, for this the site became popular. They did not thinking that they would do it as a business, because they want to have fun only. The idea start back then when they are at the bar drinking and having a chat, Jim was on his PhD and James was unemployed graduated at business school. They have encounter the first big problem with the bandwidth it became slower than the usual because the pictures that are being uploaded at their site was too large.

The site became more and more popular like a virus spread on the place so they need to do an initial action to fix the traffic because it gets you 30 seconds to one minute to move you to the next page so they find an alternate route to divert it , so the problem was solve but then again many people are uploading nude pictures that kept them away from advertisers because of the porn pictures that the advertisers and the capitalist don't want to invest in because they think that their site is only a scam, fortunately they have fixed the problem. They hired someone to run the system and watching the traffic. So they go back to the ordinary route of their lives. James didn't want to call him a CEO of a company he only claimed this title because he is the middle man of the transaction their business is making. The hot or not site has to change their name because there is a domain that is closely similar to their domain name but they had finish dealing with that kind of issue. A company wants to buy them from a price of three million to five million dollar but James valued the company as much he valued his self so he did not sell because he also knew that they will kill the site and made another that is within their probation and accountability.

If you are starting s company you should have a mentor that have the same passion with you to keep guidance with you and help you out in terms in dealing with a problem.

## James Curie ( Tickel)

The founder of tickle website is James Curie, it was founded in 1999 before it became Tickle the former name was EMODE. He has great passion in digital media and social sciences, he believe that internet could discover and the passion of the user, before he start his company he invested in many company that deals with digital media for the growth of the movie industry. He studied at Harvard business school.

The idea of the came from his former school where he take assessment test that after a week the result was give out people still talk about it, it was like an movie block buster that people talking about everywhere and it took two week for this topic to be off, aside from that he believe that people want to talk about their self more. So he think and see the future uses of internet and made this a stepping stone, so he will do the market and many people are going to used them and while having the assessment test people would be honest because the test is regarding them.

Since there are few people who have the vision of the future use, he had a hard time to talk to the people. The challenging part in startup company is he start the startup company with the money of his friends and mentor to put up the company so in this case it is very hard to do a failure because there are people out there who are expecting you to give them a good output because you used their many and a huge expectation is expected from you.
I have learned in this case that you should built a culture and communication among the groups so they could do the things done faster and make them feel comfortable to work.

## Blake Ross (Firefox)

The creator of Firefox is Blake Ross and Dave Hyatt. While they are working at Mozilla foundation, they work at their spare time the theme of Mozilla Firefox is simple, fast and reliable browser. When they are working on Mozilla they had criticize the software because it is terrible and they want to change it in their own way.

When they launch this system many people easily adopt the system, they easily have the market share. Soon after having a successful system Blake Ross leaves Stanford University to develop more about the Firefox with a developer Joe Hewitt. Before Mozilla Firefox was an open source, the first name of the system was Phoenix but it was patent to a company so they change it to Firebird but it was patent to a company again so they are thinking what name could it be that start with Fire, soon they find a name for it the final name that they pick is Firefox. They have different kind of people working for this system consisting from different countries, they start the project online.

Before Mozilla was an open source technology and it is an arm of Netscape and Netscape distribute the system on the market. After acquiring Mozilla they had decided that they will directly distribute the system without passing the middleman. They really don't have any financial issue regarding money because many people are helping them thru donations given by a company or a certain people who would like to help them. Firefox become famous at one time because Firefox is a better browser, so it spread thru the world like a virus. They have use a strategy of getting people opinions and sum it up to make new product that is applicable to the lifestyle and opinion of most people as an open source system.

I have learned in this case that you should be honest to the client so you could gain trust and make a new customers because the client that you made happy to your product will endorse you to another user and gain again so with the simplicity of the product can make people hay and stay as the user of the product.

## Mena and Ben Trott (Six Apart)

The cofounder of Six Apart is a married couple Mena and Ben Trott. It is funny thing because the couples have their own world to deal with, they don't have any friends at all they do not do any extracurricular activities however they went to parties but they are not enjoying.

Mena like to do a blogging, the first blogging she do is the Dollar Short in April 2001, she create the system because of their own need, they do thing according to their own desire that their love, soon the product was launch in the market from day one it has many user. The product is a movable type the thing that made it popular. The second company that they formed is LLC in July 2002 those two companies don't have any funding from VC's. When they accept the money from VC they didn't easily hire people, they treasure the money much that the VC's gave them to budget from it.

They have a remote office, they want to have a service that let anybody use because the movable type is downloadable software that will be installed in your server, and this kind of software application is not applicable for a people who have less experience so he develop a system that is applicable to ordinary people who will use it.

The thing I learned in this lesson is to have a confidence, because this is your stepping stone to everything that you will do for the rest your projects and other stuff.

## Bob Davis (Lycos)

The founder of Lycos is Bob Davis, which was established in 1995.A huge success for Bob and his team to land at fourth place in the most popular site by the year 2002. This is a research project of a federal research grant, Fuzzy is the research scientist. The problem in the startup was hiring people , firing people and let them understand the business model, satisfying the share holders and other stuff those are the problem occurred in the first nine months of their operation of Lycos.

They had also problem regarding the issue of the real vision of the internet that would become in the making, because many people don't know it exist. They have the marketing strategy of advertising a lot to let the market and people knew the existence of the product they are dealing with. They would tell their employees, friends, families, neighbors and other person to pass on to let them know more about Lycos. For many years they has focusing on the user and the traffic in the network, they had succeeded in focusing on the priorities at the same time from their priorities not to let it pass a day.

I have learned in this case that whenever you had accomplished one problem there is always another problem waiting, and also hiring a good people in the field is very tricky. The life of an entrepreneur is a challenge is full of challenge, disappointment and failures those characters and challenges will complete you as a whole entrepreneur in the field. Alliant Computer System; Shareholder.com

## **Ron Gruner (Alliant Computer System; Shareholder.com)**

The cofounder of Alliant Computer System and Founder of Shareholder.com is Ron Gruner. The Alliant Computer System was founder in 1982 with Craig Mundie and Rich Andrew, the purpose of this company is to built a parallel super computers that use multiprocessing to be the fastest CPU.

They lead the market the next generation computers in the market that became the commodity. The company went to public in December 1986, Tom Perkins was one of the board. In 1991 he left the company Alliant Computer System because of some disagreement and miscommunication regarding the growth of the company. After he left this company he had open a new start up company Shareholders.com, which was very opposite to his first company he work for, because this company deals with web-base service business.

The company was founded in 1992, he had an investor from a group of his friends and business associates, that give out S25, 000 dollar each. They had their first corporate customer, which was Campbell's Soups, they really had a focus on the customers

satisfaction, while working on the web site. The first scariest events that happen to Shareholder.com is when there is big pharmaceutical companies want to do a project form them, because they can't afford to mess up with.

First thing If you want to be a big in the market you should start and focus a things one at a time and do not rush things along the way let it be. A second thing is Persistence is also one of the key to success of the business along the way that you should have aside from confidence.

# Use

# Cases

# Unit III

## Use Case

**Barangay Clearance**



Barangay C

to barang

ME
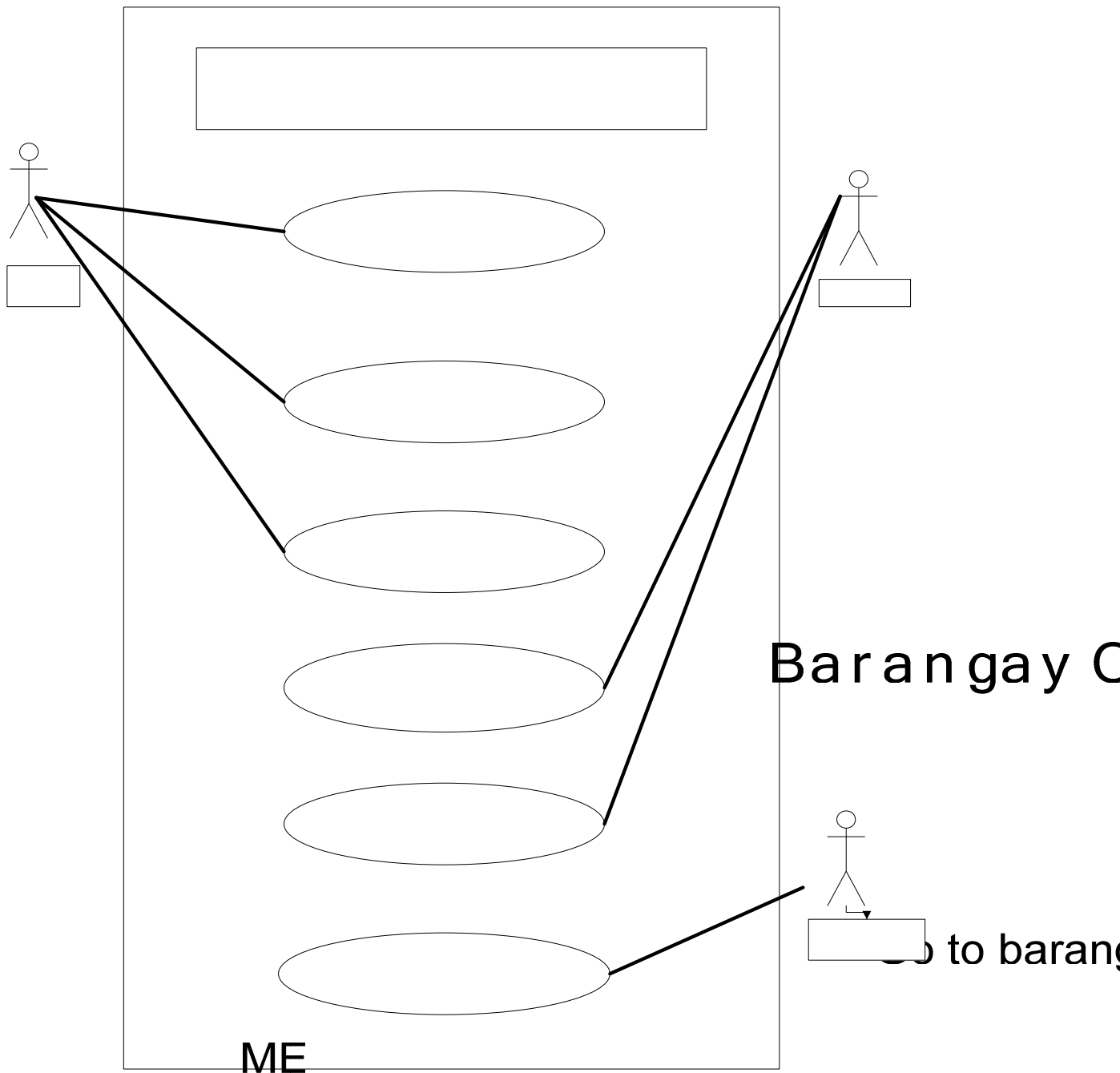
Identification Summary:

Title: Barangay Clearance

Summary: Let the people who want to get a Barangay clearance from Barangay.

Actors: citizen, tanod, chairman.

Creation Date: June 10, 2008

Version: 1.0

Date update: None

Person In charge: Celine Tan

Flow of Events:

Preconditions:

1.) The Barangay chairman should be around.

2.) I must fill up the necessary information to be needed in the transaction.

3.) There must be a Barangay hall in the vicinity.

Main success Scenario:

1.) Citizen must go to the nearest Barangay hall.

2.) Ask for a Barangay clearance to the tanod or Barangay chairman representative.

3.) Fill up necessary personal information.

"Alternative sequences:"

A1: chairman is around

1.) Ask the person in charge in the Barangay hall.

2.) Wait for the Barangay chairman to come.

A2: Have a misdemeanor

1.) Do a promissory note for it.

2.) Talk to the Barangay chairman regarding your misdemeanor.

A3: if you are not in the legal age.

1.) Ask yaya/driver or guardian to do it for you.

2.) Tell the Barangay chairman for what purpose in getting the Barangay clearance.

Error Sequence:

E1: If you have misdemeanor record

1.) Talk to the Barangay tanod.

2.) Sign a promissory note.

E2: If you are not in the legal age.

      1.) Ask yaya/driver or guardian to do it for you.

      2.) Tell the Barangay chairman for what purpose in getting the Barangay clearance.

Post Conditions:

      1.) You can claim you Barangay Clearance.

## E-Purse
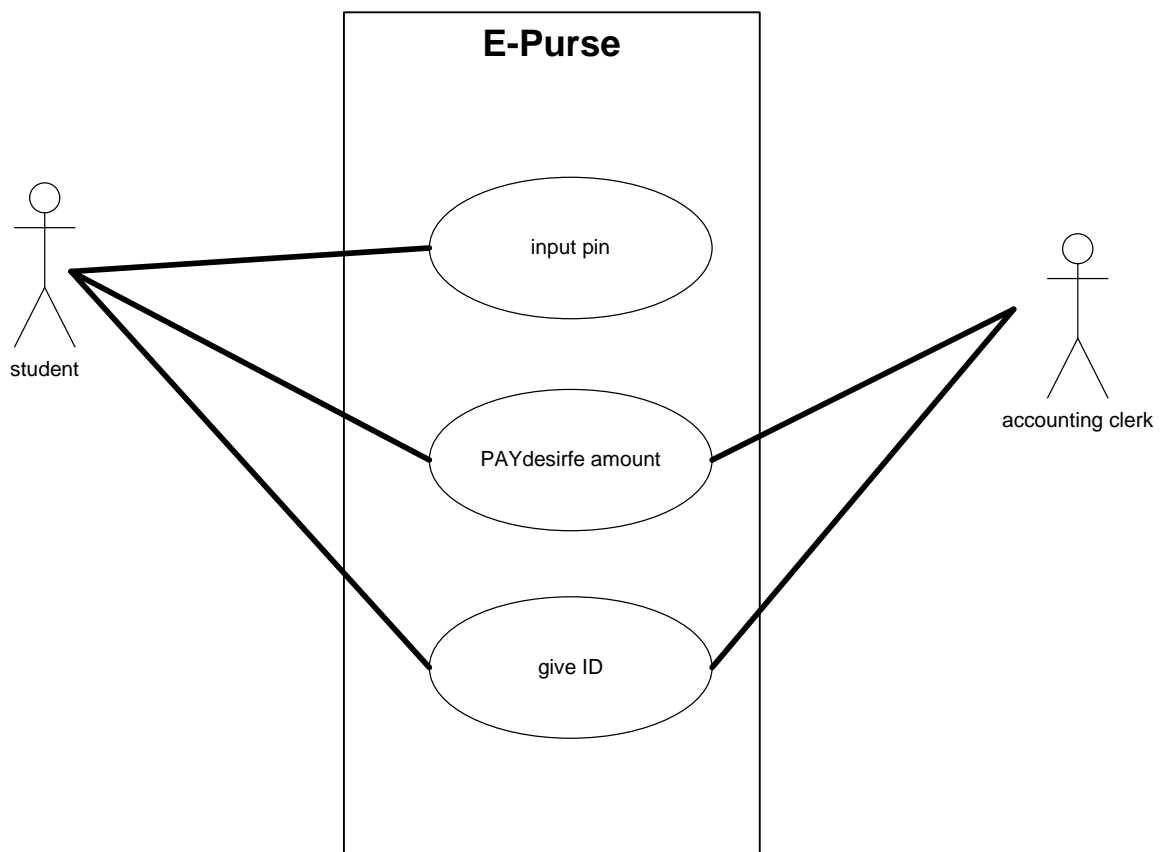
Identification Summary:

Title: E-purse System

Summary: Show the procedure to activate the E-purse.

Actors: Student and cashier man

Creation Date: June 13, 2007

Version: 1.0

Date of upgrade: None

Flow of Event:

Preconditions:

1.) I must have money.

2.) Must have valid CSB ID.

3.) Cashier/Accounting must be on line.

4.) They have receipt.

Main Success Scenario:

1.) The student must have ID.

2.) The student has money.

3.) Give ID

4.) Go to accounting office.

5.) Pay desire amount to window 1.

6.) Enter 6 digit pin number.

7.) Get official receipt.

Alternative Sequence:

A1: Don't have valid ID.

1.) Validate at accounting office.

2.) Pay due account or pending cases.

A2: Wrong PIN number.

1.) Go to accounting to reset the PIN number.

2.) It must have 1st and 2nd attempt.

A3: Forget to bring money.

1.) Use E-Purse to purchase food or things at available store participants of e-PURSE system.

Error Sequence:

E1: The student enters wrong PIN number.

    1.) Go to window 4 to reset the pin number.

E2: Invalid ID due to expired account

    2.) Go to accounting office to settle the case.

E3: Lost ID

    1.) Get affidavit of lost.

    2.) Pay ID replacement amount to the accounting window 2.

    3.) Go to ACTC to activate the account.

Post condition:

1.) E-Purse has money.

2.) E-Purse can be use at participating outlet / store.

3.) Make life easier.

User Interface:

✓ Students must have money to reload the E-Purse.

✓ The participating outlets/stores must have E-Purse system.

✓ Have valid 6 digit pin number.
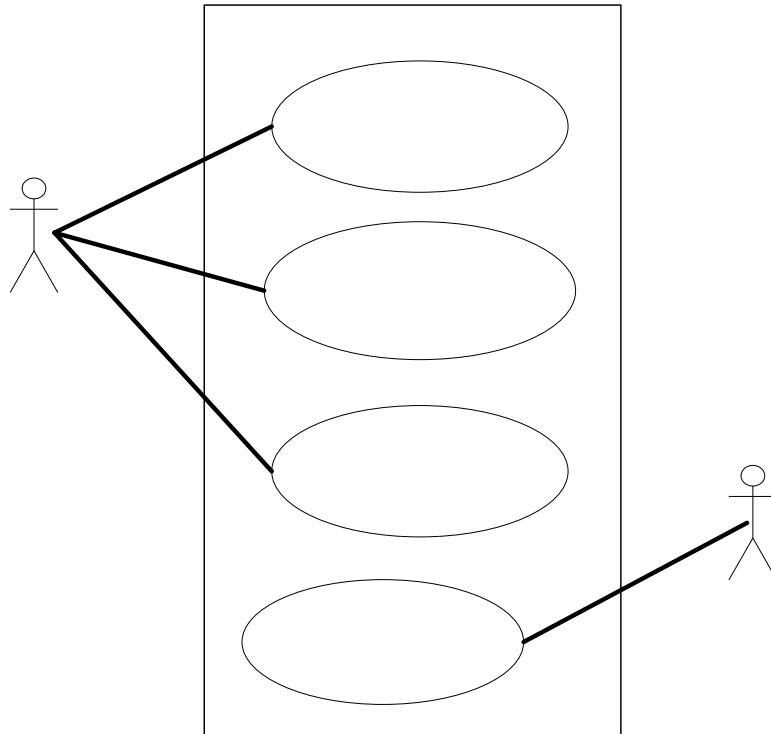
**Civil Service**

get application

pay

Give test sched
of testing

Applicant

Identification Summary:

       Title: Civil Service Exam

       Summary: To show how the applicant to get the Civil Service Exam

       Actors: Applicant, Employee

       Creation Date: July 23, 2008

       Version: 1.0

       Date of update: None

       Person In charge: Celine

Flow of Events:

Preconditions:

1.) The office must open.
2.) It must have an employee to serve the needed service by the applicant/customers.
3.) There must be available of application forms.

Main Success Scenario:

1.) the applicant must go to the office of the Civil Service Commission or go to the web to apply.
2.) He / She must finish college before taking the exam.
3.) It must have available dates for you to take the exam.

Alternative Sequence:

A1: the office is not open.
    1a. Come back again to the office in the government office hours.
    2a. get an application form via web.

A2: Incomplete details.
    2a. Come back again to bring to complete files that is needed.
    3a. Submit via web requirements.

A3: The in charge person give a wrong forms.
    3a. before leaving the office check the necessary documents.

A4: do not have available testing schedule
    3a. follow up again.
    4a. reserve a testing schedule for the opening dates.

Error Sequence:

E1: invalid documents
    1b. verify all important documents.
    2b. change the wrong documents.

E2: Applicant is underage

       2b. the system fails.

       3b. secure a permit from the parents or teacher.

E3: office is closed

       3b. come back again to pass the documents.

E4: the system fails to give the necessary details.

       3b. report to person in charge.

       4b. go to the main office to get the necessary files or documents.

Post Condition:

1. The office must have the application forms.
2. there must be available schedule for testing
3. There must be valid documents to be presented.
4. The applicant should pay after applying.

**LTO**

**Student Driver License**



Applicants

- Fill up form
- take a picture
- get the charge form
- pay to cashier
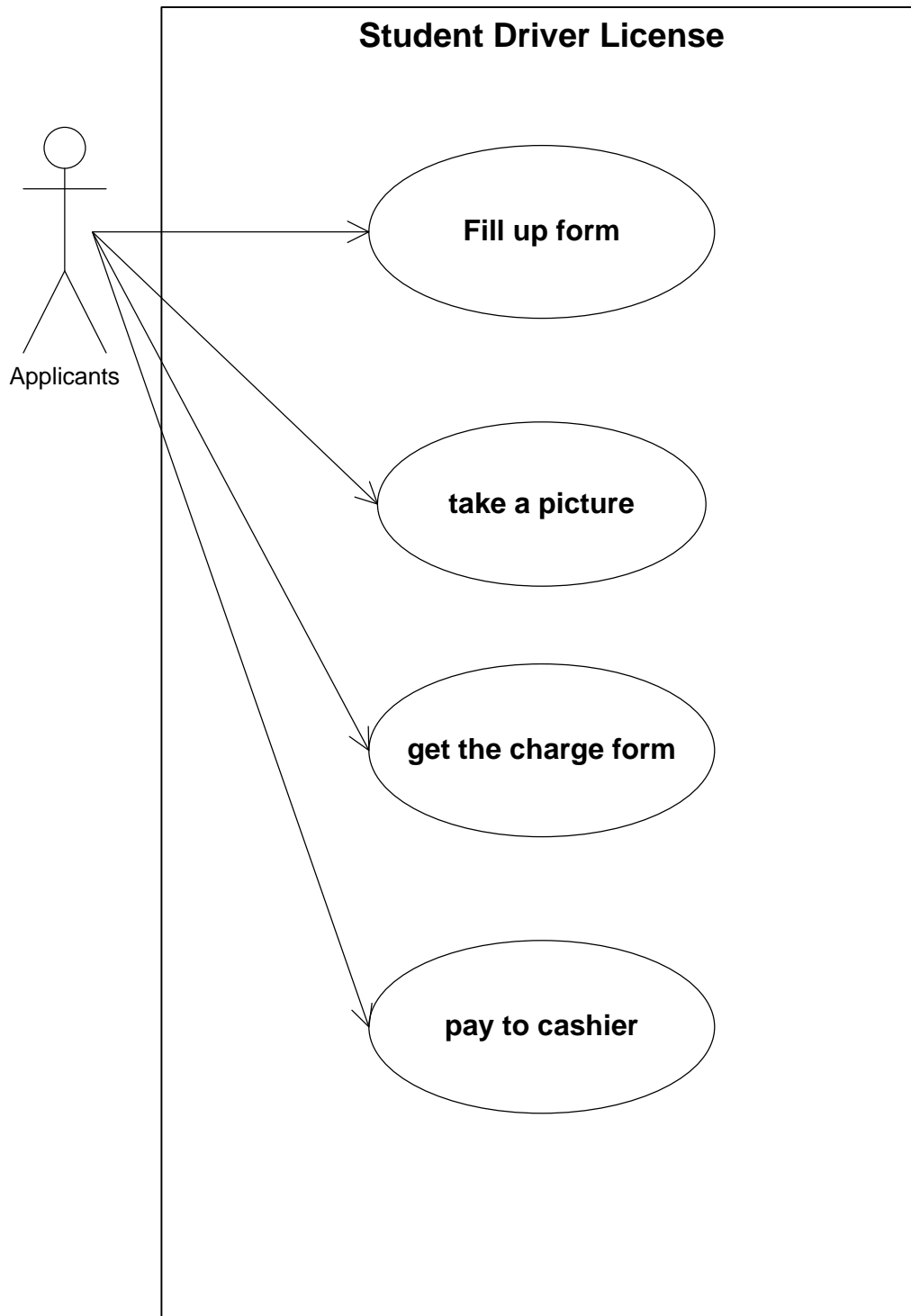
Identification Summary:

    Title: LTO

    Summary: How to get a student driver license

    Actors: Applicants

    Creation Date: July 2, 2007

    Version: 1.0

    Date of upgrade: None

Flow of Event:

    Preconditions:

        5.) Applicants must ware proper attire. No sandos, fipflops, shorts.

        6.) LTO must be open.

        7.) Know how to go to the LTO branches.

        8.) Have LTO have application forms to be given out.

        9.) Must have birth certificate.

        10.)Must have 1x1 pictures.

        11.)Must have money.

        12.)Must be 18 years of age, if not secure a parents consent.

    Main Success Scenario:

        1.   The applicant goes to the LTO.

        2.   Applicant gets application form.

        3.   Fill out the necessary information that is being asked.

        4.   Attach the 1X1 picture and birth certificate.

    "Alternative Sequence"

        A1: The applicant is minor aged.

            a.   Secure a letter from parent with parents valid ID

            b.   Bring birth certificate.

            c.   Ask fixer to get student permit

        A2: LTO is close

            3. Come back again.

            d.   Go to other LTO branch.

    "Error Sequence"

        E1: Doesn't have parents consent and parent ID

1. The LTO will not allow you to apply.

E2: No Money

    1. Find a nearest on line ATM machine.

    2. Come back again with sufficient money.

Post Conditions:

1. The applicant has a license issued by LTO.

2. The applicant can now drive according to the restriction of the vehicle.

3. It serves as identification incase of emergency.

UI Requirements

- The LTO must be available

- The applicants have complete documents.

Non-Functional Requirements

- The LTO must release the license with in an hour.

- The LTO must have available seats for the waiting applicants.

**BIR TIN Number**
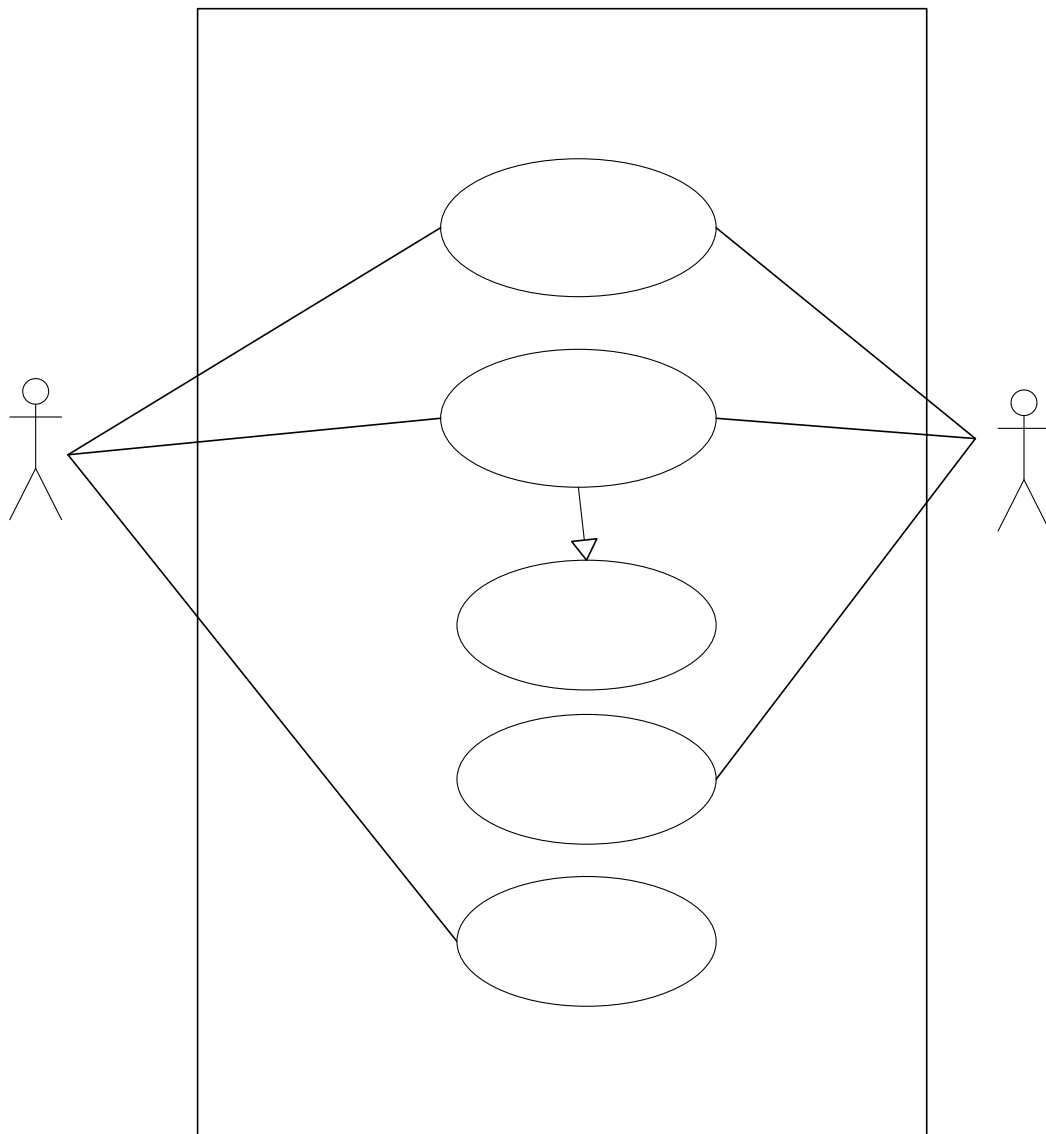


Applicants

**BIR TIN**

Get BI

Fill u

«e

give ba

Title: BIR TIN number

Summary: To have a permanent TIN "Tax identification Number" for the rest of your life.

