

CHAPTER 2

CASE STUDY BACKGROUND

2.1 Company Background

Siemens is an international company which is world wide accepted for its various ranges of products. It has more than 400,000 employees around the world working to develop and manufacture leading-edge products, design and install complex systems and projects, and tailor a range of individualized service as varied as its customer's requirement.

In 1991, Siemens Ltd. was founded in Thailand as branch company of Siemens. The company started with telecommunication business only. Its products have been sold to both public and private sector. Nowadays, Siemens Ltd. (Thailand) has expanded its business to various ranges of products such as energy infrastructure, industrial and building system, automation systems and medical engineering sectors.

Information and Communication Network (ICN) is one of Siemens' business unit which takes care of telecommunication business. It is the biggest segment of the company since its sales volume covers almost 50 percent of total revenue of Siemens Ltd. (Thailand). ICN has various ranges of telecommunication products, however, they can be grouped as follow:

1) *Information and Broadband*

This covers a complete range of Internet protocol and data networks for local area network, radio relay, multi-service networks and broadband access technology.

2) *Communication on Air*

This provides mobile radio networks and radio solutions as well as intelligent network solutions for the entire area of Information and Communication Networks.

3) *Wireline Network Communication*

This composes of all wire-line communication equipment.

4) *Call Center Solutions*

This includes products, solutions and applications for customer-specific call centers.

5) *Transport Networks*

This consists of transport networks as the backbone of national and international information highways, as well as management solutions for the entire area of Information and Communication Networks.

The MSC Relocation project which was chosen as case study project is one of projects from the section of Communication on Air.

In general, the majority of company's sales are in form of turn-key project. That means ICN not only supply products to customer but also has to install and commissioning the product to make sure that it can work properly according to what identified in the contract.

2.2 Company Organisation

All ICN departments are formed as company organization structure as shown in figure 2.1. The top position of ICN organization is the Chief Executive Officer (CEO) who has responsibility to set up company mission, policy and strategy, then direct and control all departments to proceed according to his strategy.

ICN organization consists of the following departments.

1) *ICN CM (Commercial management)* The main functions of ICN CM are commercial participation in quotation, control of receipt of payment and executing project internal commercial control.

2) *ICN BD (Business Development, Marketing and Sales Coordination)* This department has responsibility to explore and create new market opportunities.

3) *ICN Q (Quality and Central Tasks)* All quality issues are major concerns for this department. Their responsibility is to ensure that works and products of ICN are compliance with ISO9002 Quality standard.

4) *ICN S (Sale Representative)* the main objective of ICN S is to sell company's product to the target customers. ICN S consists of four departments. They are separated by their target customers.

- ICN S1 → TOT (Telephone Organisation of Thailand), CAM (Cambodia), LAO, MYA (Myanma), and SC&C (Shinawatra Computer & Communication)
- ICN S2 → CAT (Communication Authority of Thailand)
- ICN S3 → AIS (Advance Info Service)
- ICN S4 → TA (Telecom Asia) and Military

5) *ICN PLM (Product Line Management)* ICN PLM is responsible for preparing parts of offer for customer, evaluating parts of customer requirement and specification, and designing parts of network and system according to customer requirement. ICN PLM is divided to three departments based on its major products.

- ICN PLM WN/TR (Wireline and Transport Networks)
- ICN PLM IB (Information and Broadband Networks)
- ICN PLM CA (Mobile, wireless and Intelligent Networks)

6) *ICN O (Operation)* ICN O provides both human resources and non-human resources to execute the project.

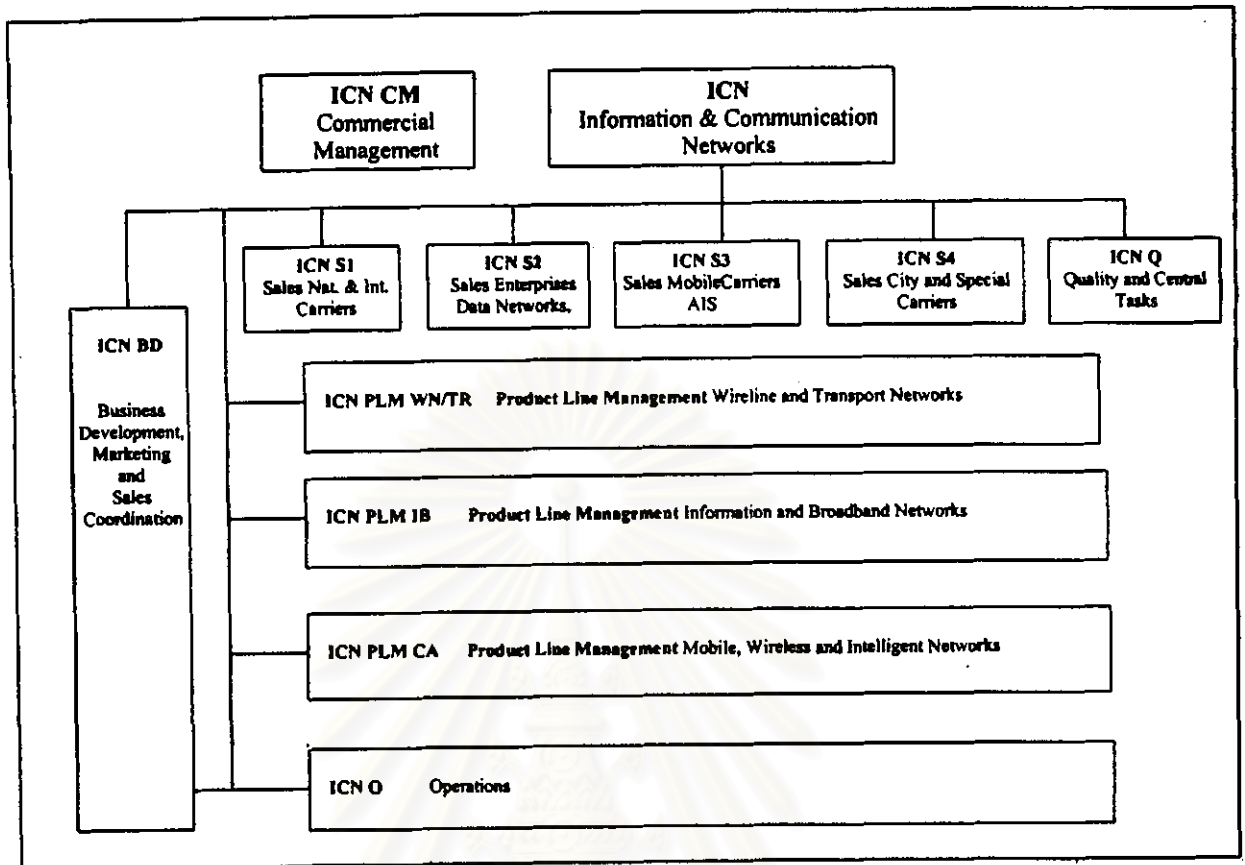


Figure 2.1: ICN organisation (Siemens internal memorandum, 1998)

2.3 ICN Process

In general, the ICN process can be divided into two main processes which are:

- > ICN offer process
- > ICN Contract Execution process

2.3.1 ICN Offer Process

The ICN offer process is initiated after receiving a tender / request for offering from customer. It covers the entire processes of preparing offer from receiving a request from customer until hand-over of a signed contract to the ordering organization. However, this process is beyond the scope of this case study.

2.3.2 ICN Contract Execution Process

Normally contract execution process is applied to project after the project contract is officially signed between company and customer. Although all projects in the company are different in size, scope and complexity and each of them is unique, however, the company has guideline process for project team to follow up through out project life. The process identifies all important tasks to carry out the project from start up until project is phase out. The contract execution process consists of twelve processes as follow.

1. Internal kick-off meeting process

The project manager and all responsible person (contract interface) of the commercial, site engineering, procurement, resource pool, training department and customer support department are appointed and invited to the kick off meeting. Then key account manager gives an overview of the contract and explains scope of work to project team. All contract items have to be clarified during the meeting.

2. Implementation plan and calculation process

Project manager prepares plan and calculates budget according to the scope of work of the contract.

3. Customer kick-off meeting process

Project manager introduces project team to the customer and makes some general agreement with customer such as document approval process, format of reporting and master implementation plan.

4. Site engineering and survey process

Site engineering department prepares site-survey schedule; performs site survey; designs all kinds of layout and submits layout to customer for approval.

5. Material ordering process

Ordering department with assistance of project manager list specification and quantity of equipment required for the project according to the contract and start ordering material.

6. Shipment and custom clearance process

Shipping department checks equipment with the custom approved list; performs custom clearance and delivers equipment from custom to warehouse.

7. Material delivery to site process

Project co-ordinator coordinates with warehouse to deliver equipment to customer's site.

8. Implementation process

Project implementation team do installation and commissioning as well as test the product according to Acceptance Test Manual (ATMN).

9. Provisional Acceptance Test (PAT) process

Project co-ordinator performs inventory check and functional test together with customer

10. Request for PAC process

Project manager requests for Provisional Acceptance Certificate (PAC) from customer and then forwards the PAC as well as all other related documents required for the invoicing to the contract commercial team.

11. Request for FAC process

Project manager requests for Final Acceptance Certificate (FAC) from customer and then forwards the FAC document as well as all other related documents required for the invoicing to the contract commercial team.

12. Warranty Support process

Customer support team initiates warranty period according to contract.

2.4 Background of the Case Study Project

AIS (Advanced Info Service Public Co., Ltd.) is one of three operators who provides customers with mobile phone service in Thailand. Its services cover both NMT (Nordic Mobile Telephone) system and GSM (Global System for Mobile

communication) system which are analog system and digital system for mobile phone, consecutively. The MSC (Mobile Service Center) relocation project was initiated in 1998 because of AIS requirement in relocating the MSC from Phitsanuloke province to be used in Ubonratchthani province. Considering the main tasks related to this project, they can be listed out in sequence as follow:

1. *De-install the existing MSC equipment*

The installation team is responsible for de-installation the existing MSC equipment. After de-installation, the MSC equipment such as equipment racks, hardware modules, cables, cable ladders are classified for ease to packing and avoidance of mess when re-install equipment at the destination province.

2. *Packing the MSC equipment*

The MSC equipment is loaded into equipment box. Then list of equipment, which identifies equipment contained in each box, are created and attached beside the box. This list will be used for checking the equipment when it reach the destination.

3. *Deliver equipment to the destination*

Equipment boxes are loaded to trucks and delivered to customer's site at Ubonratchathani province.

4. *Install the MSC equipment*

The equipment are unpacked and checked with the equipment list. After that installation team start doing hardware installation based on the approved layout received from the customer.

5. *Commissioning the MSC equipment*

Before performing commissioning, commissioning team has to prepare software and database for the MSC. Both of them must be correctly created based on the specification of the MSC identified in the contract. To commissioning MSC, first, the software and database are downloaded into system then all hardware equipment and features of the MSC are tested to ensure that they can function correctly as written in the contract.

6. *Perform Provisional Acceptance Test (PAT) with customer*

Commission team performs PAT together with customer by follow all test cases identified in the approved Acceptance Test Manual (ATMN).

Refer to the contract execution process, since all material required in this project is available and ready to be used so the material ordering process as well as the shipment and custom clearance process are excluded from the contract execution process. In addition, the scope of research identifies the period when implementation team finish the PAT with customer as the end of the research, therefore, the request for PAC process, the request for FAC process and the warranty support process are beyond the scope of research. The diagram of this case study project based on the scope of the research can be drawn as shown in figure 2.2.



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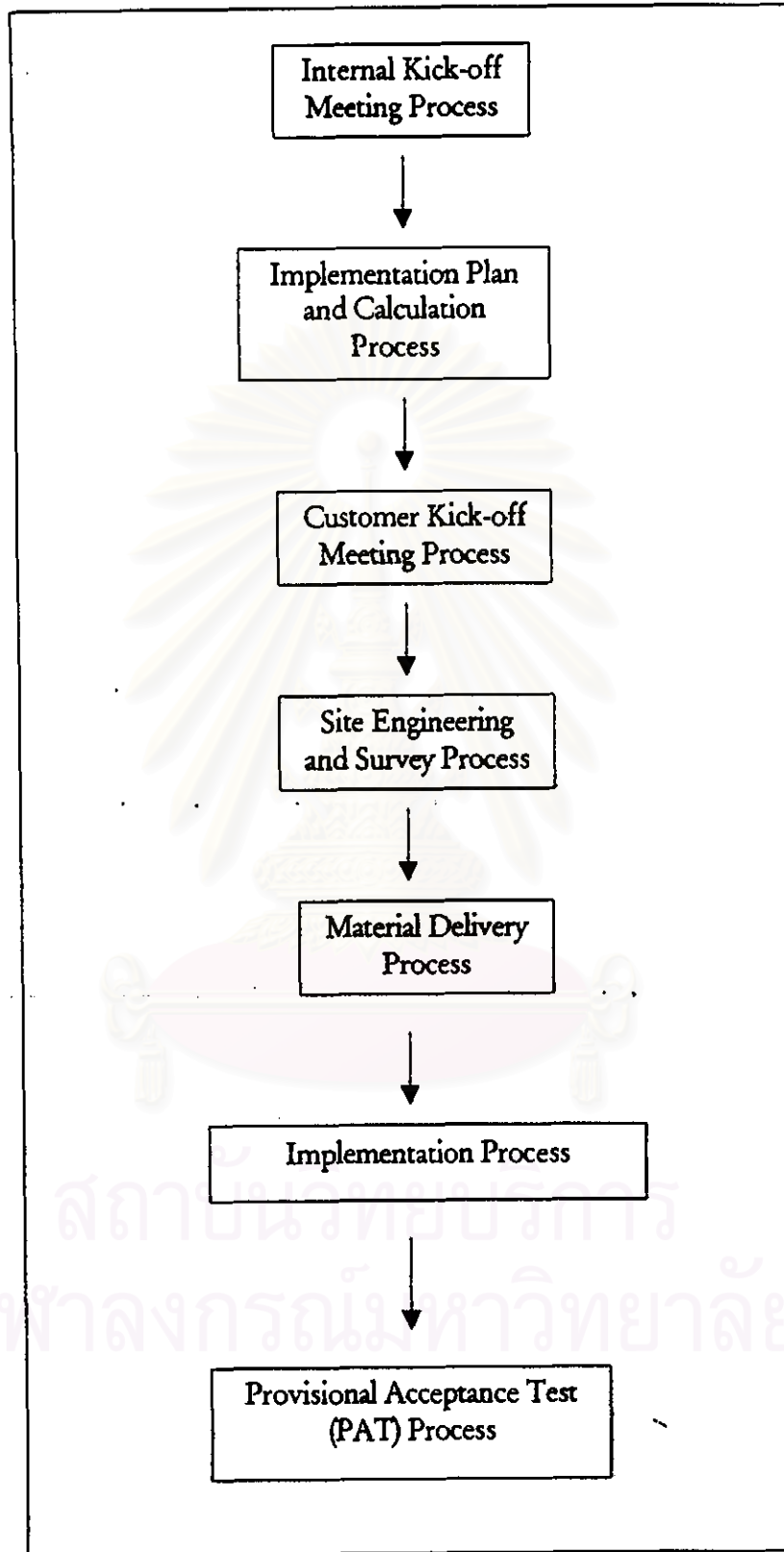


Figure 2.2 Contract Execution process of the case study project