

CHAPTER 6

THE SYSTEM AS A DYNAMIC PROCESS (The Communication Network)

6.1. COMMUNICATION

In an activity network communication is the dynamic process involving a range of activities and participants, is purposeful, and is mainly to do with meaning processing. Meaning processing includes other facets like social relations, social positions, social processes and everything to do with the human and his/her social environment. So, communication is not merely a transportation tool, but refers to the consumption and production of meaning in a particular social structure in time and space.

Meanings are complex and originate from within the cultural and social setting of the community. It is the culture of the community that determines what can be communicated, what is communicable, and how it is to be communicated. Culture includes the structures, the processes, the producers, and the receivers of meaning within that

community. In fact it refers to the whole system and network (the synoptic and dynamic aspects) and the interconnectedness of the two.

In - built and deeply embedded in the Logos network are rules, prohibitions, permissions, and codes of culture that are at most times so implicit and covert that newcomers accept the processes of communication as natural and normal within the Perdana discourse community. Most times, new members accept and take on their designated place within the social structure without question because the way things are done in this community have become so routinised and that to the individuals these routines have become second nature. Thus communication is really structured by the community and not by individuals and it is the community which determines the various interactions within the network.

6.2 THE ACTIVITY NETWORK

7

The success of Pineapple in the market is best summed up in the way they see themselves and their goals through their mission statement:

Pineapple is a dynamic organisation committed to achieving high growth, profitability and customer satisfaction by providing information based products, solutions and services that empower Individuals, Educators, Businesses and the Government through accessible Resellers and a professional, dedicated and dynamic Strategic Sales Team (GM's Business Plan Meeting, 20th Feb 95 K.L).

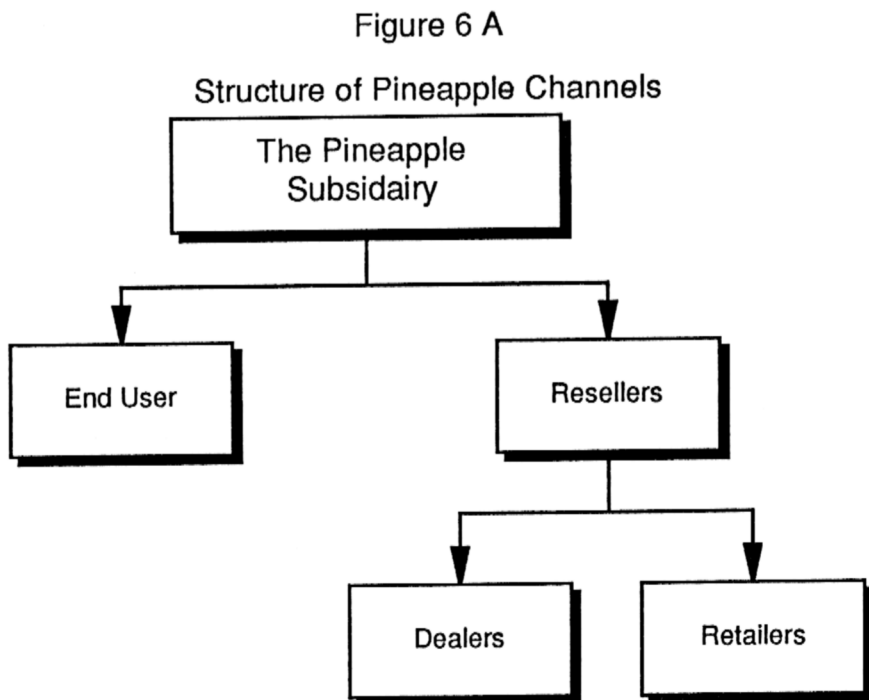
This subsidiary company of Perdana, Pineapple, was formed in 1986 to distribute a particular brand of computers in Malaysia. It has since grown into one of the most respected companies in the local information technology industry. In the process of developing certain market segments, Pineapple also undertook several systems development projects. The success of those projects led to the formation of another company in November 1991 to concentrate only on systems integration and software developments. Although starting out as only as a distributor, over the years, Pineapple also received distributorship of some core Third Party products. Therefore, in May 1992, another company was set up to take over the expanding third party distributorship. This company was set up due to the aggressive demand of third party software and hardware in the market. These spin-offs of the original subsidiary company Pineapple have since become independent subsidiaries directly under the parent company Perdana because of their success and growth.

Currently, Pineapple functions as a distribution/trading company, marketing and servicing the full range of a particular brand of computers and peripherals. The success of this company can be attributed in part to its organisation and distribution strategy and in part to its utilisation of technology to enhance its operations. Pineapple realises its objectives in the way the way it channels the goods through specific outlet types for best outreach, market share, and sustainability. Distribution of goods is through the following channels:

1. The Resellers which consists of:

- a) Dealers - These are people who are dedicated sellers carrying only one brand and that is the brand sold by Pineapple.
- b) Retailers - These are people who sell many other brands of computer products, and the Pineapple brand of computers is but one of their product range.
- c) End- Users. These refer to direct sales to large organisations, government bodies, universities etc. They basically cater to economies of scale as the other two channels may not have the resources to back up the sales and credit requirements of large deals.

Pineapple and its distribution channels are conceptualised diagrammatically in figure 6A below.



Dealers are appointed by Pineapple and the company decides which products from the range available, that different dealers can stock. This depends, among other things, on the credit worthiness of the dealers. On appointment, the Dealers send their business plan and projected sales to Pineapple for decision making. Pineapple decides whether their business plans are viable and makes suggestions accordingly, so that jointly, both parties can achieve their individual objectives. To protect themselves against any in eventualities, Pineapple insists on the following requirements from all their channels:

- (i) they must have a bank guarantee for security
- (ii) they must meet their sales figures
- (iii) dealers can only deal with the Pineapple brand of computers and in recognition of their dedication Pineapple gives these dealers a better price than what they give to the retailers who are not dedicated pineapple concerns.

The process flow activity network enabled through Logos is seen in relation to these three clients or channels. The process flow network between the company's own sourcing organisation in America and its distributing agent in South East Asia will not be covered because it is outside the scope of this study. To describe and explain the process network, the communication within the Perdana discourse community will be described. Although some of the communication for example from and to the warehouse are from a physical location that is many kilometres away from the Perdana discourse community, these are still considered internal communication because it is part of the Perdana technology network in

the virtual space and therefore considered as extensions of the Parent company.

(For ease of description, one can look at the whole process flow as made up of four interrelated activity centres with each centre comprising a series of communicative events.) (Refer table 6B). The four centres are: at the front line-sales, at the warehouse, at the accounts department and at the General Manager's office. If we follow one business transaction in this case the sale of computer products from start to finish, we will be able to see how the network links the various centres and how they enable each other to carry out their individual tasks and collectively enable the company to make profits for the company.) The description of the activity centres and their part in the process will be in the form of a linear description, only for ease of understanding because, in reality the processes though sequential are not mostly linear. They are sometimes simultaneous, sometimes random and sometimes idiosyncratic.

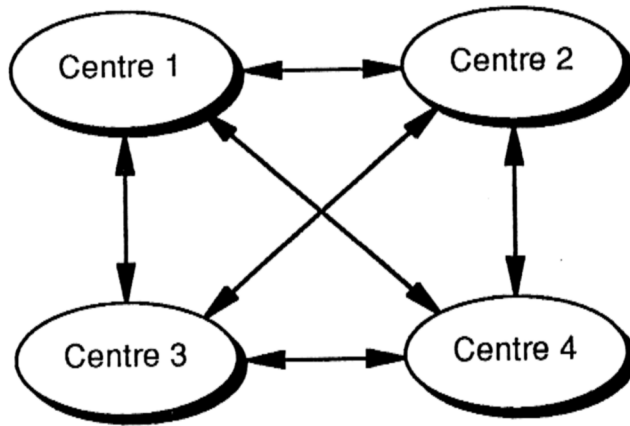
Table 6B

Linear Conceptualisation of the different activity centres

Activity centre	Brief Description of interactants involved
Activity Centre I	<p><u>At the front line -Sales Staff and customer</u> This is where the sales personnel interact with the customer. and the sales department with the rest of the organisation.</p>
Activity Centre II	<p><u>At the Warehouse</u> It is in the warehouse that the next set of interactions take place as a result of the social processes in the sales department. Here, the interaction is basically between the personnel at the warehouse, the customer and the company that the warehouse is servicing, which in this case is Pineapple.</p>
Activity Centre III	<p><u>At the Accounts Department</u> It is in this section of Perdana that the monies transacted earlier are accounted for and managed. Interaction is predominantly between the personnel in this section of the organisation, the sales department and the warehouse.</p>
Activity Centre IV	<p><u>At the General Manager's office</u> In a sense this can be considered the conclusion of the social processes initiated in activity centre one. The interaction described here refers to that between the accounts department, the general manager, the board of directors and finally the shareholders. Although the interaction with the shareholders is only once and at the end of one fiscal year, it is still considered because it is the day to day profits, losses and financial maintenance and accountability that is collated and organised in the form of an annual report to the share holders. Therefore, technically the interaction is there all the time but it is physically executed in the form of an annual report once a year. This is a very important social event in an organisation's existence because this report represents the public or "social" face of the organisation. It is through this report that the rest of the world view the organisation's business success and business acumen. The interaction described here will be that between the accounts department, the general manager and the auditors. The interaction in this activity centre is unlike those in the other centres described because there is constant back and forth communication on one issue. Interaction in this centre is different in that it does not cause a pre-ordained, routinised, technology-controlled change as in the other centres. These are human initiated, human controlled because "sensitive" accounting is done to ensure that the appropriate "public face" of the company is portrayed. Technology is used for hard facts but not for decisions. Interaction tends to be idiosyncratic and random, not routinised.</p>

The actual process network that is Logos - enabled is conceptualised in Figure 6C. For example, information about a particular sale will be automatically “posted” to all the relevant departments simultaneously and automatically with just one entry at the sales department. That one entry in the system will automatically cause the information to reach the relevant members in the warehouse and the accounts department as well.

Figure 6 C
Activity Centres and their Interconnectivity

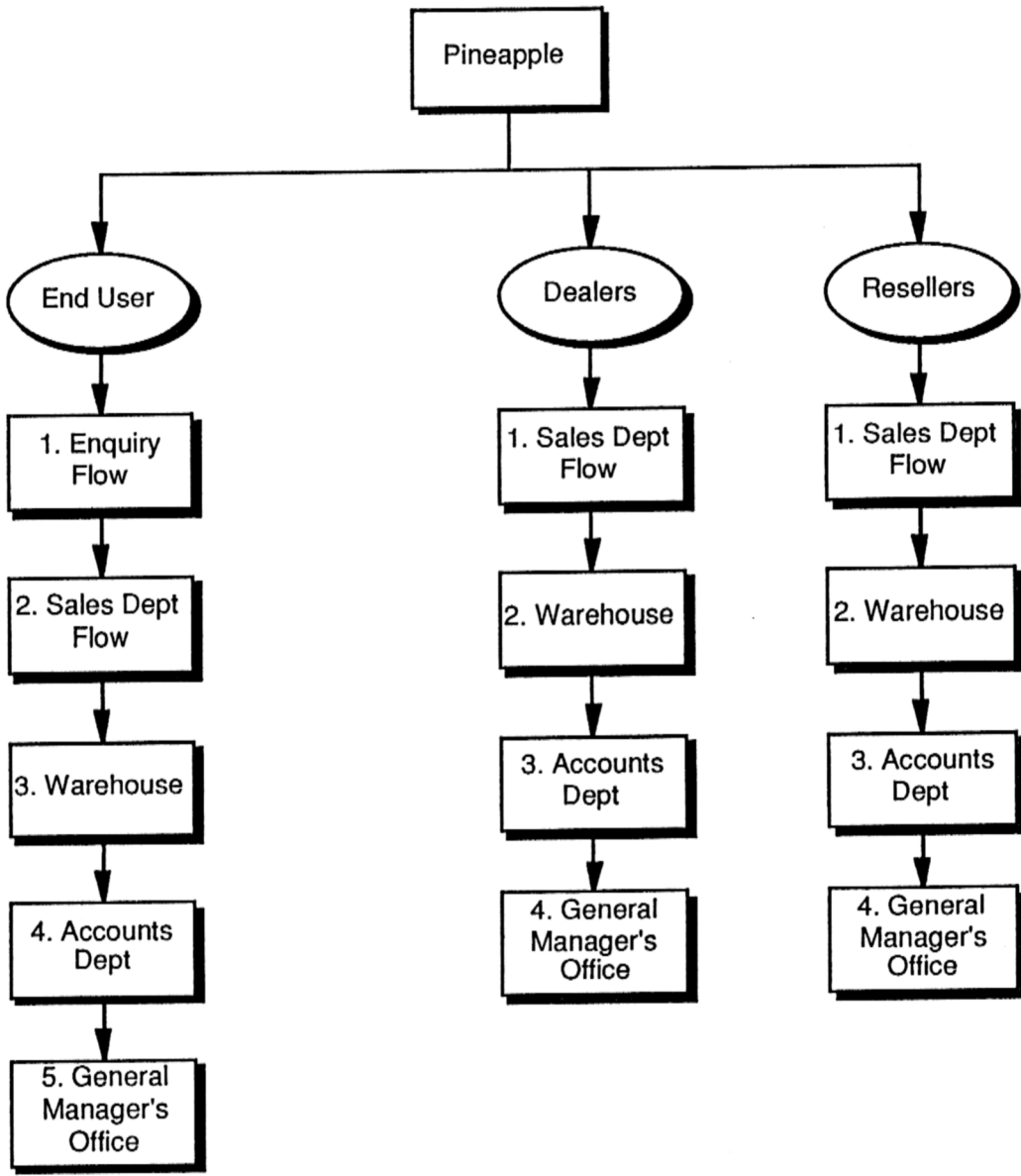


Basically, all the three categories of clients or channels share the same social processes but dealers have a shorter process flow network because of their relationship and commitment to the Pineapple company. The business transaction with dealers, go through a shorter process, because their request for products is a 100% guarantee of sale or successful transaction because of their dedication to the Pineapple brand of computers. Of the three channels, the end users have an extra series of communicative events in that they go through the enquires stage which as the name suggests is only an enquiry and not a commitment to buy. At this point in the interaction, the enquiry is only

a 25% indication of sale possibility, and if successful the next stage, the quotation stage is a 75% indication of sale possibility and when the request reaches the sales department in the form of a purchase order, it is a 100% indication of sale. Dealers skip level one the enquires stage and level two the quotation stage and go straight to the flow in relation to the sales department because of their commitment and dedication to the brand. The end user clients have the most processes to go through and the dealers therefore, the least. Dealers, because of their dedication, are regarded as extensions of the Pineapple company. Conceptually the various activity centres of the three channels in relation to the Pineapple company are shown in figure 6D below.

Agents were about 1000 in clients

Figure 6D
Activity Centre of channels



As a corporate discourse community, the overriding purpose of the Perdana process network is to maintain the existence of the organisation. It is through this structure or process network that what gets done by whom to whom, where and why is determined.

According to Weick,:

Structures form when communication uncovers shared occupational specialities, shared social characteristics, or shared values that people want to preserve and expand. The structures themselves create additional resources for communication such as hierarchical levels, common tasks, exchangeable commodities, and negotiable dependencies. These additional resources constrain subsequent contacts and define more precisely the legitimate topics for further communication (Weick, 1987: 98).

The Pineapple social network is a collectivity of interdependent social activity centres. It defines the position of an individual or group (activity centre) relative to the community.

The activities of the business processes are better understood if we look in detail at one particular business transaction and follow it through. Such an analysis would reveal individuals in terms of the characteristics of the linkages which bind them to each other, role-taking, mutual understanding, shared meanings for common events and actions, and how technology or the system enables all these linkages. The processes involved in the network provide information and description about a group of people bound by their social circumstances. A key construct in this description is the "communicative event." (Hymes, 1974; Saville-Troike, 1982).

According to Willett:

Events are culturally defined and bounded segments of activity that constitute meaningful contexts for action, interpretation, and evaluation. People construct events by acting and reacting to one another and holding one another accountable for acting within the evolving interpretive framework of the event. They establish participants' identities and roles; create norms, rules, and strategies for accomplishing events and criteria for evaluating them; and construct a semiotic history for the event (Willett, 1995:476).

Embedded in these events are a number of virtual interactional routines. (The contents, processes and linguistic forms of the routines are generally fixed by the system) Logos for all, but individual subsidiaries have the option to customise the routines further.) Interactional routines and the strategies used to enact them are part of the sociocultural system, and to understand the meaning of the enacted routines one must examine them in the context of the whole community. Since the routines are technology controlled, they are objective and predictable. (The predicability of routines enables learners to participate confidently in the community early in their employment career) By engaging in the sociocultural practices of the group, almost immediately, newcomers appropriate the language and culture needed in order to be considered as an insider in this particular social system. Who can say or do to whom, for what purpose, and in what manner is therefore shaped by the local social system) and the technology.

(Individuals sending and receiving the messages and interacting in this process flow network do not do so in their own individual personal idiosyncratic capacity but in their capacity as an official or

social agent in that particular social structure. Thus one can confirm the theoretical concepts in this study that organisations are purposeful systems based on functional interrelationships coordinated by mechanisms that in the end help in defining and maintaining the system itself. Communication not only defines and constrains the system but also regulates the flow of interaction within that social system.)

(The process flow arises out of a specific social occasion (a sales transaction) for a specific purpose (to buy/sell a product) at the micro-level as well as for a more generalised purpose (make profits) when seen in the larger context of the whole community. This larger context is in keeping with the main objectives of most organisations, which is to utilise human, material and technical resources in the communicative furtherance of its goals and objectives. Towards these objectives, the process flow network, establishes functional relationships through which social agents manage and coordinate their activities to accomplish at the micro-level, individual goals but more importantly organisational goals through mutually acceptable relational arrangements and common task activities.)

Basically, the messages, tasks and activities in Pineapple are routine, regular, procedural, and the meaning derived from the message is as much by its form as it is by its content. An element of intertextuality runs through all the documents. Certain predetermined bits of information are repeatedly found in many of the documents routinely used in this company. Information that is repeatedly found in many genres or documents include: reference number, date, unit price, gross price, part number, description of product. The documents that

carry this same information include, the purchase order, the sales order, the invoice, the pick up slip etc. Such information contribute towards task completion, accomplishment, and reinforce shared knowledge. The fundamental idea behind the process network in Pineapple, is that all social activity centres must meet four basic needs if they are to survive:

- (1) integration - how the parts of the system fit together as a whole.
 - (2) pattern maintenance - how the major patterns of culture and interaction in the system are maintained.
 - (3) goal attainment - how a system organises and controls the pursuit of its tasks and goals and
 - (4) adaptation - how a system relates to its environment.
- (Stohl & Redding 1987:471).

Pineapple ensures that social processes are organised in patterns of transactions appropriate to the accomplishment of organisational goals through patterned systems of communication and this pattern is seen as a communication web or process flow. Communication network flows are basically information exchange networks because they are concerned with how knowledge about the activities relate to the internal operations of the organisation. Regularity, repetition and verification are very common aspects of such operations within the organisation. These network flows engineered by Logos are not tangible or observable in the physical sense but more in the virtual sense. The intangible lines or patterns of interaction are mainly ordained by the system Logos, and to a lesser extent initiated by the workmates or work groups to effectively accomplish their own tasks

within the organisation. In the wider Perdana discourse community, the process flow network serves the parent organisation in the accomplishment of its pragmatic goals through:

- (1) generating information
 - (2) processing information
 - (3) sharing information necessary for the coordination of interdependent organisational tasks
 - (4) disseminating decisions
 - (5) reinforcing a group's perspective/consensus.
- (Jablin & Sussman in Stohl & Redding 1987:470).

6.3 ANALYSIS OF ONE BUSINESS TRANSACTION

The process flow of the end user channel and the activities and interactions in that flow will be described as what goes on in two locations: the physical space and the virtual space inside the system. The details of the social processes in relation to the end users will be described because their interaction includes all the activity centres. (Refer Figure 6C above). To facilitate order in the description, the processes will be described according to what happens in the activity centres and where possible, in a linear sequence for ease of understanding.

6.3.1 **ACTIVITY CENTRE ONE - AT THE FRONT LINE**

A customer (end user) initiates interaction by making enquires about the products to be purchased through a letter, fax, memo or verbally. (Refer Figure 6 D). The sales executive approached then acknowledges the enquiry and gathers customer information to determine the customer profile. These activities are done in the physical space. Then, in the virtual space, the sales executive checks Logos to see if the customer already exists in the system. At this point, a routine decision is made by the system, if the customer exists in the system, the sales executive enters the enquiry details. If the customer does not exist in the system, the system alerts the sales executive and she/he enters the customer profile into the “prospects customer” (in the system) and saves it as the customer’s “master record” (in the system). The sales executive then informs the customer verbally or through correspondence. The sales executive prints out an enquiry document through the system and dispatches it to the customer together with a fax, letter or memo and the customer acknowledges receipt of the document. In the virtual space, the system matches the enquiry input and makes a reservation of the goods ordered based on the availability in the inventory. The inventory will indicate if the company has the stock to sell to the customer. Next, the system matches the enquiry to the pricing records in the system, and makes a routine decision. If the prices are right and available it displays the applicable price for the customer on the enquiry document but if the pricing is not available the system alerts that no pricing record exists for the products enquired and prints the master record of the product and attaches it to the master record of the customer (in the system).

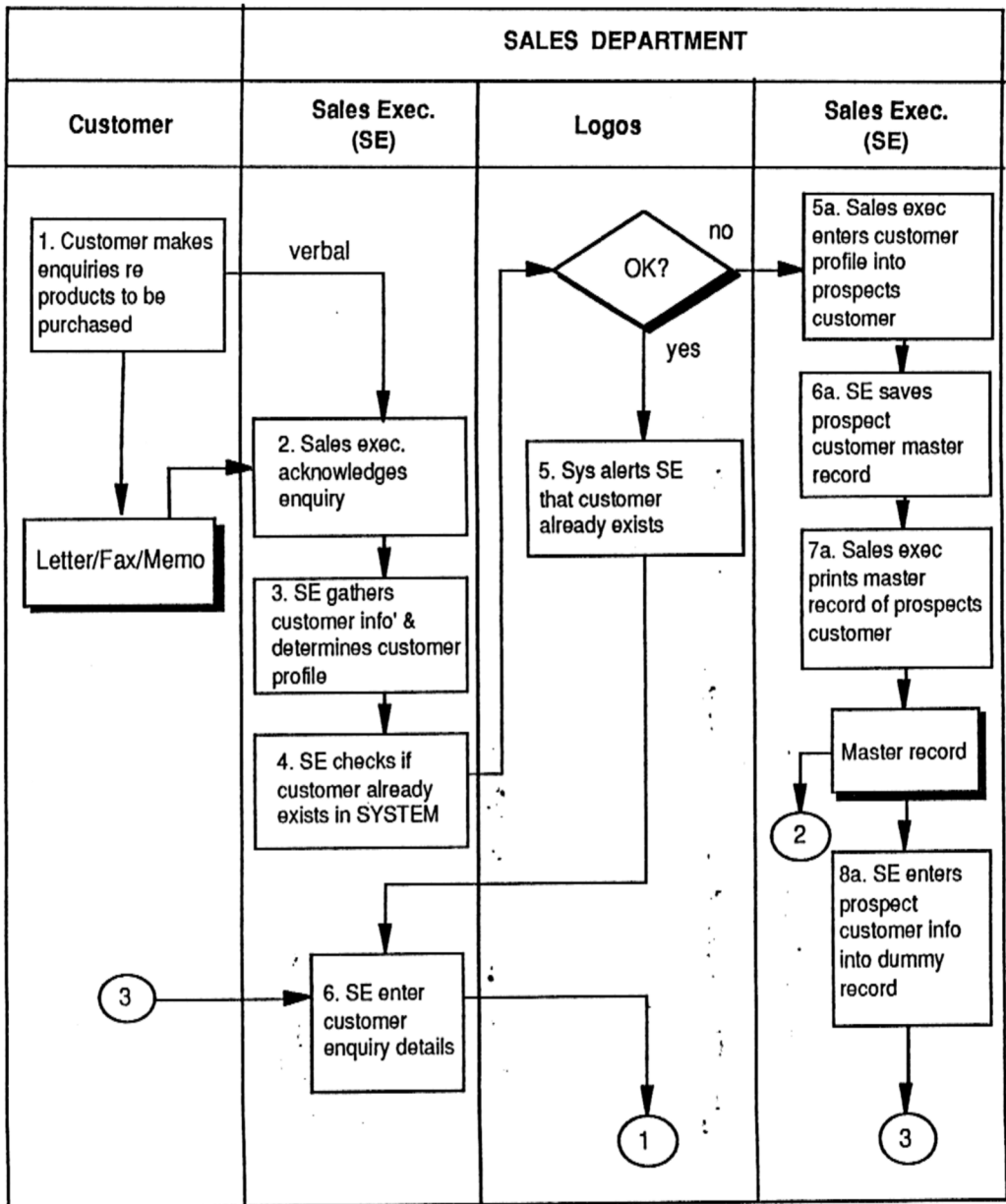
This event, triggers intervention by an officer higher up the hierarchy because it is not a routine decision and cannot be handled by the system. The sales executive informs the Marketing Manager through e-mail (in the system) that the pricing is not maintained. All these interactions are done in the virtual space through the computer at the desktop of the sales staff. In a situation like this, where no price exists, the decision is not routine so the marketing manager is called to make the decision.

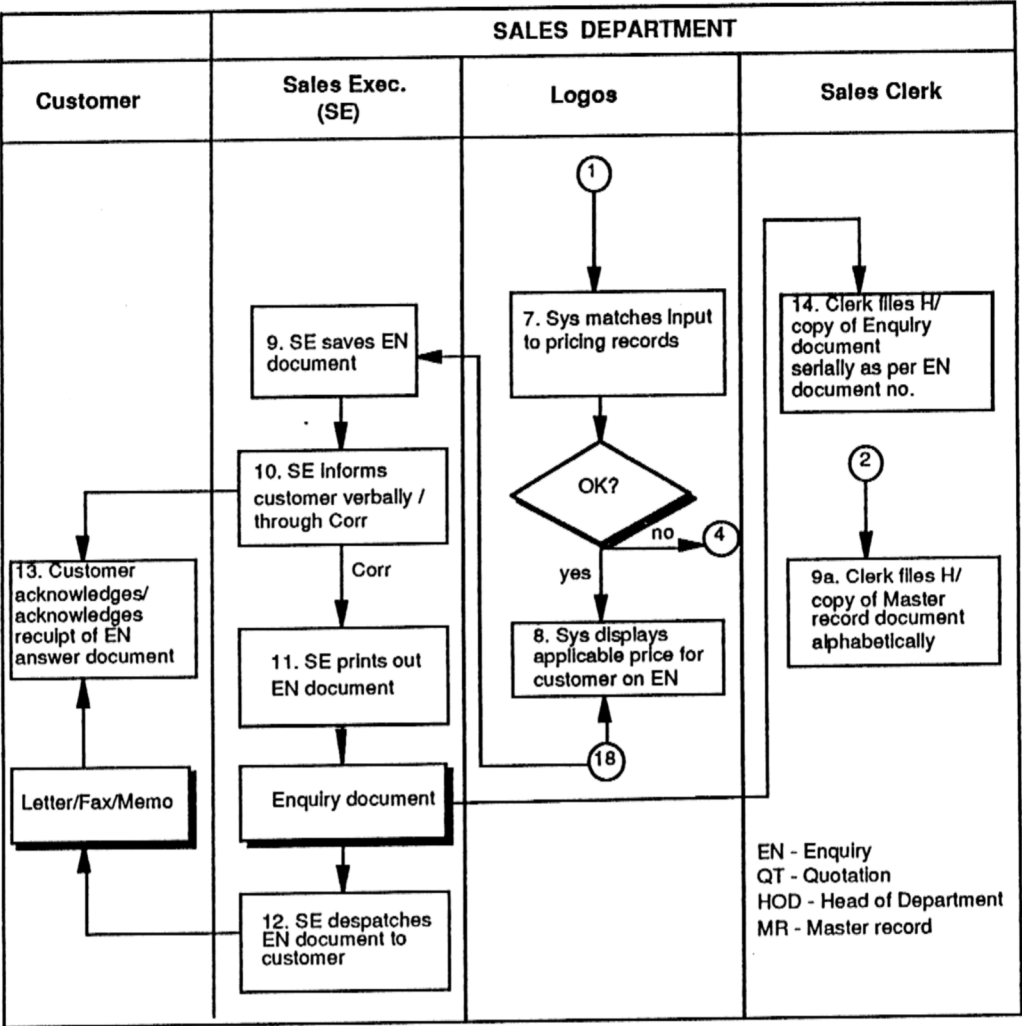
At his/her end of the office, without leaving his/her seat, the Marketing Manager checks the product and customer record copies and then through the system, determines the reason for non-maintenance of records. The system is commanded to check again if pricing is maintained. If pricing is not maintained, pricing information is entered on the advice of the Manager and changes saved (in the system). Next the system checks to see if the customer is allowed to purchase the product based on his/her credit limit. This is a routine decision because each client would have a bank guarantee to back his/her purchase and this check is to see if the credit limit has been exceeded. If the credit limit is exceeded, then not a routine but event triggered decision has to be made. The Manager or someone higher up in hierarchy can make any one of the following decisions. (a) The manager may decide to allow the client to still buy the product but the quantity may be reduced because of insufficient funds. If this were so the manager would configure the information in the system to allow the client to purchase the product. (b) Then again the manager may decide that despite insufficient funds he may be allowed to buy probably because he has had a good track record financially with the company so far. (c) On the other hand the manager can also decide that

the sale be stopped until the client tops up his credit deficit because he is a bad paymaster. If we assume that the transaction is successful then the sales personnel will receive the purchase order from the customer and when that information is saved in the system, a delivery order will be automatically generated for that particular purchase but the delivery order will not be printed out yet. The delivery order generated at Pineapple will be translated by the system into a pick up slip which is printed out at the warehouse. The warehouse is about 15 kilometres away from the company. The next set of the social events will be at activity centre II - the warehouse.

Figure 6 D

Process flow at Activity Centre 1





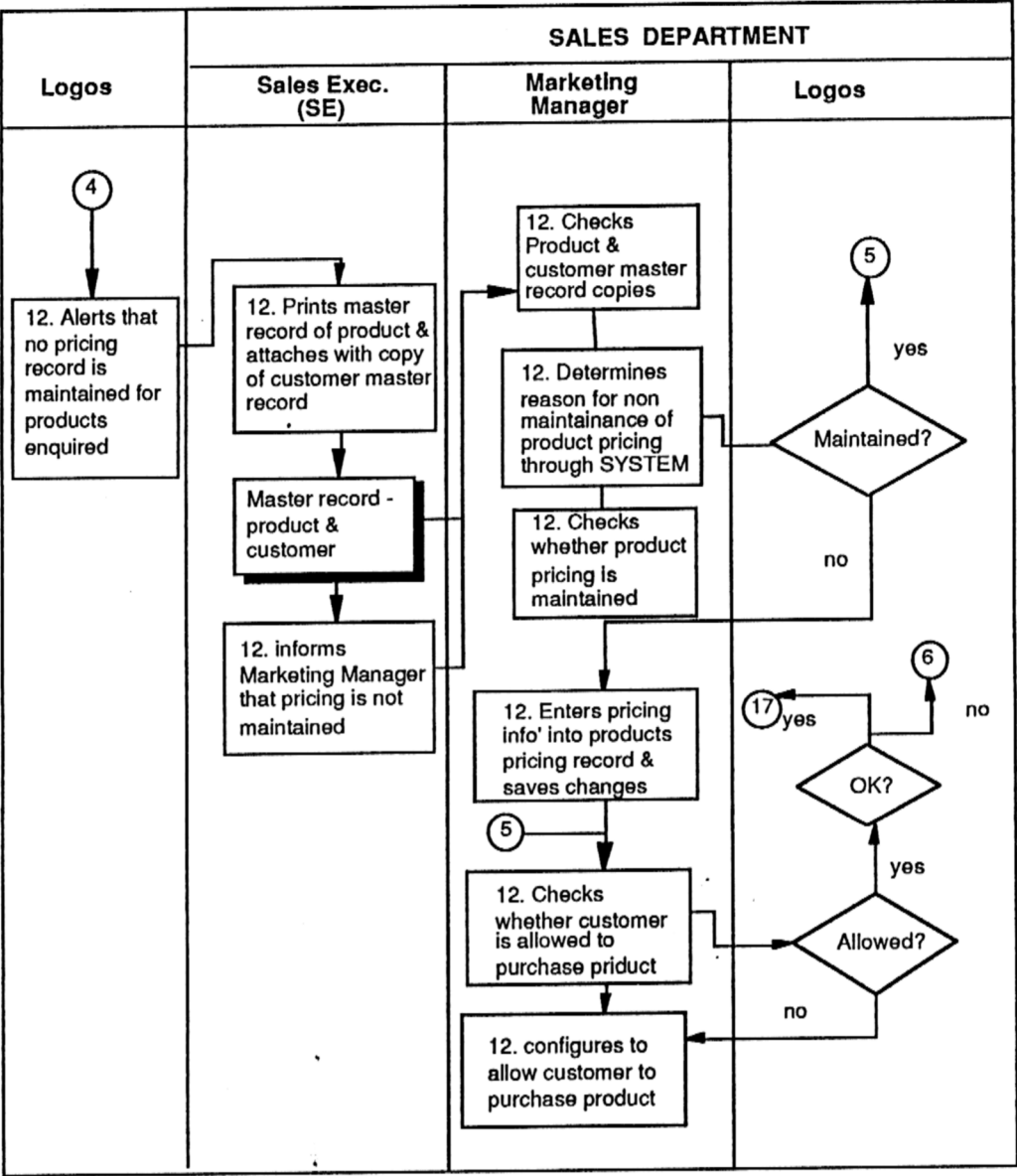


Figure 6 E

Summary of processes in Activity Centre 1

Activity centre One	Information Sought	Locus of communication	Process in Physical space	Process in Virtual Space
Event: Sales enquiry Agent: sales staff Instrumental Function: generate Information Decision Point: Does customer exist in system - routine Document: Ltr/Fax./Memo.	price of product	System	✓	
Event: Entry of customer profile Agent: sales staff Instrumental Function: generate information Decision Point: none Document: master record	Customer information	system		✓
Event: Informing customer Agent: sales staff Instrumental Function: disseminating information Decision Point: none Document: Enquiry doc/ ltr/fax/memo	Product information	system	✓	
Event: pricing records Agent: sales staff Instrumental Function: processing information Decision Point: is price applicable Document: Enquiry doc/ master record doc	Price structure	System		✓
Event: check pricing Agent: system/marketing manager Instrumental Function: sharing information Decision Point: is customer allowed to buy-yes/no/event Document: if yes, sales order	credit worthiness of customer	system		✓
Event: purchase order processing Agent: sales staff Instrumental Function: sharing information Decision Point: is stock available Document: Purchase order	product availability	system/ warehouse		✓

The table above quantifies the number of times the system is involved in the social events in this activity centre, especially for decision - making purposes. For the six social events described, the communication and information needed is found within the system. In addition four of the six social processes happen in the virtual space of the system, where the system and not the members make the decision thus contributing to the flattening of the hierarchy. Members in the community depend almost completely on the network to carry out their routine duties and roles. Most of the events described in this centre are routine everyday events. Technology has enabled members to interact without leaving their seats in their office even if the destinations of fellow members be as near as next door or as far as the other side of the city. The instrumental functions of members are basically to ensure common values, and knowledge through processing, disseminating generating and sharing. These facilities of Logos confirm the importance of technology in the daily running of modern organisation. It also stresses the importance of the dynamic virtual social network in relaying and relating with various social agents within this social system.

6.3.2 ACTIVITY CENTRE TWO - THE WARE HOUSE

The central warehouse and distribution facility has been established to provide warehousing and distributing services for many of the companies belonging to Perdana and not just the subsidiary Pineapple. The warehouse is not physically connected to these various companies but connected virtually through Logos. The warehouse is on-line to all the companies in the Perdana discourse community through Logos's communication network. All interaction with the warehouse is as if it were next door to each of the subsidiaries because

all communication is immediate. All information to and from the relevant parties is also immediate because the system has taken over routine decision making, thereby flattening hierarchy by eliminating unnecessary authority consulting. The warehouse interfaces with Logos to manage the inventory and provide the service to these companies. The whole inventory of the Perdana discourse community is completely managed by the system electronically. There are no more stock cards and other traditional forms of keeping stock. These have become obsolete. With Logos looking after the warehouse, there is negligible variance during stock count. Previously the variance was large because there were no proper tools to handle records. It was also a tedious and labour intensive job. With Logos, the monthly stock count is done within one hour after closing time of the office because the system has everything online and it is just a question of balancing, and even that is done by the system. Previously stock taking was a major event that sometimes took two weeks to accomplish.

The main social processes carried out in the warehouse are order processing, invoicing and delivery of goods. (Refer flow chart 6 F).

Once the sales order is received through the sales office, the order is processed as per flow chart representation (Figure 6 E). The delivery order is created automatically when the sale is clinched and the information is entered into the system. This activity is done at the sales office. Although the delivery order is created at the sales office in Pineapple, it is not printed out yet.

What is printed out automatically at the warehouse is a pick up slip. All the required information is on the pick up slip. It is an instruction to the warehouse staff to do the work of physically picking up the required products. This information is conveyed almost immediately to

the warehouse although it is situated about 15 kilometres away. After the goods have been physically picked up the warehouse staff interacts with the system to indicate that the goods have been picked by “posting” the information to all relevant departments like the finance and sales. The system drops the stock electronically from the inventory only after the information has been posted. Once the stock has been dropped, the system updates automatically and this new information is made available to all who need to carry on with the routine social processes of the company through the process network. Next the Delivery order saved by the sales department in Pineapple is now printed out at the warehouse together with the invoice.

In the warehouse, a cut off time for pick up slips is enforced for route planning and picking of good. The cut off time is mainly to maintain delivery standards and to ensure efficient utilisation of delivery vehicles. After completing the route planning, the goods will be picked. The cut off time is 12.30 each working day. If the pick-up slips are printed before 12.30 pm. of day one then it can be assured that at least 80% of the goods will be delivered by the next day and the remaining 20% the following day.

The next step in the process flow is the loading of the goods. The officer in the warehouse checks that the correct goods and correct quantity leaves the warehouse. Every agent in the social processes is singly responsible for his/her part because the system has ensured this. The system ensures accountability by printing five colour-coded copies of the delivery order and three colour coded copies of the invoice. These multiple copies are done to ensure that all the relevant people involved get a copy which in turn ensures that the information is

shared among all the members and no one can plead ignorance about the information or their role in the structure. Each individual receiving a copy of the slip has to acknowledge receipt. These shared perceptions and shared information ensure individual responsibility and ensure the smooth functioning of the processes. The number of copies of the Delivery Order and Invoice are as follows:

Delivery Order (DO)

- Copy 1 Customer (white)
- Copy 2 Sales operation (Blue)
- Copy 3 Warehouse (yellow)
- Copy 4 Transporter (green)
- Control (Pink)

Invoice

- Copy 1 customer (white)
- Copy 2 Sales operation (Blue)
- Copy 3 finance (yellow)
- Copy 4 Control (pink)

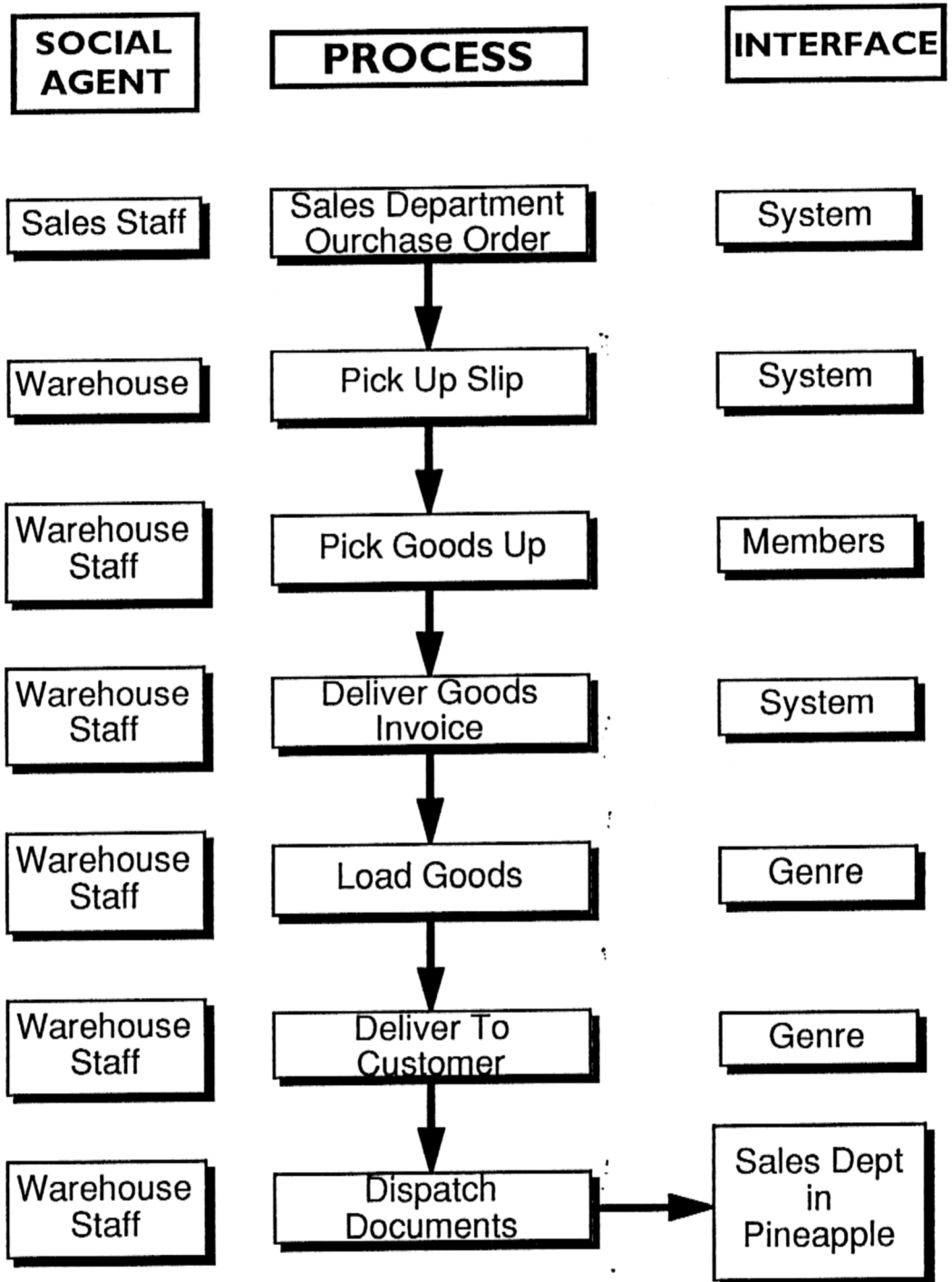
The distribution of the copies of the delivery order and the invoice are summarised below.

Copy 1 and 4 of the delivery order and copy 1 of the invoice to be handed to the delivery crew/transporter to effect delivery. Copy 5 of the delivery order is retained in the warehouse as a control copy with the transporters and delivery crew acknowledging having received the goods. Copy 2 to 4 of the invoice will be retained in the warehouse and forwarded to the Sales office. Copy 1 of the delivery order and Invoice will be retained by the customer. The customer is

required to chop and sign copy 2 to 4 of the delivery order. The transporter is to return copy 2 and 3 of the delivery order to the warehouse. The transporter is to retain copy 4 of the delivery order for billing of delivery charges. The warehouse files copy 3 of the delivery order retaining this document as proof of delivery of goods to the customer. Copy 4 of the invoice is stapled to copy 3 of the delivery order and filed with it. The warehouse dispatches copy 2 of the delivery order and copy of the invoice to the sales personnel of the relevant subsidiary company.

Figure 6 F

Process Flow of Events at the Warehouse



The delivery crew then delivers the ordered goods to the customer who has to sign the delivery order and invoice as confirmation of goods delivered. These documents are returned to the warehouse and dispatched physically to Pineapple. Although all information is already in the system, these physical documents are filed as proof in case of dispute to confirm that the delivery has been done. If by any chance an event triggers a problem that needs clarification either the warehouse or the Pineapple company will communicate with each other through e-mail about the matter. The system has flattened hierarchy because there is very little time wasted in making appointments, or waiting for those in authority to be present and be free to make decisions. It has also eliminated unnecessary workforce at the warehouse because the system, controls everything that enters and leaves the warehouse, and manages the stock in terms of what goods the company is short of and the shortfall is remedied through the necessary processes. Once the copies of the delivery order and the invoice have been dispatched to Pineapple, the next set of social events happen at activity centre three which is at the accounts department.

Figure 6 G
Summary of Processes in Activity Centre 2

Activity Centre Two	Information Sought	Locus of communication	Process in Physical space	Process in Virtual Space
Event: generating delivery order Agent: sales staff Instrumental Function: disseminating information Decision Point: none/ routine processing Document: purchase order	identification of product	system		✓
Event: picking goods Agent: warehouse staff Instrumental Function: processing information Decision Point: none/routine Document: Pick up slip	sort and identify	system/ warehouse	✓	
Event: Delivery and invoice Agent: warehouse staff Instrumental Function: processing information Decision Point: none/routine Document: delivery order & invoice	delivery to stated customer	system	✓	✓
Event: delivery to customer Agent: warehouse delivery staff Instrumental Function: processing information Decision Point: none/routine Document: delivery order/invoice	acknowledgment of goods delivered	delivery van and documents	✓	
Event: Dispatching document to Pineapple Agent: warehouse staff Instrumental Function: sharing information Decision Point: confirm goods delivered	proof and record of social process in warehouse	documents /system	✓	

The quantified social processes in Table 6 G indicate that the system is used for communication of information in four out of the five social events described. A warehouse is a place where there is constant physical movement of goods and people yet many of the important social processes in the warehouse occur in the virtual space. Despite the nature of work in a warehouse, the system is a very important reference point for the members in this activity centre. In fact the system completely decides the course of action in the warehouse, thereby flattening hierarchy as there is no need to consult anyone but the system for the course of events. The system is consulted for accuracy of information, direction of transaction, updating the inventory and initiating the hard copy of many of the documents relevant to these social processes. Technology controls, directs and supports the social processes in the warehouse. Even in an area where there is a lot of physical movement and therefore one would expect, people to be in control, it is not so here as the technology has taken over the control and the decisions. Once again helping to flatten the hierarchy structure in this organisation.

6.3.3 ACTIVITY CENTRE THREE - THE ACCOUNTS DEPARTMENT

The accounts section of the company is not only the “wallet” of the company but it is also the “watchdog” of the company. Every single interaction in terms of goods and services is captured by the system for the accounts section. In terms of the business of the company one can say that nothing escapes this section and everything that happens in the company regarding the daily running passes through this section. The accounts section is ultimately responsible for the creditability, viability and “public face” of the company.

In the accounts activity centre, all interaction in terms of business processes are done online and almost instantaneously to and from this section. Logos dominates this section almost completely. In order to realise the central role of the accounts section in the daily running of the company, one has to view the company's social processes in the terms of the finance section- through their eyes. (Refer Figure 6 H).

There are two important parts in the system that feed the finance section, namely the **inventory** and the **general ledger**. One must remember that all these parts, though given physical names, actually exist in the virtual space as part of the configuration of the system. These physical names are given for ease of understanding and explanation. The general ledger, is made up of four supplementary or smaller ledgers: the accounts payable ledger, the accounts receivable ledger, the fixed assets ledger and the journal voucher ledger.

The inventory of the company holds all the stock- assets and liabilities of the company. The term inventory as used here does not only refer to the stock of physical goods like the inventory in the warehouse but refers to everything that belongs to the company. It is an online status record of the stock of the company and all movement of items in this inventory is done online. For this trading company one can view the inventory as mainly divided into two:

- (i) accounts payable ledger which has a listing of all the creditors of the company and this refers to the suppliers of the computer products, their advertising company, etc. The information from this ledger regarding the monies

payed out by the company is updated automatically and in turn the central inventory is also updated.

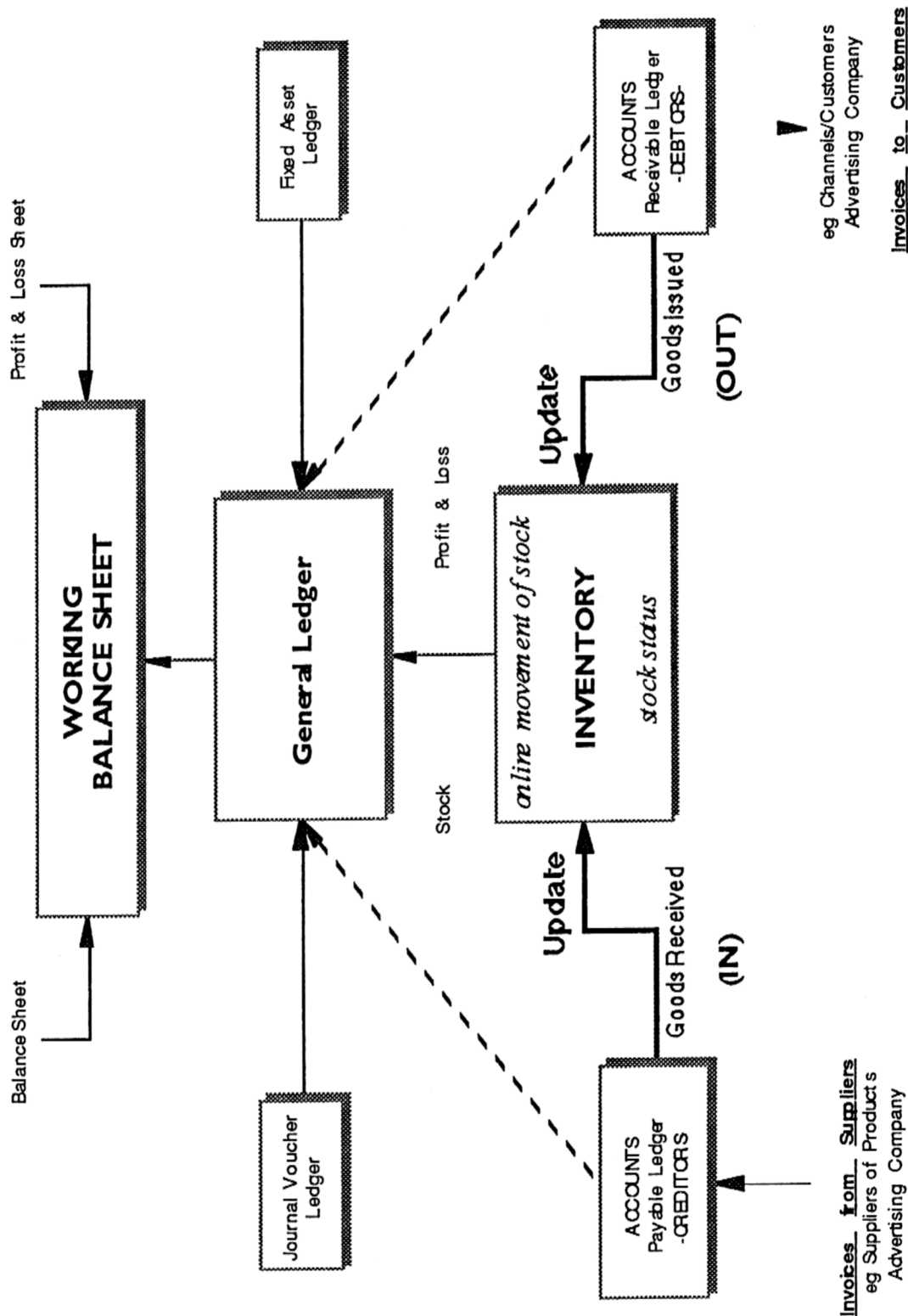
- (ii) accounts receivable ledger is subdivided into two - the sales made by the company and the debtors or clients of the company. This ledger is updated automatically, and consequently so is the inventory. The information in this ledger refers to the monies due to the company.

Whenever clients purchase products from the company the system deducts from the client's account which has a bank guarantee and credits that same amount into company's sales ledger for the sale of the goods to the client.

If we recollect the social processes from activity centre one - the sales flow - what is described above in terms of the accounts receivable ledger becomes clearer. To summarise, the client issues a purchasing order, confirming that the client wants to buy the products from the company. The social processes involved in terms of document flow from the company's perspective will be as follows: the sales order is generated by the sales department and then the pick up slip is generated in the warehouse, resulting in the delivery order being generated. When everything has been collected and the physical stock updated in the warehouse, the invoice is generated by the system in the warehouse. The information in the invoice generated online is captured by the system and posted to the company's sales ledger as credit and the clients' online account as debit. It is not a cash transaction.

Figure 6 H

The process flow of Activity Centre Three



The inventory continually makes adjustments based on the information received from the accounts payable and the accounts receivable, and the information received is processed by the system which updates the stock of the company automatically. This updated information is fed online to the general ledger.

At the same time and continuously the other two supplementary ledgers also feed into the general ledger. The fixed assets supplementary ledger provides online information of the status and movement of the fixed assets of the company. The system provides the following information about the fixed assets:

- date of acquisition
- system allocation number - this is for tracking purposes
- description of asset
- location of assets in the company
- cost of asset
- accumulated depreciation of asset - (cost of asset minus depreciation)

If a particular asset is still useable and not a write - off then that asset is given a value of one ringgit to indicate that it is still present somewhere in the company. With the allocation of one ringgit, the system can keep a record of the item and still track it. However, everything that is obsolete or a write - off is discarded by the fixed asset ledger automatically. All information in the fixed ledger is automatically posted to the general ledger which is also continuously updated.

The journal voucher supplementary ledger holds information of all unpredicted expenditure, and small miscellaneous payouts done by the company. This information is sometimes keyed in manually into the system because the information is not routinised or predictable.

Thus, all the information from the four supplementary ledgers, viz accounts payable ledger, the accounts receivable ledger, the fixed assets ledger and the journal voucher ledger is fed into the general ledger automatically all the time by the system. The inventory does the same. This collective information is then processed by the general ledger online and transmitted in the form of a working balance sheet. The working balance sheet is divided into the Bank balance sheet and the income and expenditure (or profit and loss) for the accountant of the company to act on. The information from all the ledgers is processed by the system and the information is translated into the form acceptable in the balance sheet document. The document itself is generated by the system. (Refer Appendix two). The ultimate figure that the public is interested in the balance sheet is the bottom line. Are the assets and liabilities equal to the shareholders fund? The shareholders fund refers to the monies from the public who have purchased shares of the company. These shareholders are interested in whether their investment in the company will bring about any dividends.

Table 6 I

Summary of Processes in Activity Centre Three

Activity centre Three	Information Sought	Locus of communication	Process in Physical space	Process in Virtual Space
Event: Updating Inventory/ General Ledger Agent: System Instrumental Function: processing /disseminating Decision Point: none/ routine Document: online General ledger	what clients owe & what the company gained	the accounts receivable ledger in system		✓
Event: Updating General Ledger/ Inventory Agent: system Instrumental Function: processing /disseminating Decision Point: none/routine Document: online General Ledger	who company owes & amount due	accounts payable ledger in system		✓
Event: Updating General Ledger/ Inventory Agent: System Instrumental Function: processing /disseminating Decision Point: none/routine Document: online General Ledger	Accumulated depreciation & Qty	fixed assets ledger in system		✓
Event: Updating General Ledger/ Inventory Agent: System Instrumental Function: processing /disseminating Decision Point: none/routine Document: Online General Ledger	amount of expenditure occurred	journal voucher ledger in system		✓
Event: processing working balance sheet Agent: System Instrumental Function: processing information Decision Point: none/routine Document: Balance Sheet	collating information for balance sheet	online inventory in system		✓

The quantified information in the table above shows that all the processes are carried out by the system. The system sometimes takes on the role of social agent in the social processes of the company. All the social processes described above are carried out completely in the virtual space and all the information needed is also found in the virtual space even though the initial input is from the physical space. The only document that eventually comes out in the physical space is the

balance sheet of the company. The importance of technology in this department is evident in the primary role that technology plays in its decision - processes. All the decisions in relation to money or finance are completely controlled by the system. Power of the individuals is replaced by power to the system. This transfer of almost all power to the system in this section has the effect of flattening hierarchy because the decisions are given immediately without going through any intermediaries.

ACTIVITY CENTRE FOUR- THE GENERAL MANAGER'S OFFICE

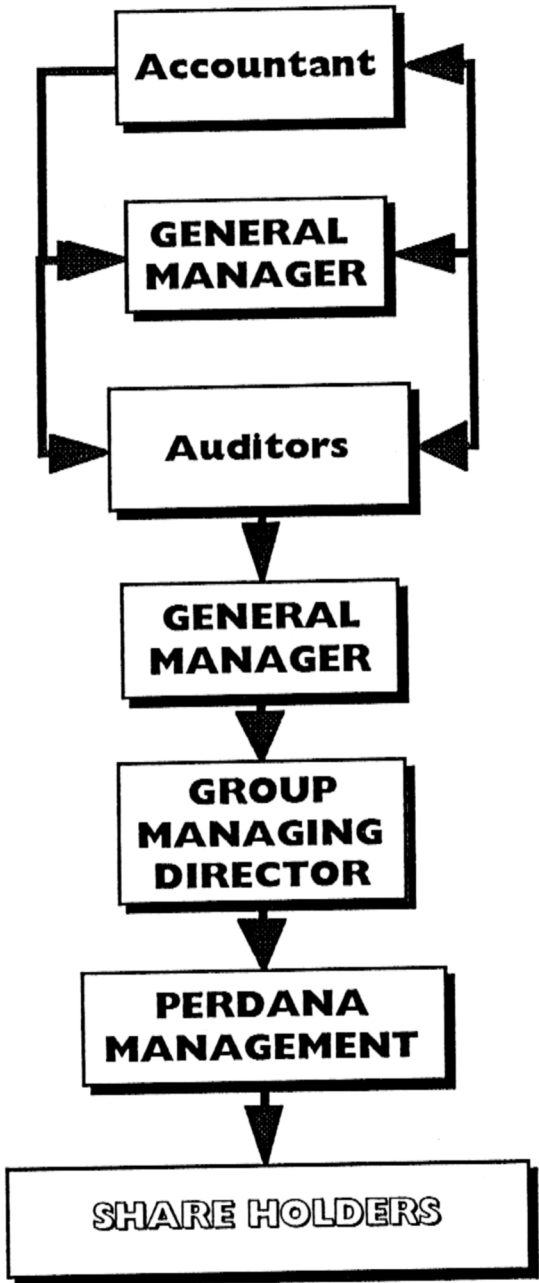
The social processes carried out here are all in the physical space and the social agents involved in this interaction are the General Manager and the Accountant at one level and at another level between the Accountant, the Auditors, the General Manager and the people she/he is answerable to at the Perdana Headquarters. In this interaction, the role of the technology is only to provide historical facts - information about all that has already happened in the company. The social processes carried out in the manager's office are done for two social occasions, the Monthly Management Report and the Annual Report which is carried out once every financial year. The system generates both these documents.

Since the system works with a relational database, the Accountant can pull out from the system information in any permutation that the General Manager wants in relation to the Monthly Management Report. The Accountant is responsible for the Management Report document. Once the Accountant generates the monthly Management Report, the accountant, discusses with the General Manager issues that need looking into at this point in time.

Trends are studied to see if the company is managing itself well. Various "sensitive" adjustments are made along the way to ensure that the "right" image and the "right" figures are shown. Basically, these monthly reports are generated to ensure that there are no extreme fluctuations in the profit margin and that the company is prudent in matching sales with the cost of sales. These issues become critical when the audit report is prepared for the auditors at the end of the financial year. This information and the discussion between the Accountant and the General Manager is private and confidential. After various discussions between the Manager and the Accountant, the final report is agreed on. At the end of the financial year an Annual Report is prepared. The social agents involved include the Accountant, the General Manager, the Group Managing Director of all the subsidiary companies grouped under the category Telecommunications, the Management of Perdana and finally the shareholders. (Refer figure 6 J).

Figure 6 J.

The Process flow of events in Activity Centre Four.



The audit report is prepared for the auditors by the Accountant in consultation with the General Manager. The auditors are interested in the performance of the company, in terms of whether there is any "window dressing" as when sales are overstated or falsified to ensure that the initial budget projections of the company are met. It is important to the company's image that the company sticks to the budget projections because the shareholders of public listed companies are very particular about performances. If the subsidiary company sticks to its budget projections, the Holding Company's performance will not be affected. (will not create a domino effect financially). Auditors are interested in the top line and the bottom line. The auditors do only a sampling audit and so they cannot proclaim that what they discover is 100% accurate. What they can do is give an opinion that the company has been "true and fair" (Perdana Annual Report 1994) in its declarations. If the auditors feel that further explanations and proofs are needed they would ask for them and finally if they have suggestion for revisions they would sign the audit report after the General Manager has signed that she/he has agreed to the adjustments. The General Manager is not obliged to agree and if she/he does not then the auditors will make a qualified opinion of their audit to safeguard themselves. If there are no problems and all suggestions by the auditors are attended to they do not qualify their auditing. For example, this statement taken from the Perdana Annual Report is an example of an unqualified endorsement:

The audit reports on the accounts of the subsidiaries were not subject to any qualification or any adverse comment made under subsection (3) of Section 174 of the Act (Perdana Annual Report 1994:49).

The unqualified statement by the Auditors is very important for the company's image. The statement informs shareholders that the company has nothing to hide and that they can continue to invest in that company because it is shown to be viable and well managed.

After the audit report is cleared by the auditors, the Annual Report is written for discussion within the Perdana discourse community. The executive summary of the Annual Report is the responsibility of the General Manager who writes it based on the information provided by the Accountant. The executive summary is written by the General Manager because he has access to privileged information about future deals, strategies, trends etc that other employees are not aware of. Based on the privileged information, he can justify and rationalise the figures provided by the accountant to the group Managing Director in charge of the Telecommunication group of subsidiary companies. The group Managing Director collates all the information provided by the subsidiaries under his management and prepares a report for the Management of Perdana. At the Management level, the Perdana group Financial Controller, looks at all the reports of the subsidiaries in terms of their viability and their liability to the parent company. The general Manager's executive summary plays a crucial role in this decision making as she/he can explain the reasons for the turnover - the income and the profit of his/her company. The final agents involved in these social processes are the public who have bought shares into the company- the shareholders. The shareholders interact with the company through the Annual Report.

The process network not only connects and enables the interaction between individuals in a company, between departments in

a company, with other companies in the discourse community, with the parent company and with society at large. This dynamic capability of the system is realised through the communication network as shown through the process flows. The social process that began with a simple sales transaction has come one full circle and is finally represented in the Annual Report of the parent company.

Table 6 K
Summary of Processes in Activity centre Four

Activity centre Three	Information Sought	Locus of communication	Process in Physical space	Process in Virtual Space
Event: Monthly Management Report Agent: General Manager/Accountant Instrumental Function: Managing Decision Point: Event Triggered Document: Trial Balance Sheet	Financial status of company	Balance Sheet	✓	
Event: Auditing Agent: Auditors/Gen. Manager Instrumental Function: Checking Decision Point: Event triggered Document: Auditors Report	true and fair declarations	Audit Report	✓	
Event: Reporting to Group MD. Agent: General Manager Instrumental Function: Disseminating Decision Point: Event triggered Document: Annual Report	projection of company	Annual Report	✓	
Event: Reporting to Perdana Agent: Group Managing director Instrumental Function: Disseminating Decision Point: Event triggered Document: Annual Report	performance of subsidiary	Annual Report	✓	
Event: Public Relations Agent: Perdana Instrumental Function: Disseminating Decision Point: routine/Public "Face" Document: Annual Report Perdana	financial status of company	Annual Report of Perdana	✓	

The social processes described in the final cycle of the sales transaction are all done in the physical space although the information discussed are actually from the virtual space and generated by the system. These events are in the physical space because they are not routinised decisions. They refer to decisions that are event triggered and in this case the events refer to the Management reports- Monthly and Annually - and the information provided by the auditors and the Group Managing Director. In sensitive issues like finance and the viability of the company, technology is unable to interact in the active discourse between members. What technology can do is provide the basis for discussion, the talking point in the form of the information generated in the balance sheet. Thus, even though the social events are all in the physical space, technology plays a pivotal role. The whole interaction is based solely on the information provided by the technology and only partly by the information provided by the General Manager regarding future directions of the company. These future directions can only be predicted based on the performance and the historical data provided by the system. This reliance on technology confirms that the system reigns supreme in this discourse community. Technology has managed to flatten the hierarchy by taking on most of the routine decision-making processes of the company. Managers are only referred to when an unusual event triggers their intervention, otherwise the decisions are made by the system thus doing away with unnecessary labour and hierarchy.

6.4 THE MEANING BEHIND THE PROCESS NETWORK

6.4.1 TECHNOLOGY

It is Logos or technology that is responsible for the communication and the social processes being so efficient in the Perdana discourse community. Technology enables the organisation to process and react on information effectively and the benefits of that reaction are felt in the organisation's structure and processes. The process network gives meaning to the system and mediates meaning-making in the community. The processes ensure that the Perdana is sustained and maintained through the routines which enable the organisation to function as an "information processing" and "decision making" system. (Huber, George 1987:132). It is through effective information processing that decisions, valid and reliable, are made. Organisations need and use communication activities to make decisions, to control, to coordinate, to make sense of their environments and to exist. Technology transforms and enhances these activities significantly thereby greatly increasing their productivity.

Perdana uses task specialisation and mechanistic processes and structures to attain efficiency in the communication network to ensure that there is shared understanding, and judgment about what to do with the new information. Basically, in this discourse community, the purpose of technology is to acquire or receive the information from the environment and then undertake processes possible within the system to convey the new information from the environment to all the internal activity centres. The activity centres then decide what actions to take

regarding the information received in terms of opportunities and problems. In the process of doing so they collectively achieve the global goal of the company.

Technology plays a very important part in the storage, retrieval and transmission of information. Logos ensures that the communication of the whole discourse community is backed up at the headquarters every night automatically. The system continues working long after the company has closed for the day and the members have gone home. Technology does not sleep. It keeps vigil and active all through the night receiving, processing, storing and disseminating information from the environment selectively to all its members. For technology there is no question of fatigue, which is basically a human trait.

Daily, the system acquires information and processes it and then disseminates it to all relevant sub sections through the virtual network so that members can carry out the task of decision making and processing. The greater the task dependency the greater the messages and the frequency. Therefore, units like the financial department of Pineapple, whose task fulfilment is dependent on information held by other units will have this information directed to them all the time. The process network can be looked as a group of people interpreting situations and the actions of other people - a human activity network.

Enabled by technology, these processes go on as normal and routine everyday because they share a common set of social structures and processes and in addition a "common language." There is this assumption of commonality at all levels. All linguistic activity in such a

structure is seen as interactive, as a process. The individual in such an interaction is socially and culturally formed by the community or institution she/he is in. The individual knows exactly his/her role and function in relation to the others in this working relationship. All these aspects of structure are assured when communication is an integral part of the process. The communication network is really the virtual network created by and through the system confirming that the social processes and everything related to it in this community is possible because of technology. Technology is the core of its life, the meaning behind the processes.

6.4.2 TECHNOLOGY AND DOCUMENTS/ GENRES.

Ninety - eight percent of the documents generated for Pineapple is through Logos. (Information provided by officer in-charge of Logos operations in the subsidiary company). Since Logos caters for the larger discourse community, the number printed on the various documents generated from Logos follow its own serial number and this number is not distinguished according to the individual companies. However, what Logos does is to ensure the company from/for which the document is generated is stated on the document. The documents are generic and shared by many subsidiaries; so the serial number follows its own sequence and is done so for parent control. Logos provides a form of identity by printing the name of the company requesting the document.

Since for a particular subsidiary company the number will not be running consecutively, it does not facilitate effective filing of documents. The numbers run consecutively only from the point of view of the parent company and not from each subsidiary company that Logos is servicing.

To overcome this problem of not having consecutive numbers, delivery orders and invoice forms with pre-printed numbers are used. Filing in these documents will then be according to the pre-printed numbers and not by the numbers given by Logos. That way the copies of these documents can be accounted for by the subsidiary company. In addition, the delivery orders, and the Invoices are multiple copy documents, and colour coded to enable distribution of these documents to relevant parties for control. The goods received note and the transfer form are single copy documents and have only the Logos generated number which is Perdana discourse community wide. Due to this, photocopies of these documents need to be made for required distribution and controls. Many of the documents are generated at the premise of the various individual companies and the generated documents are printed out elsewhere, for example, at the warehouse. The communication network and the technology therein contribute to the creation and dissemination of genres throughout the discourse community.

6.5 THE PROCESS AS A POLITICAL NETWORK

While the decision to acquire technology can be looked at as a technical or an economic progress, the political decision behind it is to

ensure power maintenance and control. Electronic communication webs present a potential to control and manipulate communication that is almost inconceivable in traditional inter organisational communication modes. The rules, structures, and ways of doing reflected by the process network are really politically determined by the powers and technology ensures that these political linkages are easily internalised and skills easily acquired by the members. In the beginning, Pineapple and the parent company Perdana ensure harmony and extinguish fear of the new by providing in-house training, hands - on sessions, documentation, motivating talks etc to ensure that members already in the community have a positive mind set to the introduction of technology. With time, as more and more new members join the community, these rules and structures are taken as natural and given because they have become so routinised and seem to enable new members to have a shorter learning curve therefore giving members the false of security that they have been well socialised into the community.

What the process network has done in reality is to ensure that power structures are maintained through the right indoctrination so that the overall objectives of the parent company are not sacrificed in any way. Power in Perdana exists at the deep structure level. Power is well embedded in the virtual structural network provided by Logos (the system) and its strength is exerted through the routinised behaviour patterns, relational positions, shared knowledge dissemination and also in the prescribed practices of the social institution. Technology has enabled power to be at this deep structure level, therefore many of the social agents do not challenge or question it because it is unperceived. It is usually quite impossible for the

members to realise that what seem like universal interests of employees are actually disguised interests of the owners of the organisation. All the decision points in the process network are really at the surface level only because these decision points are routinised and decision rules have been predetermined and deeply embedded into the system by the real powers behind the discourse community, i.e. the owners or the parent company. The crucial decision -making is done by the management of Perdana and by no one else. The powers have re - engineered the whole process in the discourse community by providing the "right" interpretative frames for all members in the organisation. These frames are constrained by perceptions, learned behaviours about how to communicate, and a variety of organisational factors such as who reports to whom, who is supposed to do a job, when a job needs to be done, where the communication takes place, how one is supposed to communicate what is the expected content of the communication, what is the particular job setting is and so on. The daily meaning - making processes, the rituals, the metaphors are really disguised mediums for the perpetuation of power. This view is corroborated by Frost:

The power holders have constituted and institutionalised their provinces of meaning in the very structuring of organisational interactions so that assumptions, interpretations and relevance become the interpretive frame, the cognitive map, of organisational members (Panson, Hinings, & Greenword, 1980:08 in Frost, 1987:507).

Technology gives unrevealed power to the owners and the technology process ensures that these desired meaning of the owners are maintained and sustained. The process network is an avenue for

the exercise of power both at the surface and deep structure level. Thus, technology traditionally associated with objectivity is a misnomer. Technology is not neutral - it favours some and marginalises others. Power viewed from the process aspect is power in action, but in the synoptic or system aspect, it is power in conception. Power is given form through the social processes and structures and the communication network (the system) ensures that the games are played according to the rules prescribed by the owners of the organisation.

Examples of power in action in the social processes in the day to day running of the organisation is best reflected in the financial section of the company. The system has the following features to ensure that the finances are accurate and updated. The system balances all entries for the transactions carried out. The debit and credit must match for each entry. If for some reason it does not match, the system will not allow the entry to be "posted" to all the other sections. This form of control at the lower end or the surface level is to ensure that all transactions are well accounted for by each of the social agents. The "posting" feature of the system allows immediate update of all subsidiary ledgers and this allows for a one - to - one correspondence in the General Ledger and ultimately in the balancing of the accounts. This control ensures figures are immediately available for decision making.

Another form of control is the central inventory, which is updated immediately. If someone conducts a transaction without the goods being actually available, the system will disrupt sales automatically and the sales transaction will not be allowed to continue

until the shortfall is rectified by the social agent through the accepted social processes..

The system has the facility to print cheques for the company. Creditors have a credit limit of thirty days and the system will continually update the list of creditors by picking out those whose credit limit are up and print out cheques for them in the right amount. All this is done by the system so it controls and records all monies flowing in and out of the company. The system has cut down the possibility of corruption. An interactive feature of the system enables it to provide relevant information on its clients. If a customer or client's code is called up the system will give a listing of: the name, address, fax number etc and also the "aging" features. This feature refers to the amount of days overdue for payment and the details of it. This facility ensures that the members responsible for collecting payment regularly do their rounds as the system will force them to do so by reminding them of the aging features.

Thus the communication network is not just another organisational activity that occurs inside an organisation, rather it creates and recreates the social structure that makes the organisation.

6.5.1 THE POLITICS OF GENRES

The number on the various documents from Logos is Perdana wide, meaning that it is not distinguished by the individual company. This would ensure that the parent company has a firm grip on all the activities that go on in her subsidiary companies. It will ensure everything is accounted for and there would be less opportunities for subsidiaries to hide anything from the parent company. All the

activities related to profit making in the subsidiaries can be counter-checked through the central serial numbers issued by Logos. Every night, automatically, the system updates all the activities that have been going on in the discourse community. All profits and losses are identified and it is easy to trace any of the social processes because the serial numbers would run serially and consecutively if there has been no hiccup. This is one form of gate keeping by "Big Brother."

At the subsidiary company level, the documents are in multiple copies and colour coded as well to ensure control and accountability. For example, the number of copies of the delivery order and Invoice in Pineapple are as follows:

Delivery Order:

- Copy 1 Customer (white)
- Copy 2 Sales operation (Blue)
- Copy 3 Warehouse (yellow)
- Copy 4 Transporter (green)
- Control (Pink)

Invoice:

- copy 1 customer (white)
- copy 2 Sales operation (Blue)
- copy 3 finance (yellow)
- copy 4 Control (pink)

The documents and their copy distribution are summarised below.

Copy 1 and 4 of the delivery order and copy 1 of the invoice to be handed to the delivery crew/transporter to effect delivery. Copy 5 of the delivery order is retained in the warehouse as a control copy with the transporters and delivery crew acknowledging having received the

goods. Copy 2 to 4 of the invoice will be retained in the warehouse and forwarded to the Sales office.

Copy 1 of the delivery order and Invoice will be retained by the customer. The customer is required to chop and sign copy 2 to 4 of the delivery order. The transporter is to return copy 2 and 3 of the delivery order to the warehouse. The transporter is to retain copy 4 of the delivery order for billing of delivery charges. The warehouse files copy 3 of the delivery order retaining this document as proof of delivery of goods to the customer. Copy 4 of the invoice is stapled to copy 3 of the delivery order and filed with it. The warehouse dispatches copy 2 of the delivery order and copy of the invoice to the sales personnel of the relevant subsidiary company.

By ensuring that all the social agents have a copy of the document the company assumes shared knowledge and accountability and control. The documents are further colour coded for ease of identification and dissemination. These colour coded multiple copies are really forms of control because individual members are completely answerable for their part in the total process and any hiccup can be traced to that particular individual in the network. Moreover, because the warehouse has a preprinted serial number on its documents, these can be checked and accounted for daily by just ensuring that all the copies of delivery orders run in a number sequence. If a number is missing from the sequence then it would be easy to identify or look for it because the preprinted serial number would indicate which one of the delivery orders is causing the problem.

An element of intertextuality or a theme runs through all the genres in the social processes of Pineapple. The information is repeated

in different genres to ensure shared information and perceptions. For example, purchasing orders have the following information- the date, the purchasing order reference number, the unit price, the gross price, the part number (refers to product identification) and description of product. This information is also found in many other documents generated by the system including the invoice and the delivery order. (Refer Appendix One). Intertextuality is on the one hand a form of control because one cannot plead ignorance of message and on the other hand ensures shared knowledge and perception because some of the information in one form or another is repeated in all the different genres.

Another form of control is seen in the compulsory conditions prescribed for some documents. Purchasing orders, for example, are legal documents and can be used in court for any default. As such, all purchasing orders have to be signed. This is a form of control because it assures commitment and responsibility. It also ensures that the profit that is rightly due to the company is not in any way jeopardised because default can be fought in a court of law based on the purchasing order as evidence.

These dynamic perspectives of the system show how interactants are occupied continuously negotiating with technology and unfolding its creation. The process network shows how people get on through communication with one another achieving what they, as individuals and collectively, what they as part of a corporation have set themselves to achieve in situational and cultural contexts. The political and the meaning systems are very much a part of these activity systems of processes and flows.