Actors; Applicant, Person in charge in BIR

Precondition:

    1.) Go to respective BIR of the city where you live.

    2.) Bring necessary certification documents.

    3.) Look for the floor assign in the directory.

    4.) Go to the assign floor.

5.) Approach the tax payer's assistance service table.

6.) Ask for a BIR form 1904.

7.) Fill up the necessary information.

8.) Give it back to the employee to be recorded in computer.

9.) Get your permanent TIN number with the card.

Alternate Sequence:

A1: Download forms from www.bir.com.ph/

A1: sequence start at point 1

1.) Go to the respective BIR of you city.

2.) Bring the form that you have downloaded and documents of certification of bonafide citizen of Philippines.

3.) Look for the floor assign in the directory.

4.) Go to the assign floor.

5.) Approach the tax payer's assistance service table.

6.) Give to the employee in charge the downloaded form and the bonafide certification.

7.) Get your TIN number and the TIN card identification.

A2: Error in downloading the forms.

A2: alternate sequence start at point 1

1.) Go to respective BIR of the city where you live.

2.) Bring necessary certification documents.

3.) Look for the floor assign in the directory.

4.) Go to the assign floor.

5.) Approach the tax payer's assistance service table.

6.) Ask for a BIR form 1904.

7.) Fill up the necessary information.

8.) Give it back to the employee to be recorded in computer.

9.) Get your permanent TIN number with the card.

A3: alternate sequence start at point 5

5.) Approach the tax payer's assistance service table presenting the complete information and supported documents requirements.

6.) Ask for a BIR form 1904.

7.) Fill up the necessary information.

8.) Give it back to the employee to be recorded in computer.

9.) Get your permanent TIN number with the card.

Error Sequence:

E1: Left the necessary

E1: error sequence start at point 5

5.) Approach the tax payer's assistance service table presenting the complete information and supported documents requirements.

10.) Ask for a BIR form 1904.

11.) Fill up the necessary information.

12.) Give it back to the employee to be recorded in computer.

13.) Get your permanent TIN number with the card.

E2: Go to wrong BIR office.

E2: error sequence start at 1

1.) Go to respective BIR of the city where you live.

2.) Bring necessary certification documents.

3.) Look for the floor assign in the directory.

4.) Go to the assign floor.

5.) Approach the tax payer's assistance service table.

6.) Ask for a BIR form 1904.

7.) Fill up the necessary information.

8.) Give it back to the employee to be recorded in computer.

9.) Get your permanent TIN number with the card.

**Linkedin**



add photos

add company

LinkedIn

Fill up Profile

A
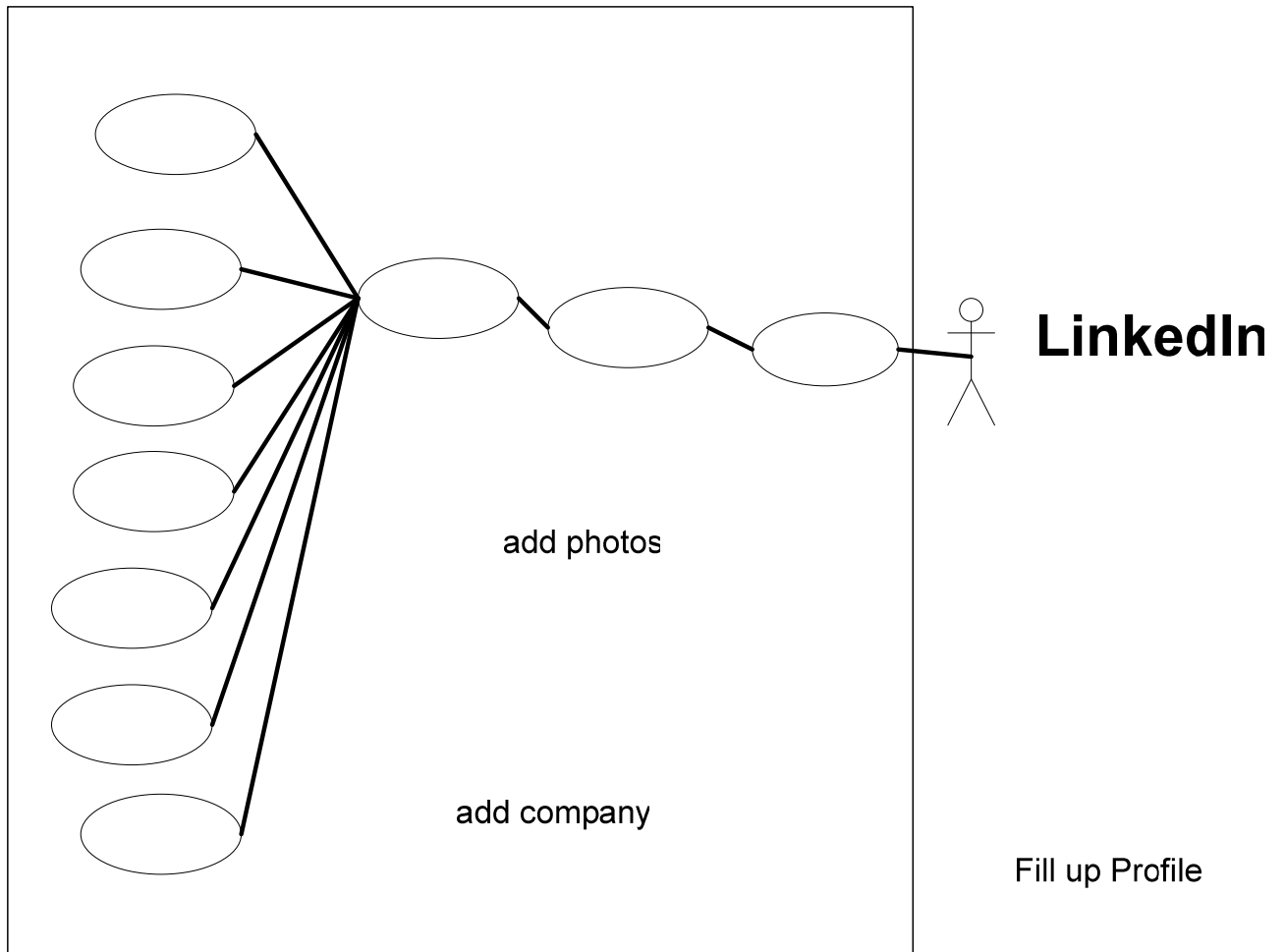
Identification Summary:

    add recomendation

    Title:LinkedIn

    Summary: To show hot to have an account on linkedin.

    Actors: user/applicants

    Creation Date: 7/18/07   import contacts

    Version: 2.5

    Person in Charge: Celine Tan

Flow of Events:

    Preconditions:   add experience

       1.) There must be an internet connection

       2.) There must be available id name

3.) They must have internet browser

4.) The site is available

5.) The e-mail address is valid

Main success Scenario:

1.) There must ne internet connections

2.) It must have an internet browser

3.) Enter www.linkedin.com at the address bar

4.) Click signup icon

5.) Fill up the necessary information

6.) Agree with the terms and conditions

7.) Confirm the e-mail

8.) Update profile by editing personal information, add photos,import contacts, add company, add recommendations and other.

9.) Save changes

Alternative Sequence:

A1: Invalid user name or password

A1: Sequence start at point 4 of alternative sequence.

4.) Ask for retrieval of username and password to be sent in your mail.

5.) check e-mail for the password and user name retrieval.

6.) Go back to www.linkedin.com.

7.) sign in

8.) Click edit profile

Save changer

**Twitter**
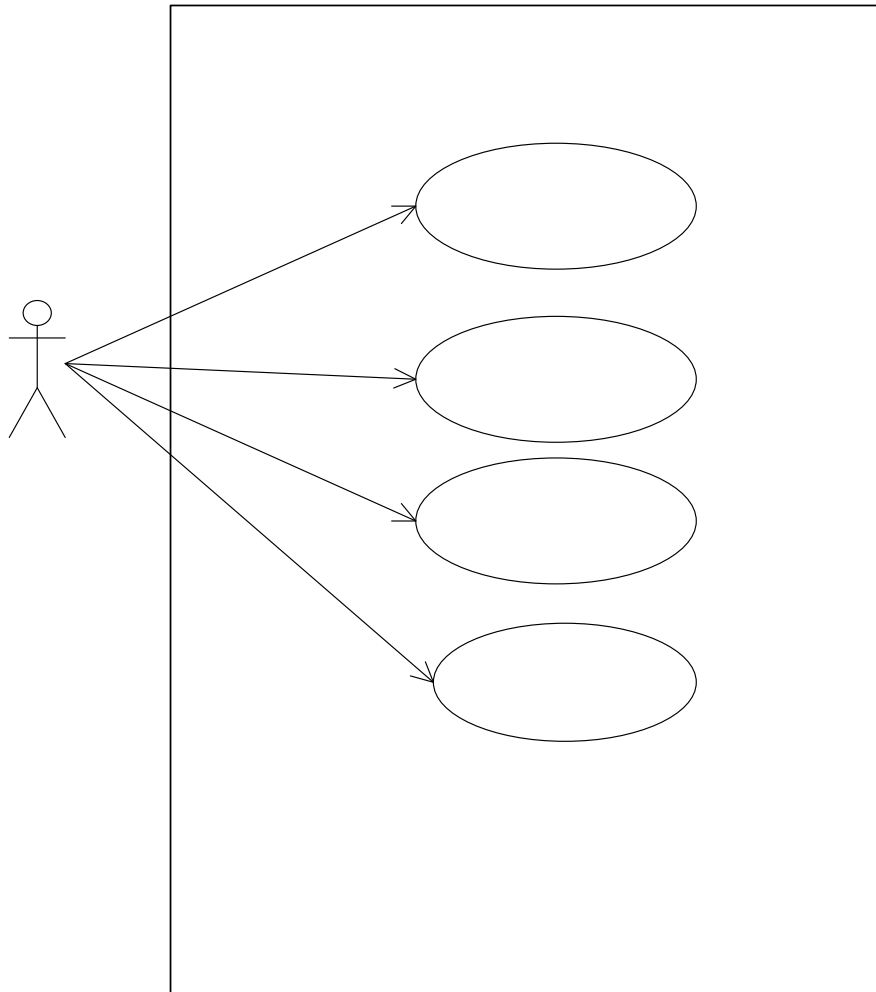


Identification Summary

    Title: Twitter

    Summary: let the people be connected and can send a SMS message to the people./

    Actor: Applicant/User

    Creation Date: June 15, 2006

    Person In charge: Celine Tan

    Version: 3.1

Flow of Events:

    Preconditions:

        1.) There must be internet connections.

        2.) The system is not down or under maintenance.

        3.) It must have correct user name and password.

        4.) There must be an active browser.

Main success Scenario:

    1.) There must be internet connections.

    2.) Open a browser and enter the URL [www.twitter.com](www.twitter.com)

    3.) Give a valid username and password

    4.) Fill up the necessary information needed.

    5.) Check that you have agreed with the terms and conditions.

    6.) Accept and create account.

Alternate Sequence:

    A1. Taken user name

    A1: Sequence start at point 3 of alternate Sequence

        3.) Try again a new username and create the password

        4.) Fill up the necessary information needed.

        5.) Agree with the terms and conditions.

        6.) Accept and create account.

Error Sequence:

    E1: Site is under constriction

    E1: Sequence start at point 3 of error sequence

        3.) Come back after 12-24 hrs. from the time of visit in the site.

    E2: There is no network connection / internet

    E2: Sequence start at point 1 of error connection.

        1.) Go to internet shop and rent a computer.

        2.) Open a browser and enter the URL [www.twitter.com](www.twitter.com)

        3.) Give a valid username and password

        4.) Fill up the necessary information needed

        5.) Check that you have agreed with the terms and conditions.

        6.) Accept and create account.

**Slideshar**

sign

user

upload pre
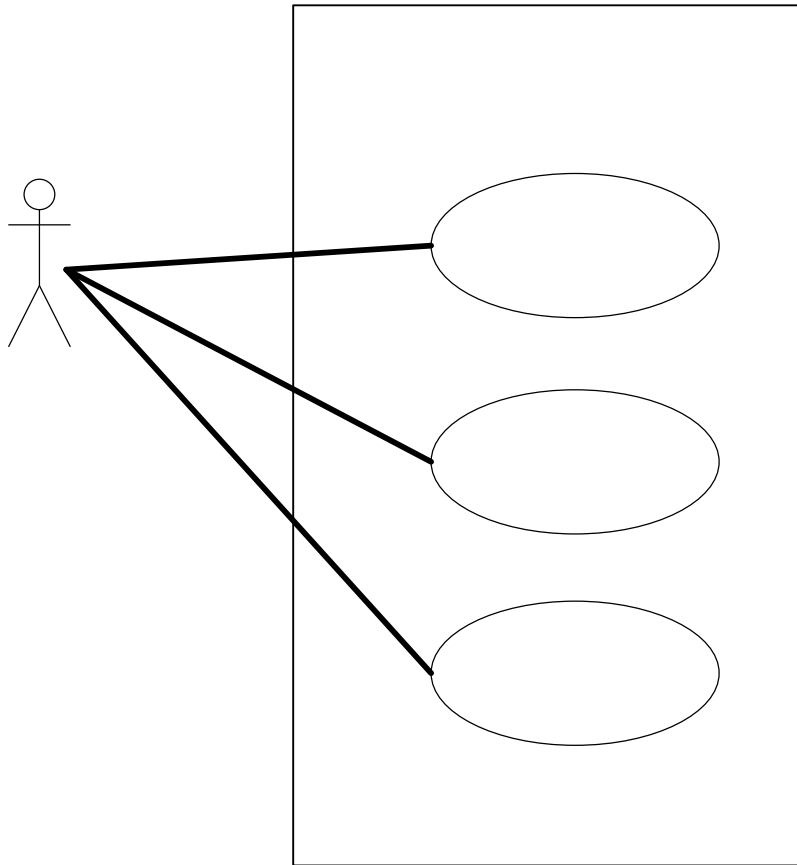
Identification Summary
     Title: Slideshare.com
     Summary: This use case shows how to use slide share.com
     Actors: user/applicant
     Creation Date: June 15,2001
     Version: 1.23.11
     Date of Updates: N/A
     Person In charge: Celine Tan
Flow of Events:
     Preconditions:
          It must have an internet connection
          The site is not under maintenance
          He/she has an e-mail address
          It must have an internet browser
     Main Success Scenario:
          1.) The user should have an internet connection.
          2.) The users will open an internet browser any of which internet explorer,
             Mozilla Firefox, Netscape or other internet browser.

confirm

dr

3.) The user will enter the URL http://slideshare.com.

4.) The user will sign up for account

5.) The user will fill up the necessary information

6.) User will confirm e-mail

Alternative Sequences:

A1: the username is taken

A1: start at alternate sequence 5

5.) The user will try again for the new user name.

6.) User confirm to e-mail

A2: No internet connection

A2: starts at alternate sequence 1

1.) The user will rent at the computer shop

2.) The users will open an internet browser any of which internet explorer, Mozilla Firefox, Netscape or other internet browser.

3.) The user will enter the URL http://slideshare.com.

4.) The user will sign up for account

5.) The user will fill up the necessary information

6.) User will confirm e-mail

Error Sequence:

E1: The site is under maintenance

E1: sequence start at point 4 of error sequence.

4.) he/she will not be able to log in

5.) use case failed

Post Condition:

The user can view millions of presentation slide

User is member of slideshare.com

The user can meet the millions users of slide share and make friends

**Smart Money**

- buy smart sim
- apply for smart money
- pay

applicant
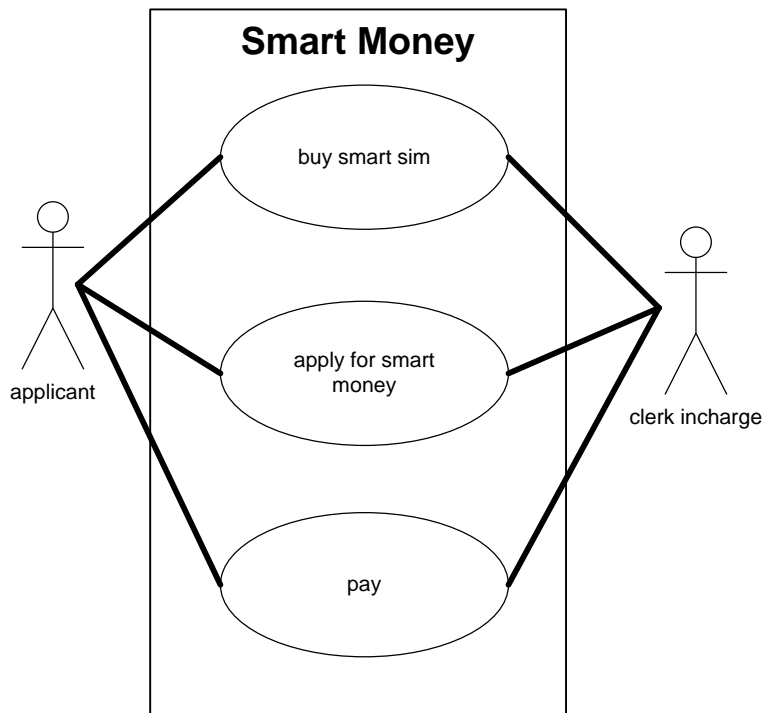
clerk incharge

Identification Summary

    Title: Allication fo smart money

    Summary: This use case allow a citizen to apply for a Smart Money

    Actors: applicant, clerk in charge

    Creation Date: November 17, 2005

    Version: 2.14

    Date of Updates: N/A

    Person In charge: Celine Tan

Flow of Events:

    Preconditions:

        The applicant should be 18yrs. Old above

        The applicant should have money

        The applicant should have all the required requirements.

    Main Success Scenario:

        1.) The applicant will go to any Smart Wireless Centers

        2.) The applicant will get application form from the clerk in charge.

        3.) The applicant pays the application fee.

        4.) The applicant accomplishes the application form together with the requirements.

        5.) The clerk confirms the completion of the requirements.

        6.) The applicant will wait for the releasing of O.R.

Alternative Sequences:

    A1: the applicant did not bring the requirements

    A1: start at alternate sequence 4

        4.) Applicant could not get the application until he/she have a valid documents required.

        5.) The applicant will go home

Error Sequence:

    E1: The office was closed

      E1: sequence start at point 2 of main success scenario.

        3.) The applicant will come back again

        4.) Use Case Failed

Post Condition:

    The applicants have a debit card.

    The applicants have option to pay, via cash or debit card of smart.

    Smart wireless center gained customer for debit card

    The stock of debit card has decreased.

    The debit card of Smart has gained market buying power.

# Appendix 1

**Blogging at Multiply**



**Blogging at M**

S
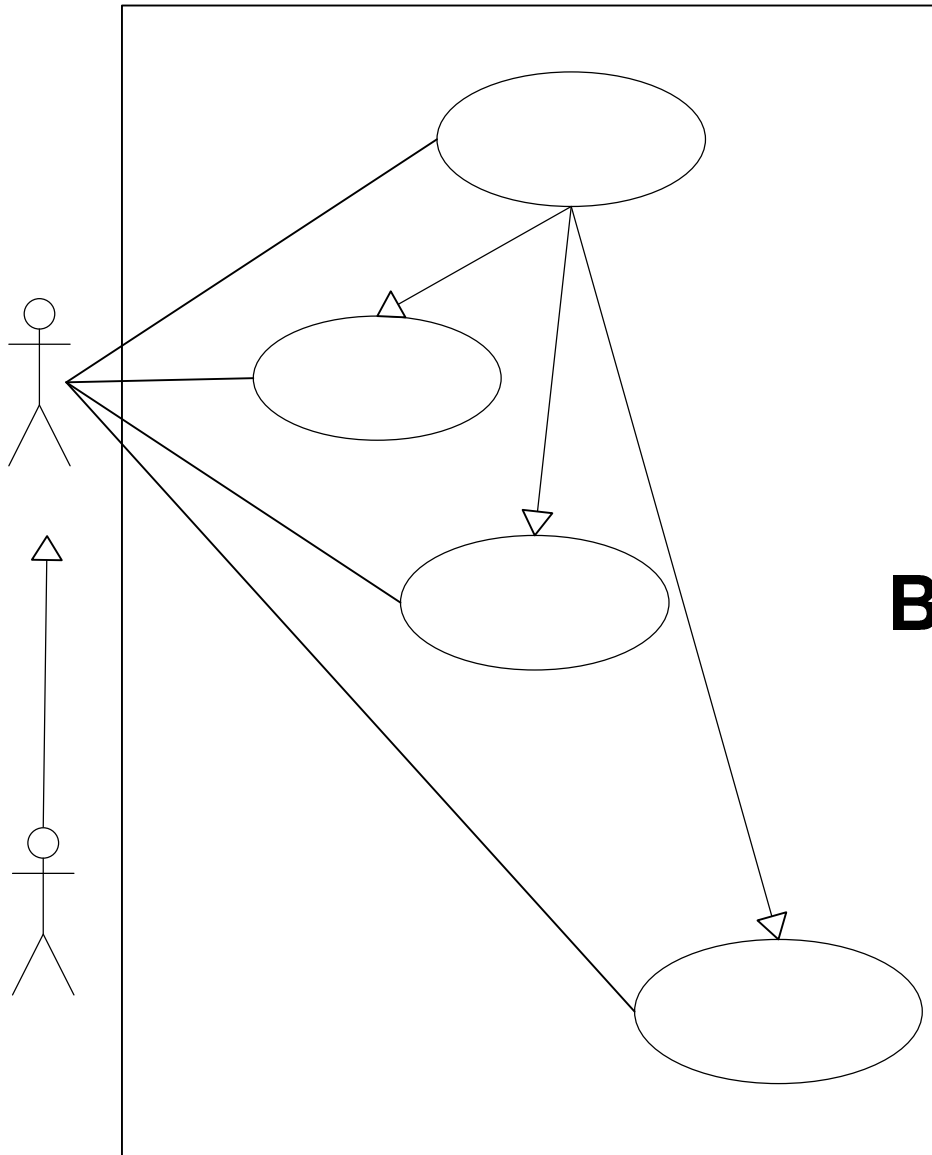
Post BLOG

Identification Summary:

    Title: Blogging at MULTIPLY

    Summary: allow the users/members to post a blog at multiply.

Actor: Users/ members

Creation Date: 7-15-07

Version:2.3

Person in charge: Celine Tan

Flow of Events:

Preconditions:

1.) The actors must have an internets access.

2.) The actors must be a member of multiply.com.

3.) The site is available

Main Success Scenario:

1.) The user should have an internet connection.

2.) The users will open an internet browser any of which internet explorer, Mozilla Firefox, Netscape or other internet browser.

3.) The user will enter the URL http://multiply.com.

4.) The user will log in with his/her user name and password.

5.) The user will click the blog icon

6.) Enter blog title.

7.) Enter blog message at blog composition box.

8.) Save and publish.

Alternative Sequence:

A1: User id or password invalid

A1: sequence start at point number 5 of alternative sequence.

5.) The user can ask the user id and the password to be sent to his/her mail.

6.) Retrieve the user name or password.

7.) Go back to multiply to log in.

8.) Click the blog icon

9.) Put title of the blog

10.) Write the blog composition box

11.)Save and publish it.

A2: he/she is not a member of the multiply.

A2: sequence start at point number 4 of alternative sequence.

4.) Sign up join for free icon

5.) Fill up the necessary information

6.) Agree with the terms and conditions

7.) Validate or confirm the e-mail notification.

8.) Log in

9.) Input user id and password

10.) Clock the blog icon

11.) Put the tilt of the blog

12.) Write the blog on the composition box.

13.) Save and publish the blog.

Error Sequence:

E1: The multiply site is under maintenance

E1: sequence start at point 4 of error sequence.

4.) he/she will not be able to log in

5.) Come back after 12-24 hrs.

E2: There is no internet.

E2: Sequence start at point 1 of error sequence.

1.) Look for shop where there is an internet access.

2.) Rent a computer/ borrow computer.

3.) The users will open an internet browser any of which internet explorer, Mozilla Firefox, Netscape or other internet browser.

4.) The user will enter the URL http://multiply.com.

5.) The user will log in with his/her user name and password.

6.) The user will click the blog icon

7.) Enter blog title.

8.) Enter blog message at blog composition box.

9.) Save and publish.

Post Condition:

1.) The user has a new blog at his/her site.

2.) The people will read his/her blog.

3.) He/she was able to express his/her thoughts or feelings for the day.

4.) He/she has enlighten or made people guilty for the blog message.

Activity Diagram: BLOGGING

```
         ●                                    ⬡ A
         │                                    │
         ▼                                    ▼
   ┌──────────────┐                    ┌──────────────────┐
   │  Input user  │                    │  Click post blog │
   └──────────────┘                    └──────────────────┘
         │                                    │
         ▼                                    ▼
   ┌──────────────┐                    ┌──────────────────┐
   │Input password│                    │     Do blog      │
   └──────────────┘                    └──────────────────┘
         │                                    │
         ▼                                    ▼
      ◇ Remem                         ┌──────────────────┐
        ber me ◇                      │ Save and publish │
      /        \                      └──────────────────┘
     /          \                            │
    ▼            ▼                           ◉
┌─────────┐  ┌─────────┐
│Time out │  │Time out │
└─────────┘  └─────────┘
    │            │
    ▼            ▼
  ═══════════════════════
         │
         ▼
       ⬡ A
```
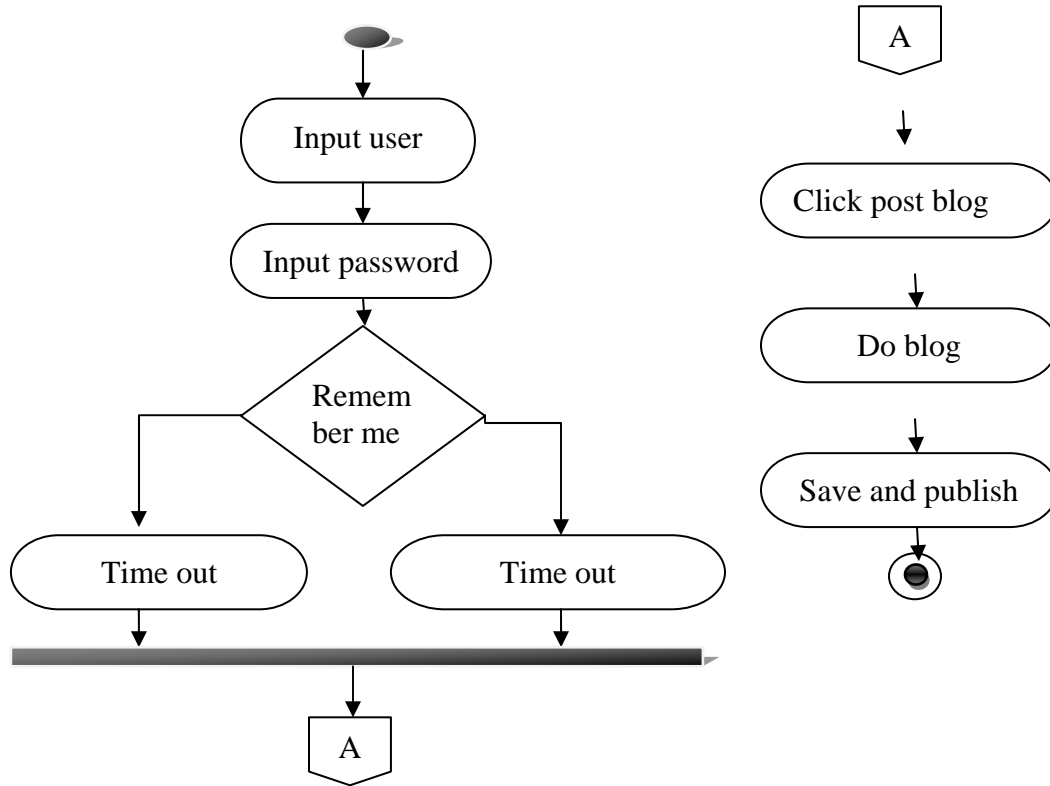
## DLS-CSB Enrollment

### DLS-CSB Enrollment System
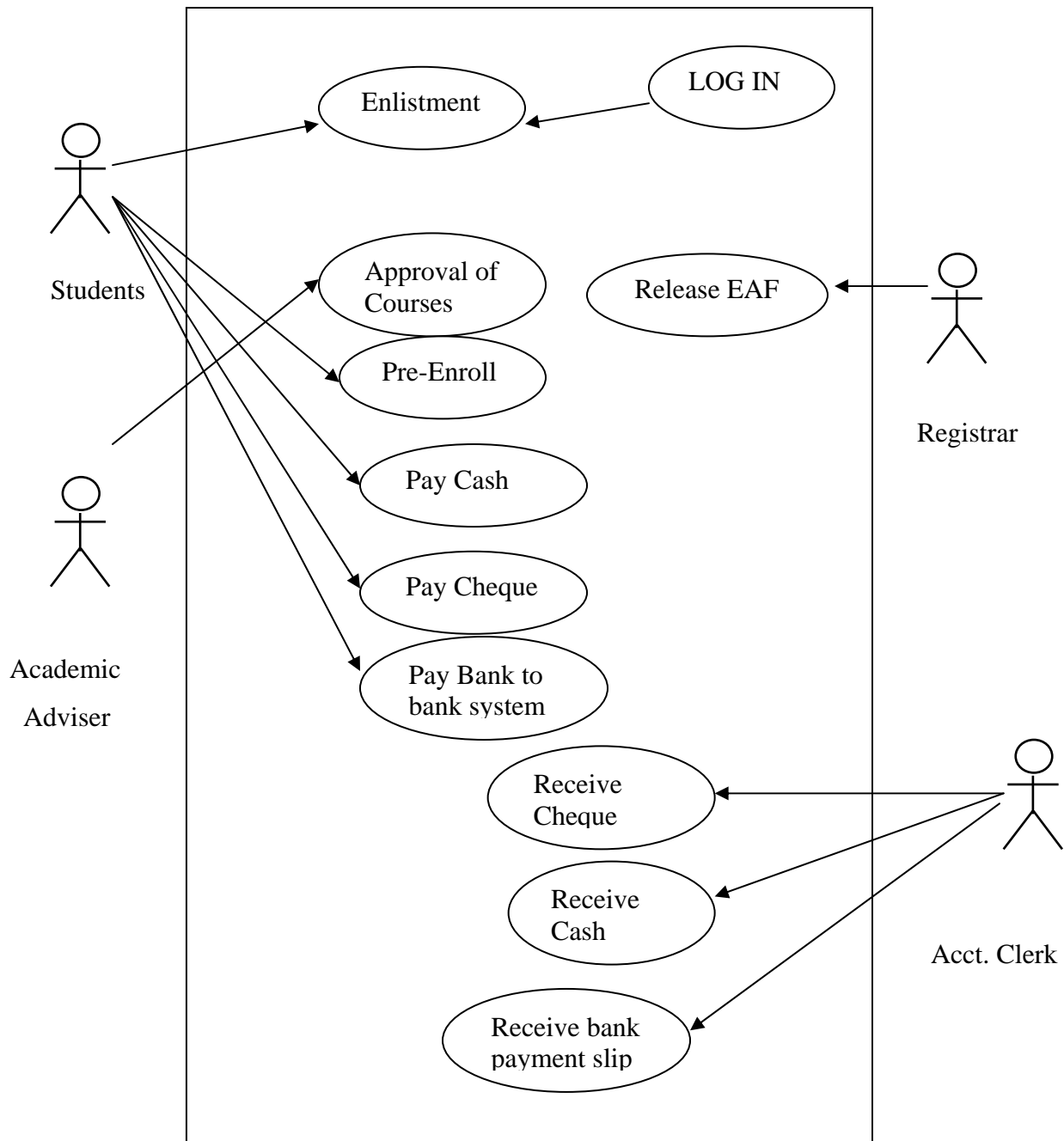
Identification Summary:

Title: DLS-CSB Enrolment System

Summary: The use case shown above the sequence of the enrolment system of DLS-CSB.

Actors: Students, Registrar, Accounting, Academic Adviser

Created Date: June 4, 2008

Version: 1.0 version

Date of Update: NONE

Person in Charge: Celine Tan

Flow of Events:

Precondition:

1.) There must be available open courses.

2.) The student must log-in first to access the SIS.

3.) Must have network connection to the school data base.

4.) Student must be currently enrolled or officially enrolled for this current term.

Main Success Scenario:

1.) The student will log-in.

2.) Choose available subjects.

3.) Log out.

Alternative Sequences:

A1: Payment / transaction mode:

1.) Pay in cash

2.) Pay in dated cheque

3.) Bank to bank payment system

A2: Lost EAF

1.) Go to the registrar to get another copy of EAF.

A3: Late Enrollee

1.) Go to the registrar to enroll.

Error Sequence:

    E1: Invalid ID number

        1.) Go to the registrar to confirm the student status.

    E2: Lost EAF

        1.) Go to the registrar to get another copy to be enrolled

Post Condition:

    1.) Officially enrolled.

    2.) Get official receipt

UI Requirements:

- to enlist a subjects for the next term student must be:
  - currently enrolled
  - has valid student number

Non-Functional:

- Must be connected to the net work of the school.
- Must have the date base information of the school to access.

**Frosh-Special Election**



Frosh-Specia

Log
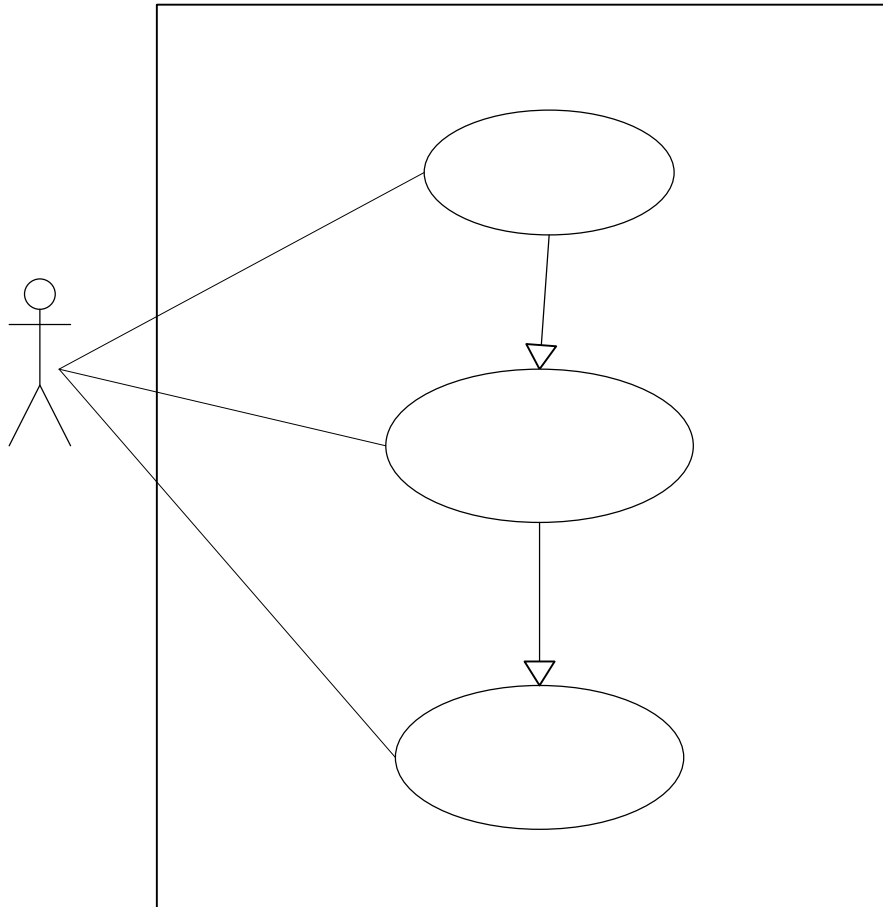
Vote for Fi
Officer S.Y. 2

Students

Identification Summary:

 Title: Frosh-Special Election

 Summary: Let the students with ID # 107 vote for finance officer of the student
council.

 Actor: Voter – Student

 Creation Date: 7-10-07

 Person in Charge: Celine Tan

Flow of Events:

 Preconditions:

 1.)  The computer must be connected to the campus network.

2.) The system/website must not be down.

3.) The student must have their user name and password.

4.) There must be available computer within the campus.

Main Success Scenario:

    1.) There must be available computer within the campus or connected to the Wi-Fi thru laptop.

    2.) Enter the URL http://taft-ispc90/comelec to the address bar.

    3.) Log in using your Student Information System username and password.

    4.) Choose a candidate for finance officer for student council S.Y. 2008-2009.

    5.) Click submit/ok

    6.) You have already voted!

Alternate Sequence:

    A1: Invalid username or password

      A1: sequence start at point number 3 of alternate sequence.

        3.) Go to the ACTC to reset the account.

        4.) After five minutes, try again to log-in using the new password.

        5.) Choose a candidate for finance officer for student council S.Y. 2008-2009.

        6.) Click submit/ok

        7.) You have already voted!

Error Sequence:

    E1: Voting Twice / Flyer voter

      E1: Sequence start at point number 4 of error sequence.

        4.) The screen will display a message "YOU HAVE ALREADY VOTED!"

    E2: No network Connection or unplugged network connection.

      E2: Sequence start at point number 1 of error sequence.

        1.) Comeback again to the site after an hour.

# Appendix II

# Appendix II

# Pre Thesis

## A Systems Analysis Study on the Production
## Of Tuff Chemical & Adhesive Tapes Co.

Presented to the

Computer Applications Program

School of Management and Information Technology

De La Salle – College of Saint Benilde

In Partial fulfillment of the

Requirements of the subject

Systems Analysis

Submitted by:

Balonso, John Justine

Coderez, Adrian

Lee, Aaron

Tan, Frances Celine

Title: "An Analysis on the Production System of Tuff Chemical & Adhesive Tapes Co."

I. **Chapter 1 Organizing for Improvement**

1.1 Company Background:

Tuff Chemical & Adhesive Tapes Co. of 1325 Jose Abad Santos Avenue Manila, is a manufacturing firm of Adhesive , providing the best quality packaging materials. Since its establishment in 1997 Tuff Chemical & Adhesive Tapes Co. has gained the market recognition for achieving its goal in such a short span of time. Tuff Chemical & Adhesive Tapes Co. receive an award of "Excellence" as the country's "Most outstanding Manufacturer of Adhesive Tapes brand", given by the Consumers Union of the Philippines on the 16th Annual Consumers Awards held in the 28th of October 2005.

Tuff presently serves a number of well known large and medium scale industrial firms, providing them with supplies for their requirement of packaging materials. Some of our major clients are General Milling Corp., Lamoiyan Corp., Destileria Limtuaco, Pepsi Cola Products, Ajinomoto, Adidas Philippines and other major corporations in the country presently serve by Tuff Chemical & Adhesive Tape Co. urgently, the company's group of experienced and highly competent sales force now embarking on a major sales blitz, focused to serve and provide what exactly the client's needs and demands. Always willing to listen and educate the clients on how to identify a high quality and genuine packaging product*.*

**Commitment**

Tuff Chemical & Adhesive Tapes Co. aims to become the country's leading manufacturer of packaging tape materials. It is our commitment to deliver quality-consistent product in a way that we will continue to educate our valued clients to mutually minimize if not eradicate fraudulent practices that pervade the industry. We are focused to continue and maintain our integrity by delivering our service/product on time and on the right quality as demand and requested by our most precious asset and that is our customer.

**People**

The major principals and staff of Tuff Chemical & Adhesive Tapes Co. have extensive knowledge and experience in the packaging industry. The company had sort out intensively highly qualified individuals that are knowledgeable and capable of delivering our product to our major clients providing them with the best quality and knowledge of the product.

The Company's personnel are focused primarily in achieving the company's goal, to provide our clients with satisfaction and maintain a long-term relationship with our existing and new clients to come. With its Technical and Customer Oriented Individuals, Tuff will continuously offer its client only the best that they deserve.

Company

Logo:



Vision/Mission:

OUR VISION:

To be the leading provider of Packaging Product Brand and the most in-demand supplier in the industry.

OUR MISSION:

To acquire all the leading industrial firms by delivering high quality grade packaging products on time.

Company History:

With almost a score of existence, J.A.S. Enterprises Co. still going strong and continuously keeping its commitment to provide the customers with greater quality packaging product. Since its establishment in 1986 J.A.S. already caters well known industrial firms in the country as well as medium scale enterprises. With the support of its management, staff, and

personnel, J.A.S. Enterprises Co. has gained the market's recognition for achieving its goal in such a short span of time. Till one time that the J.A.S. Ent. Co. could no longer prolong the capacity of the market volume so there Tuff Chemical & Adhesive Tape Co. was founded in mid year of 1997.

Products and services:

**OUR PRODUCT OFFER:**
- ➢ **Packaging Tape (Clear/Tan)**-(Water base solvent or Acrylic Base solvent)
- ➢ **Printed Tape** (Made to Order)
- ➢ **Masking Tape** (Ordinary, Auto Spray Paint Masking)
- ➢ **Electrical Tape** (with CSA, UL,PS, VL, CE, Grade ISO 9002 Product)
- ➢ **Stationery Tape** (YCT / Clear)
- ➢ **Double Sided Tape** (Tissue Type, Foam Type)
- ➢ **Bag Sealing Tape** (Resealable Double Sided)
- ➢ **Permanent Double Sided Tape** (used by DHL, LBC and Fed Ex)
- ➢ **Aluminum Duct Tape** (Aircon Duct Tape)
- ➢ **Cloth Tape** (For Balikbayan Boxes)
- ➢ **Teflon Tape**
- ➢ **Stretch Film** (Food Grade/Industrial Grade)
- ➢ **Shrinkable film**
- ➢ **Fax Thermal Paper**
- ➢ **Cash Register Paper/POS Thermal Paper**

When it comes to service, we are tangible firm that produce tangible product, we render service only to deliver the products on time. That is only a add on service.

Number of Customers:
 Total of 4358 Customers
  Some Major Clients

- ▪ Adidas Philippines
- ▪ Ajinomoto
- ▪ HIZON LABORATORIES INC.
- ▪ General Milling Corporation

- Lamoiyan Corporation
- KIMBERLY CLARK PHILIPPINES INC.
- Mighty Corporation
- Lepanto Ceramics Corp.
- Green Cross
- JBC Food Corp.
- Philip Morris Philippines Manufacturing Inc.
- MONDE  M.Y. SAN Corporation
- KRAFT FOODS, INC.
- Pepsi Cola Products
- MERCK
- RFM Food Corporation
- SUYEN CORPORATION
- UNIVERSAL ROBINA CORPORATION
- SAN MIGUEL CORPORATION
- DISTELLERIA LIMTUACO
- LIWAYWAY MARKETING CORP.
- PHILIPPINE BREVERAGE
- ASIA BREWERY
- PHILIPPINE AIRLINES
- FORTUNE TOBACCO CORP.
- GEOLOGISTICS DISTRIBUTIONS
- LBC DEVELOPMENT
- EUROTILES
- CERAMIC PLAZA
- BK ELECTRONICS
- GLOBAL LIGHTNING
- BIG-E
- PHILIPPINE SPRING WATER
- Splash Corporation

And other 1520 customers to be mention when it come to major clients. For average clients we have 2804 customers in medium and small scale in the market who is buying from us.

Number of Transaction:

As of June 2008, 50-85 Transaction per day, per week it has an average of 450 transaction and 2843 transaction a month.

Organizational Chart:

Presid

ene
MAna
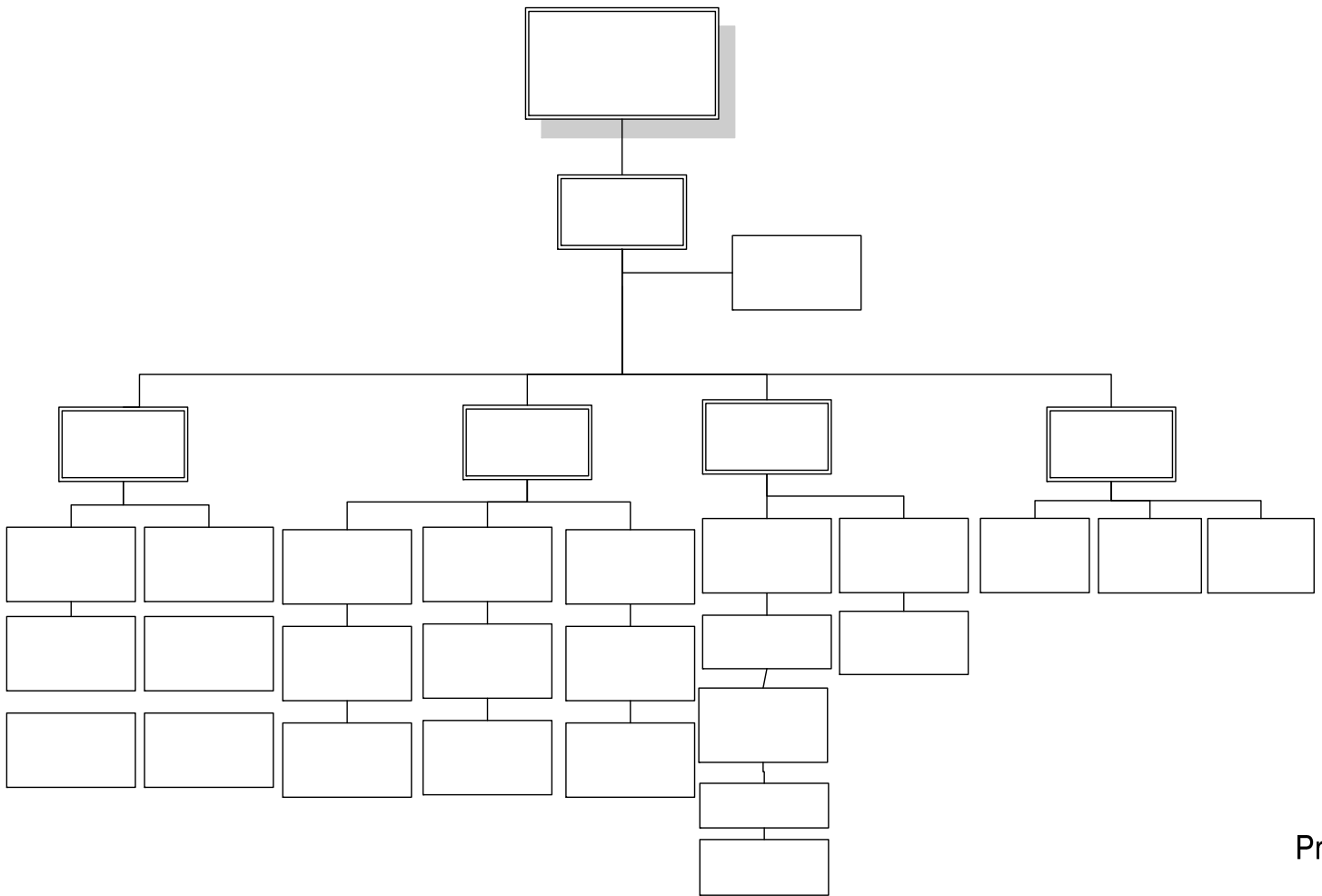
## 1.2. Statement of the problem:

The inventory system of the company that affect the marketing strategy of the company.

- Due to insufficient time the company uses manual coding
- Unguarded manual stock card

This kind of system was selected in terms of importance to the company department in achieving its goals, since they use manual inventory. In the current situation it is not applicable to use a manual system for the production in term of dealing with a large scale production every day, and also to prevent human error. Also to make the product in the ware house to be liquidated easily so the product will not expire and will not consume much space in the ware house.

## 1.3. Objectives of the System

The projected effectiveness, efficiency and adaptability is at least a mark up of 90% of its original.

- Implementation of computerize production coding and a network connected in the main office
- To have fast liquidation of the product.

Tangible Benefits:

- Minimize Overtime
- Error cutback
- Increased flexibility
- Increased speed of the report

Intangible Benefits:

- More competitive
- Improved control
- Fast assessment
- Increased the organization flexibility

## 1.4. Significance of the Study:

The significance of the study to the user is to have computerized daily production report for them able, to track the stocks easily and to have a fast liquidity of the product in the market. This will help the company to have a fast track of the stock in the ware house, thru the network connection that will be implemented for this kind of system. For this kind of system the company will minimize the error cut back of the report, and also the company will save much for the overtime for the production by means of having an updating of the production each and every time the coder have encode the new production, and the stock that have been sell to the market, it will have an automated updating. Also will help lessen the space of the ware house because the main office will sell the old product first before they will request another production for the product.

## 1.5. Scope Limitation:

The boundary that we chose to study is the production team with Quality Assurance Team. To track the system of the production carefully how is the step is being process and what are the things in the production that they do why don't have time to encode the production in the system. We did not include the finance department, marketing department and the administrative department because if we include all this in the study it will be hard for us. We will simplify the existing version of the production system, to an easier version. This specifies the production of per shifting and monitoring of the stock via updating it thru network connection, and to avoid the errors, miss productions of the product, and to help lessen the space in the factory/ware house.

## 2.1 Use Case Diagram:



Production of T

Check raw materials

Wa            d

recieve
high-quality goods report

receie rejected
report

create final
production report
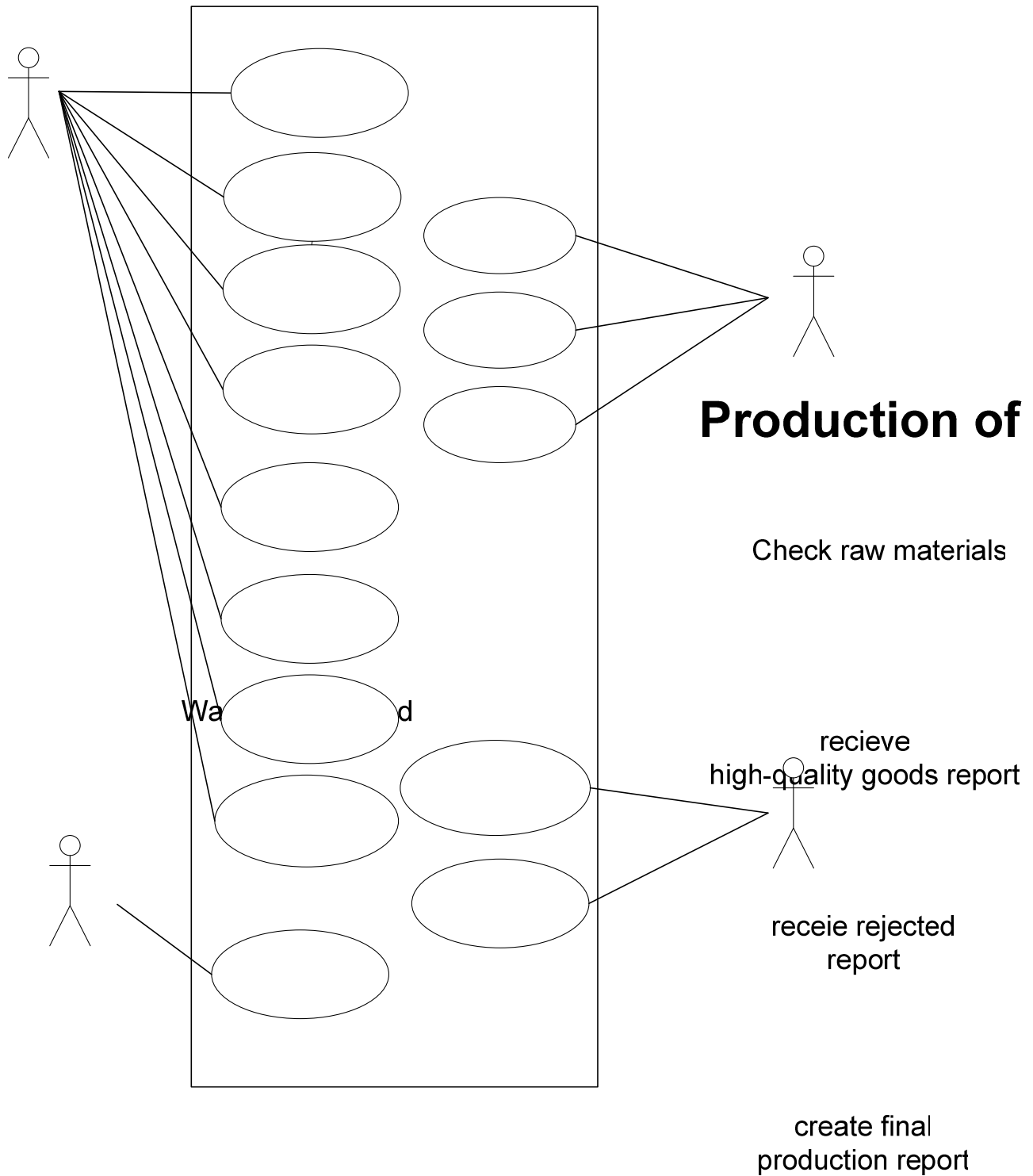
Use Case Narrative

**Identification Summary**

        Title: Check raw material availability

        Summary: This Use Case shows the checking of the availability of the raw

                  materials in the provision room.

        Actors: Warehouse Head

        Creation Date: June 28 2007

        Version: 1.1

**Flow of Events**

Pre Condition:

        The provision room is not locked

        The Ware House Head is not absent

Main Success Scenario:

        1.) Go to provisions room

        2.) Check if desired raw mat is available

        3.) Give raw mat to Lead operator

Alternative Sequences:

        A1: Raw mat not available

        A1 starts at point 1 of Main Success Scenario

                2.) Give raw mat request form to Production manager

                3.) Wait for raw mat arrival

                4.) Receive raw mat

                5.) Give raw mat to Lead operator

        A2: Raw mat requested incorrect

        A2 starts at point 3 of A1

        4.) Return delivered raw mat to main office

        Scenario goes back at point 2 of A1

Error Sequence

        E1: Warehouse head didn't create raw mat request form

        -   Use Case fails

Post Conditions:

      1.) New raw mat

2.)

**Identification Summary**

     Title: Request raw material from main office

     Summary: This Use Case shows how to request raw material from main office

     Actors: Production Manager

     Creation Date: June 28 2007

     Version: 1.1

**Flow of Events**

Pre Condition:

     It must have a requisition form of raw materials

     It must be approved by the Production Manager

Main Success Scenario**:**

     1.) Receive raw mat request form from Warehouse Head

     2.) Send request form to main office

Error Sequence

     E1: Warehouse head didn't create request form

     - Use Case fail

Post Conditions

     - Raw mat request form sent to main office

**Identification Summary**

Title: Receive high quality product report

Summary: This Use Case shows how high quality product report is received

Actors: Warehouse Head

Creation Date: June 28 2007

Version: 1.1


**Flow of Events**

Pre Condition:

The lead operator must have a production order to be slited

The machine is no broken

Main Success Scenario

1.) Lead Operator creates prod. report

2.) Receive draft report from lead operator


Error Sequence (Paki check kung tama)

E1: Lead Operator didn't create prod. Report

- Use Case fail

Post Conditions

- High quality report created

**Identification Summary**

Title: Receive rejected production report

Summary: This Use Case shows how rejected production report is received

Actors: Warehouse head

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Pre Condition:

The rewinder has crated a report

The rewinder rewind the rejected goods.

Main Success Scenario

1.) Rewinder creates rejected prod report

2.) Receive rejected prod report

Alternative Sequence

A1: Rewinder has no documents of rejected prod

A1 starts at the very beginning of MSS

1.) Q&A Team creates rejected prod report

2.) Receive rejected prod report

Error Sequence

E1: Both Q&A Team and Rewinder has no documents of rejected prod

- Use case fails

Post Conditions

- Rejected report created

**Identification Summary**

Title: Create final production report

Summary: This Use Case shows how the final production report is created

Actors: Warehouse head

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Pre Condition:

The ware house head must have the high-quality and rejected goods report.

The goods must be inspected by the Q&A team.

Main Success Scenario

1.) Receive high quality prod report from Lead operator

2.) Receive rejected prod report from Rewinder

3.) Update draft report (create final report)

Alternative Sequence

A1: Rewinder didn't not give rejected prod report

A1 starts at point 1 of MSS

2.) Receive rejected prod report from Q&A Team

3.) Update high quality report (create final report)

Error Sequence

E1: Didn't receive any report from Lead operator and rewinder

- Use Case fails

Post Conditions

- Final Production report made

**Identification Summary**

    Title: Verify production report

    Summary: This Use Case shows how the final production report is verified

    Actors: Production Manager

    Creation Date: June 28 2007

    Version: 1.1

**Flow of Events**

Pre Condition:

    The ware house head has made the final production report

    The Q&A team has finished the random testing of the product

    The ware house head is not absent.

Main Success Scenario

1.) Warehouse head creates final prod report

2.) Receive final report

3.) Verify passed and rejected products

Error Sequence

    E1: No final report was created

- Use Case fail

Post Conditions

- Products ready to release

**Identification Summary**

Title: Slit according to production

Summary: This Use Case shows how to slit an OBPP Jumbo according to

production order.

Actors: Lead Operator

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Pre Condition:

There must be an Production Order from main office

The must be a stock in the provision room

The lead operator for the assign machine is not absent

Main Success Scenario

1.) Receive raw mat from Warehouse head

2.) Create desired product

3.) Pass product to Q&A Team for random testing

Alternative Sequence

A1: No available raw mat

A1 starts from the beginning of MSS

1.) Wait for raw mat arrival

2.) Receive raw mat from Warehouse Head

3.) Create desired product

4.) Pass product to Q&A Team for random testing

Post Conditions

- Desired products produced

**Identification Summary**

      Title: Random Testing

      Summary: This Use Case shows how to have a random testing a product.

      Actors: Q&A Team

      Creation Date: June 28,2007

      Version 1.1

**Flow of Events**

Pre Condition

      The product must be done

      The Q&A Team has complete tools for checking

      The  Q&A team must receive a copy of the production for checking

Main Success Scenario

1.) Receive product from Lead operator

2.) Test product

3.) Wait for verification from production manager

4.) Release product

Alternative Sequence

      A1: Product didn't passed on testing (rejected)

      A1 starts at point 2 of MSS

      3.) Pass rejected product to Rewinder

      4.) Rewinder rewinds the product

      Scenario goes back at point 2 of Main Success Scenario

Error Sequence

      E1: No product was received from Lead operator

      -   Use case fails

Post Conditions

      -   Passed and Rejected product produced

**Identification Summary**

Title: Release Product

Summary: This Use Case shows how to release a product from the ware house.

Actors: Q&A Team

Creation Date: June 28,2007

Version: 1.1


**Flow of Events**

Pre Condition

The Q&A Team has done the random testing for the product.

The ware house head had finish creating the final production report for the final approval of the production manager.

Main Success Scenario

1.) Receive passed product from Q&A Team

2.) Wait for verification of production manager

3.) Release product

Error Sequence

E1: Prod manager didn't verify prod report

- Use case fails

Post Conditions

- Products Released

**Identification Summary**

       Title: Rewind rejected Product

       Summary: This Use Case shows the process of the rejected product that is being rewind back to form a new high-quality product  out of the rejected goods.

       Actors: Rewinder

       Creation Date: June 28,2007

       Version: 1.1

**Flow of Events**

Pre Condition:

       The rewinder is not absent.

       There must be a production for the present shifting.

       The Q&A Team is not absent for the present shifting.

       The Q&A Team had received the rewinded rejected report for random testing.

Main Success Scenario

    1.) Receive rejected products from Q&A Team

    2.) Rewind product

    3.) Give rewinded products to Q&A Team for testing

Alternative Sequence

       A1: If the product is being rejected by the Q&A Team for the second time

       A1: Alternative Sequence Start at point 2

       3.) Evaluate the product what is wrong

       4.) Fix the problem if it is applicable.

Error Sequence

       E1: If the product problem is not fixable.

       E1: Error Sequence starts at point 1

       1.) The product will consider as a scrap good.

       2.) Use Case Failed.

Post Conditions

       -   rewinded product

## 2.2 Process Walkthrough
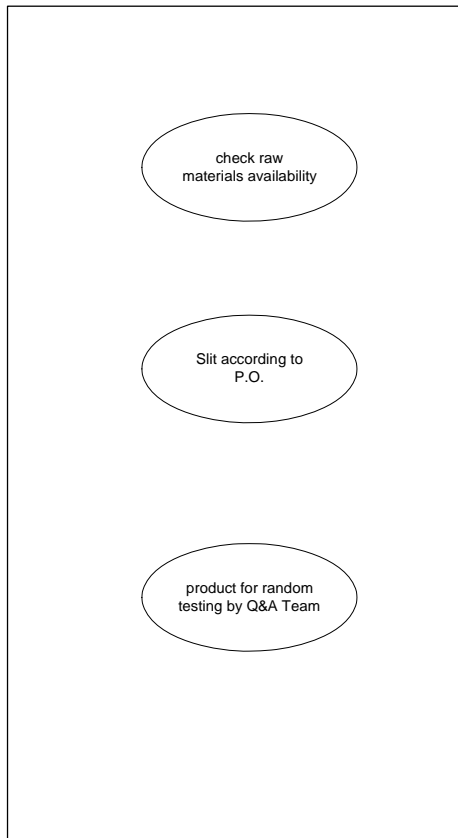


1.) Check raw materials availability



2.) still according to P.O.



3.) product for random testing by the Q&A Team

## 2.3. Activity Diagram:
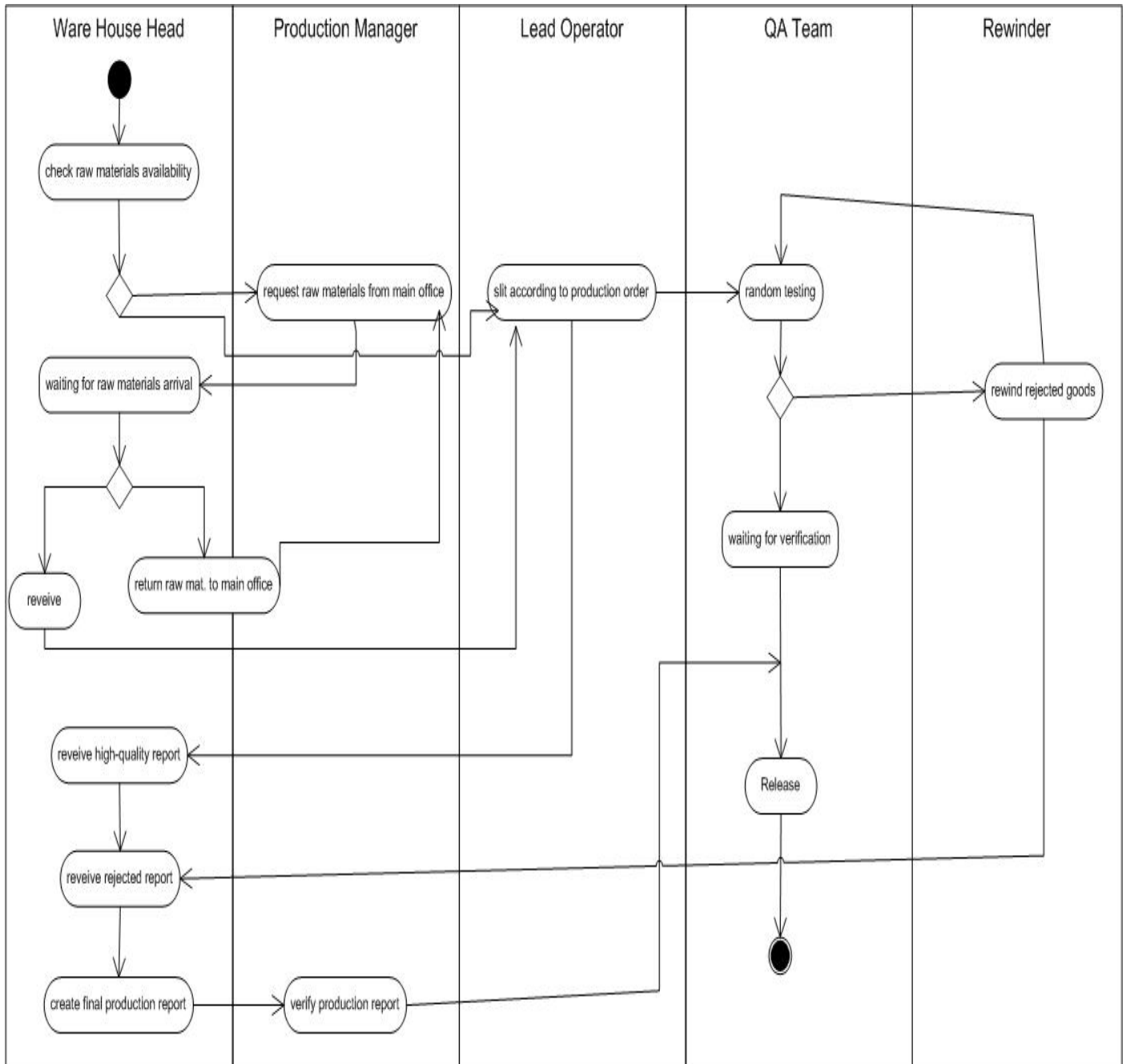
**Activity Diagram Narrative**

**Identification Summary**

> Title: Check raw material availability
>
> Summary: This Use Case shows the checking of the availability of the raw
>
>> materials in the provision room.
>
> Actors: Warehouse Head
>
> Creation Date: June 28 2007
>
> Version: 1.1

**Flow of Events**

Main Success Scenario:

> 5.) Go to provisions room
>
> 6.) Check if desired raw mat is available
>
> 7.) Give raw mat to Lead operator

Alternative Sequences:

> A1: Raw mat not available
>
> A1 starts at point 1 of Main Success Scenario
>
>> 2.) Give raw mat request form to Production manager
>>
>> 3.) Wait for raw mat arrival
>>
>> 4.) Receive raw mat
>>
>> 5.) Give raw mat to Lead operator
>
> A2: Raw mat requested incorrect
>
> A2 starts at point 3 of A1
>
> 8.) Return delivered raw mat to main office
>
> Scenario goes back at point 2 of A1

Error Sequence

> E1: Warehouse head didn't create raw mat request form
>
> - Use Case fails

Post Conditions:

> 3.) New raw mat

**Identification Summary**

Title: Request raw material from main office

Summary: This Use Case shows how to request raw material from main office

Actors: Production Manager

Creation Date: June 28 2007

Version: 1.1


**Flow of Events**

Main Success Scenario**:**

3.) Receive raw mat request form from Warehouse Head

4.) Send request form to main office

Error Sequence

E1: Warehouse head didn't create request form

- Use Case fail

Post Conditions

- Raw mat request form sent to main office

**Identification Summary**

Title: Receive high quality product report

Summary: This Use Case shows how high quality product report is received

Actors: Warehouse Head

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Main Success Scenario

3.) Lead Operator creates prod. report

4.) Receive draft report from lead operator

Error Sequence (Paki check kung tama)

E1: Lead Operator didn't create prod. Report

- Use Case fail

Post Conditions

- High quality report created

**Identification Summary**

Title: Receive rejected production report

Summary: This Use Case shows how rejected production report is received

Actors: Warehouse head

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Main Success Scenario

1.) Rewinder creates rejected prod report

2.) Receive rejected prod report

Alternative Sequence

A1: Rewinder has no documents of rejected prod

A1 starts at the very beginning of Main Success Scenario

1.) Q&A Team creates rejected prod report

2.) Receive rejected prod report

Error Sequence

E1: Both Q&A Team and Rewinder has no documents of rejected prod

- Use case fails

Post Conditions

- Rejected report created

**Identification Summary**

Title: Create final production report

Summary: This Use Case shows how the final production report is created

Actors: Warehouse head

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Main Success Scenario

1.) Receive high quality prod report from Lead operator

2.) Receive rejected prod report from Rewinder

4.) Update draft report (create final report)

Alternative Sequence

A1: Rewinder didn't give rejected production report

A1 starts at point 1 of MSS

1.) Receive rejected prod report from Q&A Team

2.) Update high quality report (create final report)

Error Sequence

E1: Didn't receive any report from Lead operator and rewinder

- Use Case fails

Post Conditions

- Final Production report made

**Identification Summary**

Title: Verify production report

Summary: This Use Case shows how the final production report is verified

Actors: Production Manager

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Main Success Scenario

1.) Warehouse head creates final prod report

2.) Receive final report

Verify passed and rejected products

Error Sequence

E1: No final report was created

- Use Case fail

Post Conditions

- Products ready to release

**Identification Summary**

Title: Slit according to production

Summary: This Use Case shows how to slit an OBPP Jumbo according to
production order.

Actors: Lead Operator

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Main Success Scenario

    1.) Receive raw mat from Warehouse head

    2.) Create desired product

    3.) Pass product to Q&A Team for random testing


Alternative Sequence

    A1: No available raw mat

    A1 starts from the beginning of Main Success Scenario

    1.) Wait for raw mat arrival

    2.) Receive raw mat from Warehouse Head

    3.) Create desired product

    4.) Pass product to Q&A Team for random testing


Post Conditions

    - Desired products produced

**Identification Summary**

Title: Random Testing

Summary: This Use Case shows how to have a random testing a product.

Actors: Q&A Team

Creation Date: June 28,2007

Version 1.1

**Flow of Events**

Main Success Scenario

1.) Receive product from Lead operator

2.) Test product

3.) Wait for verification from prod manager

4.) Release product

Alternative Sequence

A1: Product didn't passed on testing (rejected)

A1 starts at point 2 of Main Success Scenario

3.) Pass rejected product to Rewinder

4.) Rewinder rewinds the product

Scenario goes back at point 2 of Main Success Scenario

Error Sequence

E1: No product was received from Lead operator

- Use case fails

Post Conditions

- Passed and Rejected product produced

**Identification Summary**

       Title: Release Product

       Summary: This Use Case shows  how to release a product from the ware house.

       Actors: Q&A Team

       Creation Date: June 28,2007

       Version: 1.1

**Flow of Events**

Main Success Scenario

      1.) Receive passed product from Q&A Team

      2.) Wait for verification of production manager

      3.) Release product

Error Sequence

       E1: Prod manager didn't verify prod report

       -   Use case fails

Post Conditions

       -   Products Released

**Identification Summary**

Title: Rewind rejected Product

Summary: This Use Case shows the process of the rejected product that is being rewind back to form a new high-quality product out of the rejected goods.

Actors: Rewinder

Creation Date: June 28,2007

Version: 1.1

**Flow of Events**

Main Success Scenario

1.) Receive rejected products from Q&A Team

2.) Rewind product

3.) Give rewinded products to Q&A Team for testing

Alternative Sequence

A1: If the product is being rejected by the Q&A Team for the second time

A1: Alternative Sequence Start at point 2

3.) Evaluate the product what is wrong

4.) Fix the problem if it is applicable.

Error Sequence

E1: If the product problem is not fixable.

E1: Error Sequence starts at point 1

1.) The product will consider as a scrap good.

2.) Use Case Failed.

Post Conditions

- rewinded product

## 2.4 Geographic flowchart

```
Start
  │
  ▼
Go to Provisions Room
  │
  ▼
Check if there are raw materials available
  │
  ▼
Raw material available? ──Yes──▶ Give raw materials to Lead Operator ──▶ Slit According to Production ──▶ (A)
  │
  No
  │
  ▼
Create Raw material request form ──▶ Give Raw material request form to Production manager
  ▲                                           │
  │                                           ▼
 (E)                                  Send request form to main office
                                              │
                                              ▼
                                      Wait for raw material arrival
                                              │
                                              ▼
                              Requested Raw material correct? ──▶ (D)
                                              │
                                             Yes
                                              │
                                              ▼
                                      Receive Raw materials
```

```
Give high quality products to Q&A Team ──▶ Random Testing
                                              ▲
                                              │
(A) ──────────────────────────────────────────┘

Give rewinded product to Q&A Team ◀── Rewind rejected goods ──▶ (B)

Random Testing
  │
  ▼
Product Passed? ──No──▶ Give rejected product to Rewinder
  │
 Yes
  │
  ▼
Wait for Warehouse head confirmation
  │
  ▼
(C) ──▶ Release products
  │
  ▼
End
```

High
quality production
report

Give high quality
production report
to Warehouse
ead

Create Final
production report

Give final
production report
to Production
manager

Confirm
production report

## III. Chapter **3 – System Design**

## 3.1 Table of Recommendations

| 1st Column Problem: | 2nd Column Recommendation: | 3rd Column Affected System: |
|---|---|---|
| • Manual Coding | There must be people knowledge in computer, to input in the computer. Hire a I.T. officer , to ne in charge in the new system Encourage to update the production system every day. Change manual coding to automated coding. | None, the system will be updated and there will be additions |

## 3.2 Bench Marking

Crocodile Tapes & Co., Inc., 1321 Soler St., Sta. Cruz, Manila was established in 1992. We manufacture and convert a wide range of quality paper masking, polypropylene, coated vinyl, metalized cloth and duct tapes. These products service a variety of adhesive tape applications in many markets, including: the automotive industry, the paint and sundries market, the construction industries, the power and utility industry, as well as the military industries. Crocodile Tapes continues to leverage the knowledge gained from our 10-year commitment to the adhesive tape distributor to build a broader family of products supported by knowledgeable salespeople and a sophisticated manufacturing and distribution infrastructure.

7other Competitors:

1.) Crocodile Tapes

2.) Hi-Tech Corp.

3.) Armak Corp.

4.) 3M Int'l

5.) Good Hope

6.) Advance Paper Corporation

7.) Agility Corp.

|  | Tuff Chemical | Crocodile Tape |
|---|---|---|
| Number of customer: | 4358 customer | 3521 estimated customer |
| Number of transaction per month: | 2843 transaction/month | 2054 transaction/month |
| Number of branches: | 1 main | 3 (Manila, Davao, Cebu) |
| Type of Information System: | CBIS | CBIS |

1.) The quality of product is not good.

2.) To be the market leading manufacturer of Adhesive Tapes.

3.) To have a competitive market.

