ABSTRACT

Overview Decision support systems (DSS) are systems which are specially design to support the decision making process of the human by means of Expert quality knowledge, multilevel graphical analysis, statistical calculation etc. In other words these type of systems make the life easier to the human. Despite the fact that these system are beginning to used in Sri Lanka, the Management Information Systems (MIS) which can be treated as a part of DSS are very popular in commercial industry. This may due to the cost of developing a DSS and the lack of AI knowledgeable IT professionals involved in the commercial application development. 'Efficiency' the DSS will be one of the key supporters to achieve it. Background Good territory management contributes to the development of strong business partnerships and better use of resources. So the differentiation of outlets, and getting the corrective actions while satisfying the Mission of the organization is very important. Each territory is represented by an Executive and there can be couple of distributing agents or territory level warehouses. The stocks for the retail outlets are delivered by the distributing agents. And the retail outlets sell the product to the consumer. The most difficult part of this process is the management of outlets and taking the corrective action to improve the sales while satisfying the Mission of the organization (i.e. just trying to improve sales may reduce the profit or the sales of another product). Since the outlets are very large in number and any mistake in an investments also will be multiples of that number. So it is vital that the Executive get the correct decision and at correct place at the correct time. If a system can support these decision, it will definitely lead to improve the sales and reduce the cost of the company.

INTRODUCTION

This Projects Proposal gives Expert Decision Support Expert System for Trade Marketing Executives. In a Business Environment Marketing is an important practice. Marketing is generally divide in to two sub parts

- Brand Marketing
- Trade Marketing

Brand Marketing concentrates on established consumers needs and wants and how best to satisfy these with a brand portfolio. It is influence the consumer to purchase a Branded Product through advertising

Trade Marketing on the other hand important aspect of marketing because it adapting of products, logistics and brand marketing policies and strategies in such a way that best meets the needs of particular trade channels and strategic customers.

In short each customer is considered and supported, but this support will vary depending on the importance of the customer from the volume potential and marketing possibilities that they offer by doing so a company achieves continuous stock availability, competitive pricing and effective shop displays which in turn increase the volume of trade this also increasing the company's profitability

At present many companies within the fast moving consumer goods (FMCG) sector have successfully implemented and are presently operating under the trade marketing concept. these include prominent multi-national companies such as Proctor and Gamble, Pepsi Cola and Citibank

Trade Marketing has emerged as the most preferred and effective means to respond to customer needs mainly because of the fact that it takes into account changing trading trends have on two key areas, namely Trading Environment and Consumer Environment

By taking into account these changes, theoretically it is possible to improve company's performance in that market. However the larger the organization logistics become a problem and more often than not the volume of data needed cannot be handled efficiently However a recently emerging trend in industry has been the advent of technology in marketing, breaking out of the bounds of production where it had previously been active. Computers in particular have contribute hugely towards the development of such strategic concepts as Trade Marketing. Their ability to facilitate the gathering and analysis of important information has let to better management of the administrative details of business .Also providing companies with a reliable and efficient computerized total inventory control has led to better informed trade taking place .This means that consumer activity can be enhanced. Because the available data and data processing facilities make it viable to target customers more specifically and meet their needs individually. Thus trade marketing becomes a viable alternative to traditional methods.

Trade Marketing Has Trade Channels Which Given Below

- Consumer Base
- Outlet Type
- Product Range Carried
- Pricing Policy
- Objectives and Strategies
- Marketing Support Needs

By grouping customers into Trade Channels a company is better able to focus its entire marketing efforts on a special needs and characteristics of each channel's consumers. This can be done by better identifying the company's strengths and weakness, matching Trade Marketing Representatives expertise with channel needs and identifying changes in trade direction thus gaining the competitive edge. Since the areas that need to be analysis can be clearly defined computerization becomes less cumbersome.

CORE SERVICES THAT WE HAVE TO FOCUS IN THIS PROPOSAL

The Core services are a company's Foundation Form which it builds an effective and efficient business The Consists of

- Accurate Order Systems
- Efficient Delivery System
- Point of Sale Materials
- Display Support

Then Value Added Services assist a company to build business partnerships with its customers. This value added services include:

- Business Building Promotions (Consumer Trade Promotions)
- Multi Level Contacts
- Channel Specific Support
- