CHAPTER V
PROJECT IMPLEMENTATION

5.1   System Implementation

In this phase of the SDLC would concentrate on the construction of the new system. The main activities involved during this phase would be the writing testing and documenting of the programs being used in the ERP system. This also includes the data conversion and transfer from the existing IS to the new IS, as well as training of the entire system's stake holder.

According to Shelly et al (2003:25), the main objective of system implementation was *"...to deliver a completely functioning and documented information system."* Within this phase, system assessment also known as system evaluation would also be done to determine whether the system would be working properly and whether the costs and the benefits were of the expectation anticipated.

5.2   System description and requirement

The ERP system is a big information system. Its inquiry of computer hardware and software were presented in chapter 3. The following figure shows the new network connection or Wide Area Network (WAN) containing intranet of the company.

All clients computer both desktop and laptop and servers would be connected to the switch which would linked to the server using RJ45 connector port. The switch would be link with the network terminal using ISDN as a communication route linking the servers, and both Local Area Network at the office and at the factory.

The ERP system utilized a single the SQL database. Any transaction, information input action done on either server can be see on-line real time. As the load of transferring the data was large because the ISDN was utilize for other purpose such as online meeting and voice over internet protocol (VOIP) bandwidth required was at least 512kbps.
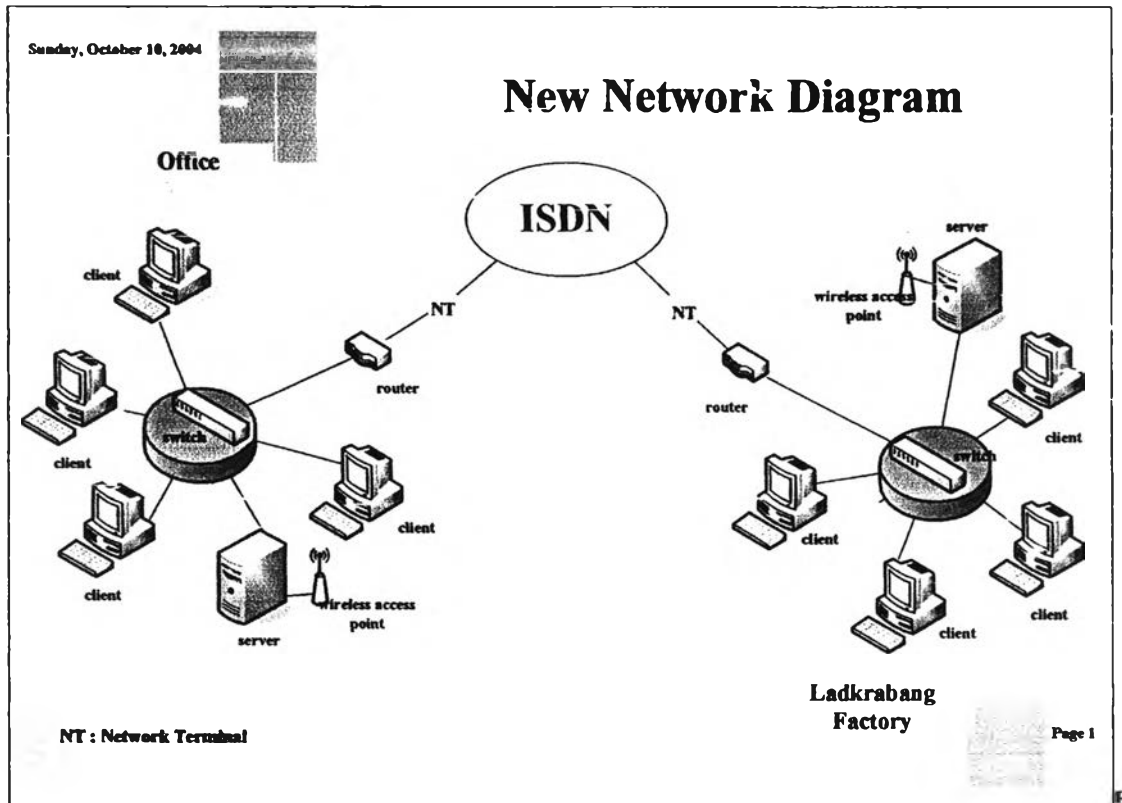
Figure 5-1: New network diagram used by the ERP system

In case of disaster recovery, the system would automatic back up daily using DVD Rams. There would be a back up everyday, using 2 DVD Rams. The data within the DVD Rams shall be kept for at least a month. The system server would perform automatic back up incrementally 24 hours to prevent data lost.

5.2.1 ERP System Application

Figure 5-2 shows the first page when the user attempts to enter the system.

Figure 5-2: User application log in page

The system would prompt for her/his user name and password. The information that could be view and retrieve depends on the level of the password assigned to each different ERP system module. Each manager could access (either as read-only or retrieve) her/his department for activities and reports. Where by the user which were at the operational level could only access their specific tasks given in the job description. The retrieve of information would need the authorization from the department manager as well as the system administration.

When entered the user would find her/himself with the "My Home Page" page. This was shown in the figure 5-3. This page acts like the navigator for the user.
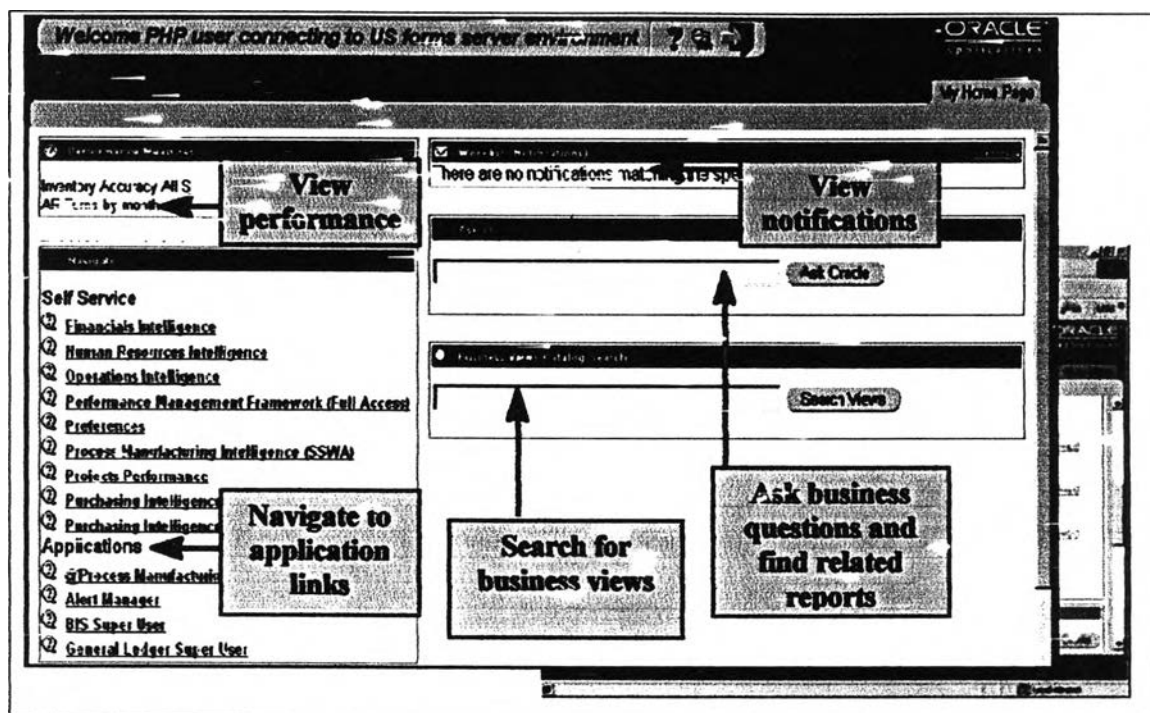
Figure 5-3: User Homepage

Nearly all activities related to BPs start with this "My Home Page" page. On this page there would be useful information, links, search engine, and help system. Namely, one the "Application Link" to various applications, the unauthorized user could only view or enter certain application. If the user's password was authorized for certain application only e.g. sale order, other application links would be made idle.

On this page there would be also notification bar where user were inform of their next job e.g. an issuing of purchase order to the raw material supplier was required, there would be mail in the inbox of the procurement officers etc. There would be also search engine to find related report and help to ask question on how to use the system as a helpdesk.

The figure 5-4 showed page exhibiting options for reports within an application. The users if authorized again would be able to view or retrieve (print, save, edit), or if not authorize the report link would be either shown but made idle or could not be seen.

Figure 5-4: An example of report list

5.2.2 ERP System Sale Order Management

The figure 5-5 shows an example of "sale order" application's function screen. In this function screen there would be various functions that the sale agent could access. Figure 5-6 shows an example of processes of each sale order or transaction (given the order identification number). In this page the user can track what would be the next step (the business process) and the status of that particular job they are following, e.g. the area sale representative could track down of when her/his customer's order would be dispatch from the warehouse, which truck number and personnel would be delivering the order.

Figure 5-5: Application's function screen

Figure 5-6: Application's process screen

Figure 5-7 shows order information of an order made by the customer. This show various information in each fields such as order identification number, the customer's information i.e. customer identification number, the customer contact address, shipping, billing location, product ordered, discount price, currency, status and summary.

Figure 5-7: Sale order function page

The figure 5-8, shows the sub folder which show information such as request date, schedule that the customer will receive items order. The product availability could also be check on this page. While figure 5-9 showed the released sale order which was ready for finish good picking and delivery.

As mentioned in chapter 4 that all the parties involved would benefit from this on line real time information due to increase visibility of the information on hand.

When an order was approved, the invoice and picking list would be automatic printed out (according to the new BPs shown in chapter 4). An example of the invoice printing page could be found in figure 5-10. The form would show the delivery destination and billing destination, credit terms, commitment of delivery, responsible sale person, and taxation. It also contains useful information for the responsible person such as balances, which will show the customer buying record and history. An example of the invoice could be found in figure 5-11.

Figure 5-8: Sale order showing real time information

Figure 5-9: Released Sale Order for picking

Figure 5-10: Invoice printing transaction page

Prior to order shipping, the ERP software had the ability of "Container Management". This function would allow the user to efficiently utilize the delivery truck and plan the capacity required which also include for outsourced delivery truck. These functions could help the logistic manger to better manage execute product delivery. Other departments could benefit from the increase visibility of the information, and promotes collaboration with the logistic partner and suppliers. The shipping transaction summary can be seen in the figure 5-12.
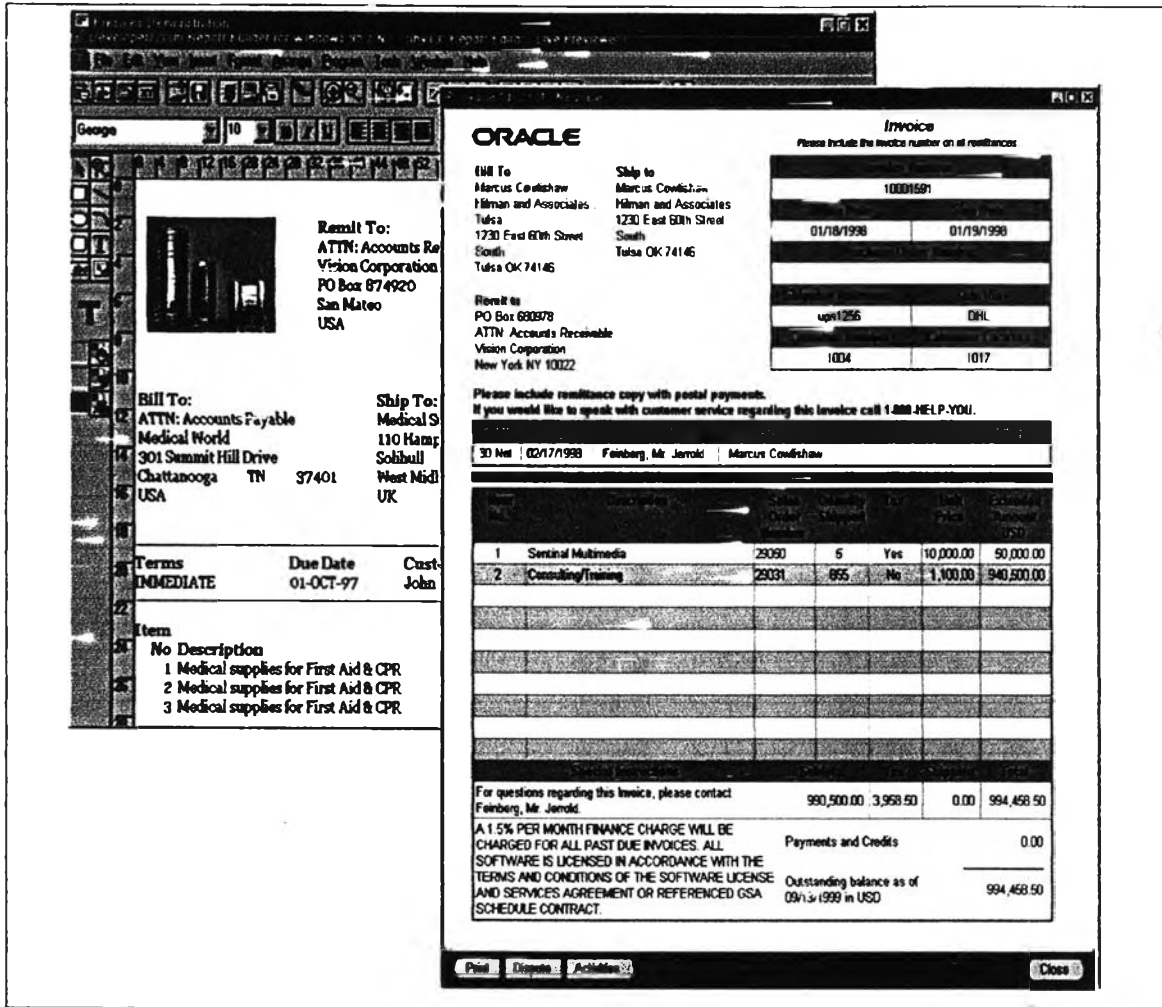
Figure 5-11: An example of invoice
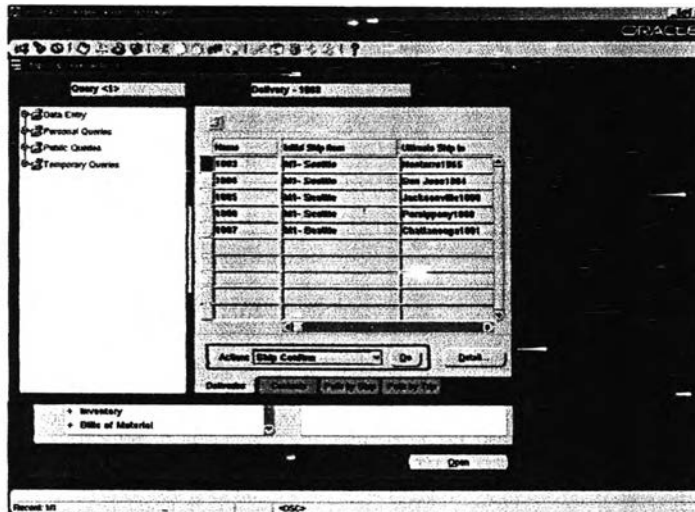
Figure 5-12: Shipping transaction summary (1)

With a reference to chapter 4, after the BPR, the procurement step had been reduced. An example of the supplier's catalog, showing the approved company's

suppliers lists could be found in figure 5-13. The window would show the price according to the quotation of each supplier.

The procurement officer would need to open up this form and choose the supplier. Once done this would automatically alert the authorized person for the outgoing PO approval. The approval form could be seen in figure 5-14.

Figure 5-13: Shipping transaction summary (2)

Figure 5-14: Procurement approval form

Once approved by the authorize person within the company the purchase order would follow the new revitalized BPs as recommended in chapter 4. An example of the purchase order summary form can be found in the figure 5-15.

Figure 5-15: Example of outgoing purchase order

Once printed and fax out to the supplier, the outgoing purchase order would then be registered in the account payable side of the accounting. The process flow of the outgoing purchase order could be found in figure 5-16.
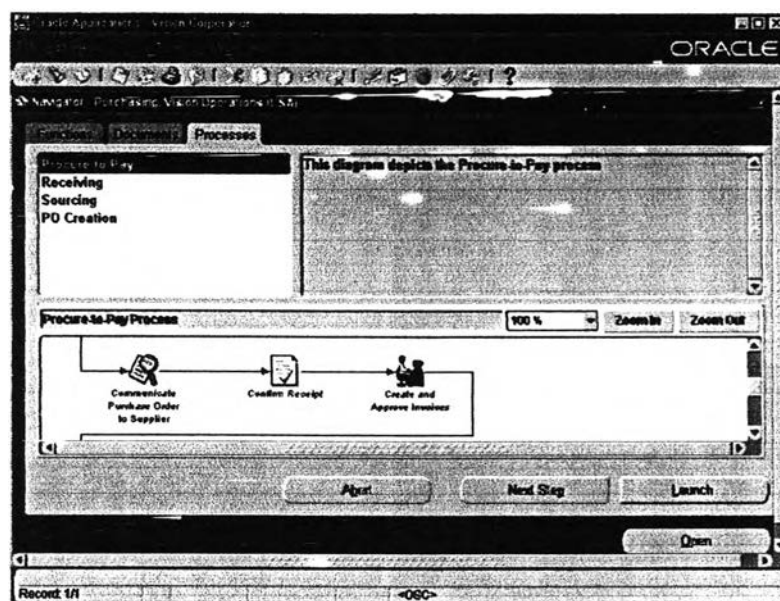

Figure 5-16: Process flow of the outgoing purchase order

Once the supplier confirmed the outgoing purchase order, the system would automatically register in the schedule receipts shown in figure 5-17. The system page would show the supplier type, purchase order number, date of release supplier information, date of delivery etc.

Figure 5-17: Pending receipts (1)

Figure 5-18, showed the pending receipts of ordered materials. The information would show information such as order type, supplier name, outgoing purchase order number, the pending receives date, and the routing. Again this real time on line information would benefits ali parties involved. The production planner would then be able to know exactly when her/his raw material would arrive, therefore better planning of production line. Similarly together with the production Gant chart, the sale agent could inform the customer of the area sales representative on when the order would arrive at the customer's depot. The procurement officer would be notify whether the goods had arrived were either correct or need to be resend.

Figure 5-18: Pending receipts (2)

On the day of the delivery the procurement officer could compare the incoming with the authorized outgoing purchase order which would then be registered as account payable if approved by the procurement officer i.e. the price, quality and quantity upon agreement. As mentioned in chapter 4 under new BPs, once approved the receipt would be automatically updated in the database.

Figure 5-19: Matching of original purchase order and the receiving invoice

The research implemented the committed ERP modules on the control item N300 over a specified period of time. The results after implementation could be found in the next chapter.