4.) Larger and faster machinery

5.) Modern marketing tools

6.) Popular and Commercialized

7.) Presentable Facilities

8.) Higher Capital and more Liqudity.

9.) With Hundreds of dealers.

10.) Efficient documentation.

## 3.3 Streamlining

1.) Simplification – we simplified the existing system of the company.

2.) Automation – from manual coding, we leveled up the automation coding to make the process fast.

3.) Simple Language – we simplified the language of the system to make it user friendly.

4.) Process Cycle Time Reduction – instead using manual coding that make the whole process slow, we make it computerized so the process of the whole event will be fast and efficient.

5.) Upgrading – we level up the system to make it simpler.

## 3.3 Use Case Diagram of proposed

**Production of Tuff Chemical**
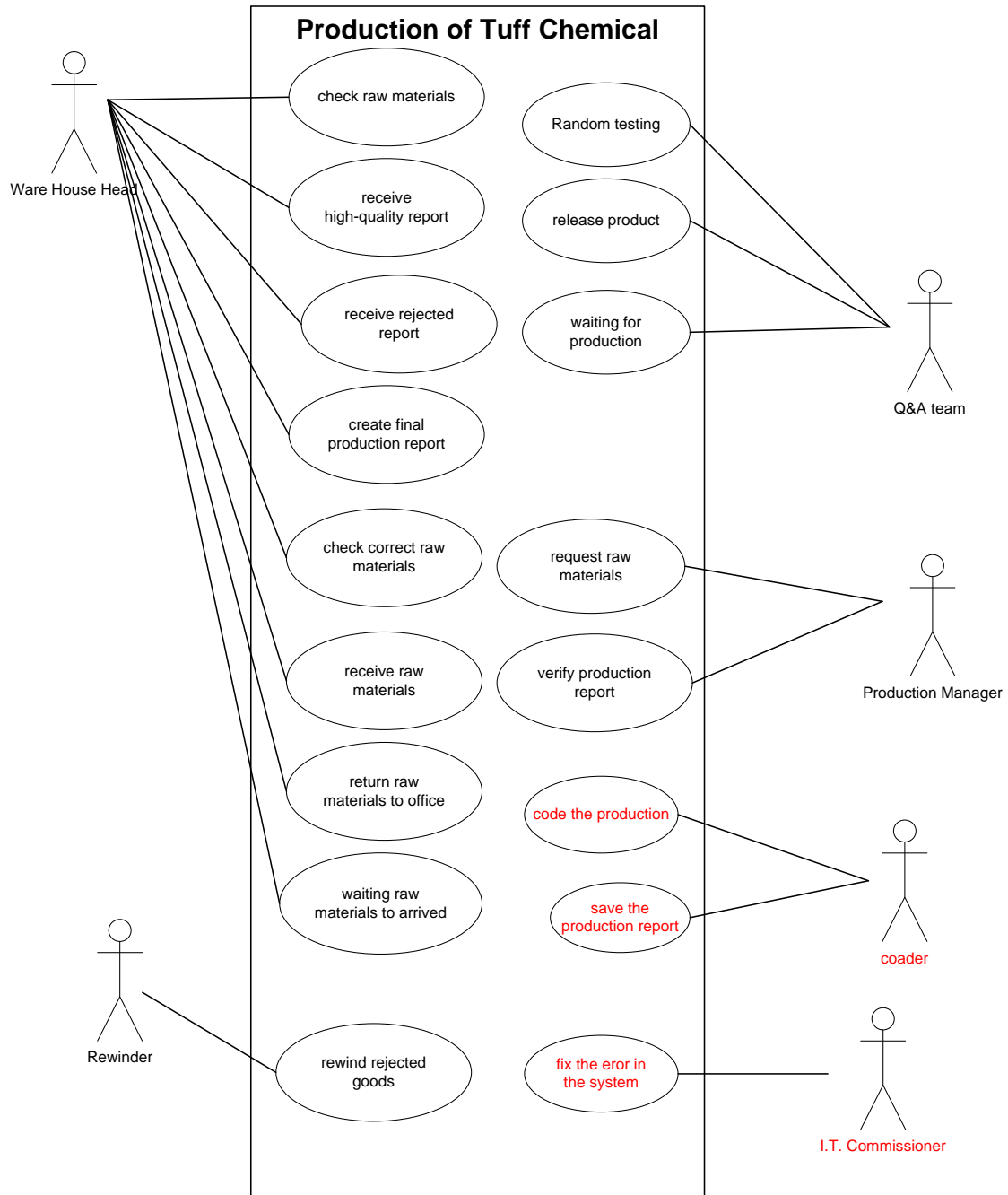
Use Case Narrative (Proposed)

**Identification Summary**

Title: Check raw material availability

Summary: This Use Case shows the checking of the availability of the raw

materials in the provision room.

Actors: Warehouse Head

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Pre Condition:

The provision room is not locked

The Ware House Head is not absent

Main Success Scenario:

9.) Go to provisions room

10.)  Check if desired raw mat is available

11.)  Give raw mat to Lead operator

Alternative Sequences:

A1: Raw mat not available

A1 starts at point 1 of Main Success Scenario

2.) Give raw mat request form to Production manager

3.) Wait for raw mat arrival

4.) Receive raw mat

5.) Give raw mat to Lead operator

A2: Raw mat requested incorrect

A2 starts at point 3 of A1

12.)  Return delivered raw mat to main office

Scenario goes back at point 2 of A1

Error Sequence

E1: Warehouse head didn't create raw mat request form

- Use Case fails

Post Conditions:

    5.) New raw mat

**Identification Summary**

    Title: Request raw material from main office

    Summary: This Use Case shows how to request raw material from main office

    Actors: Production Manager

    Creation Date: June 28 2007

    Version: 1.1

**Flow of Events**

Pre Condition:

    It must have a requisition form of raw materials

    It must be approved by the Production Manager

Main Success Scenario**:**

    5.) Receive raw mat request form from Warehouse Head

    6.) Send request form to main office

Error Sequence

    E1: Warehouse head didn't create request form

    - Use Case fail

Post Conditions

    - Raw mat request form sent to main office

**Identification Summary**

> Title: Receive high quality product report

> Summary: This Use Case shows how high quality product report is received

> Actors: Warehouse Head

> Creation Date: June 28 2007

> Version: 1.1

**Flow of Events**

Pre Condition:

> The lead operator must have a production order to be slited

> The machine is no broken

Main Success Scenario

> 5.) Lead Operator creates prod. report

> 6.) Receive draft report from lead operator

Error Sequence (Paki check kung tama)

> E1: Lead Operator didn't create prod. Report

> - Use Case fail

Post Conditions

> - High quality report created

**Identification Summary**

Title: Receive rejected production report

Summary: This Use Case shows how rejected production report is received

Actors: Warehouse head

Creation Date: June 28 2007

Version: 1.1


**Flow of Events**

Pre Condition:

The rewinder has crated a report

The rewinder rewind the rejected goods.

Main Success Scenario

3.) Rewinder creates rejected prod report

4.) Receive rejected prod report

Alternative Sequence

A1: Rewinder has no documents of rejected prod

A1 starts at the very beginning of MSS

4.) Q&A Team creates rejected prod report

5.) Receive rejected prod report

Error Sequence

E1: Both Q&A Team and Rewinder has no documents of rejected prod

- Use case fails

Post Conditions

- Rejected report created

**Identification Summary**

Title: Create final production report

Summary: This Use Case shows how the final production report is created

Actors: Warehouse head

Creation Date: June 28 2007

Version: 1.1


**Flow of Events**

Pre Condition:

The ware house head must have the high-quality and rejected goods report.

The goods must be inspected by the Q&A team.

Main Success Scenario

4.) Receive high quality prod report from Lead operator

5.) Receive rejected prod report from Rewinder

6.) Update draft report (create final report)


Alternative Sequence

A1: Rewinder didn't not give rejected prod report

A1 starts at point 1 of MSS

2.) Receive rejected prod report from Q&A Team

6.) Update high quality report (create final report)

Error Sequence

E1: Didn't receive any report from Lead operator and rewinder

- Use Case fails

Post Conditions

- Final Production report made

**Identification Summary**

        Title: Verify production report

        Summary: This Use Case shows how the final production report is verified

        Actors: Production Manager

        Creation Date: June 28 2007

        Version: 1.1


**Flow of Events**

Pre Condition:

        The ware house head has made the final production report

        The Q&A team has finished the random testing of the product

        The ware house head is not absent.

Main Success Scenario

    4.) Warehouse head creates final prod report

    5.) Receive final report

    6.) Verify passed and rejected products


Error Sequence

        E1: No final report was created

    -   Use Case fail

Post Conditions

    -   Products ready to release

**Identification Summary**

Title: Slit according to production

Summary: This Use Case shows how to slit an OBPP Jumbo according to

Production order.

Actors: Lead Operator

Creation Date: June 28 2007

Version: 1.1

**Flow of Events**

Pre Condition:

There must be an Production Order from main office

The must be a stock in the provision room

The lead operator for the assign machine is not absent

Main Success Scenario

4.) Receive raw mat from Warehouse head

5.) Create desired product

6.) Pass product to Q&A Team for random testing

Alternative Sequence

A1: No available raw mat

A1 starts from the beginning of MSS

5.) Wait for raw mat arrival

6.) Receive raw mat from Warehouse Head

7.) Create desired product

8.) Pass product to Q&A Team for random testing

Post Conditions

- Desired products produced

\-

**Identification Summary**

 Title: Random Testing

 Summary: This Use Case shows how to have a random testing a product.

 Actors: Q&A Team

 Creation Date: June 28, 2007

 Version 1.1

**Flow of Events**

Pre Condition

 The product must be done

 The Q&A Team has complete tools for checking

 The Q&A team must receive a copy of the production for checking

Main Success Scenario

 5.) Receive product from Lead operator

 6.) Test product

 7.) Wait for verification from production manager

 8.) Release product

Alternative Sequence

 A1: Product didn't passed on testing (rejected)

 A1 starts at point 2 of MSS

 3.) Pass rejected product to Rewinder

 4.) Rewinder rewinds the product

 Scenario goes back at point 2 of Main Success Scenario

Error Sequence

 E1: No product was received from Lead operator

 - Use case fails

Post Conditions

 - Passed and Rejected product produced

\-

**Identification Summary**

Title: Release Product

Summary: This Use Case shows how to release a product from the ware house.

Actors: Q&A Team

Creation Date: June 28,2007

Version: 1.1


**Flow of Events**

Pre Condition

The Q&A Team has done the random testing for the product.

The ware house head had finish creating the final production report for the final

approval of the production manager.

Main Success Scenario

4.) Receive passed product from Q&A Team

5.) Wait for verification of production manager

6.) Release product

Error Sequence

E1: Prod manager didn't verify prod report

\-    Use case fails

Post Conditions

\-    Products Released

**Identification Summary**

        Title: Rewind rejected Product

        Summary: This Use Case shows the process of the rejected product that is being rewind back to form a new high-quality product out of the rejected goods.

        Actors: Rewinder

        Creation Date: June 28,2007

        Version: 1.1


**Flow of Events**

Pre Condition:

        The rewinder is not absent.

        There must be a production for the present shifting.

        The Q&A Team is not absent for the present shifting.

        The Q&A Team had received the rewinded rejected report for random testing.

Main Success Scenario

    4.) Receive rejected products from Q&A Team

    5.) Rewind product

    6.) Give rewinded products to Q&A Team for testing

Alternative Sequence

        A1: If the product is being rejected by the Q&A Team for the second time

        A1: Alternative Sequence Start at point 2

        3.) Evaluate the product what is wrong

        4.) Fix the problem if it is applicable.

Error Sequence

        E1: If the product problem is not fixable.

        E1: Error Sequence starts at point 1

    5.) The product will consider as a scrap good.

    6.) Use Case Failed.


Post Conditions

- rewinded product

**Identification Summary**

Title: Code the production

Summary: This Use Case shows the basic steps in encoding the production.

Actor: Coder

Creation Date: July 15 2007

Version: 1.2

**Flow of Events**

Main Success Scenario

1.) Receive final production report from Production Manager

2.) Check if system is working

3.) Code the production

Alternative Scenario

A1: System is not working

A1 starts at point 2 of Main Success Scenario

1.) I.T. commissioner will fix the system

Scenario goes back at point 2 of Main Success Scenario

Error Sequence

E1: I.T. commissioner is not able to fix the system

- Use Case fails

Post Conditions

- Production encoded

**Identification Summary**

Title: Save Production report

Summary: This Use Case shows how the coder will save the production after encoding

Actors: Coder

Creation Date: July 15 2007

Version: 1.2

**Flow of Events**

Main Success Scenario

1.) Receive final production report from Production Manager

2.) Check if the system is working

3.) Code the production

4.) Save encoding

Alternative Sequence

A1: System is not working

A1 starts at point 2 of Main Success Scenario

3.) I.T. commissioner fixes the system

Scenario goes back at point 2 of Main Success Scenario

Error Sequence

E1: I.T commissioner is not able to fix the system

- Use Case fails

Post Conditions

- Production encoded

- Saved encoded production

**Identification Summary**

    Title: Fix error in the system

    Summary: This Use Case shows how the I.T. commissioner fixes the error being

        encountered

    Actors: I.T. commissioner

    Creation Date: July 15 2007

    Version: 1.2

**Flow of Events**

Main Success Scenario

    1.) Coder informs I.T. commissioner that the system is not working

    2.) I.T. commissioner fixes the system

Error Sequence

    E1: Unable to fix the system

    - Use Case fails

Post Conditions

    - System fixed and ready for encoding

## 3.4 Streamlining

1.) Simplification – we simplified the existing system of the company.

2.) Automation – from manual coding, we leveled up the automation coding to make the process fast.

3.) Simple Language – we simplified the language of the system to make it user friendly.

4.) Process Cycle Time Reduction – instead using manual coding that make the whole process slow, we make it computerized so the process of the whole event will be fast and efficient.

5.) Upgrading – we level up the system to make it simpler.

# Appendix III

## References:

Book Review

Chapter 1-10

     Systems Analysis and Design Fourth Edition, Shelly G., Cashman T., Rosenblatt H.

Chapter 11

Chapter 12

     Applying Use Cases Second Edition, Schneide g., Winters J.

## Case Study

     Founders at Work, Livingston Jessica

## Use Case

**"LinkedIn" [www.linkedin.com](www.linkedin.com)**
**"twitter"[www.twitter.com](www.twitter.com)**
**"Blogging at multiply"[www.multiply.com](www.multiply.com)**
**"Frosh-special Election"[www.taft-ispc90/comelec](www.taft-ispc90/comelec)**
**"Slideshare"[www.sledeshare.com](www.sledeshare.com)**
**"Civil Service exam"[www.csc.gov.ph/cscweb/cscweb.html](www.csc.gov.ph/cscweb/cscweb.html)**
**"Student driver license"[www.lto.gov.ph](www.lto.gov.ph)**
**"BIR TIN Number"[www.bir.gov.ph](www.bir.gov.ph)**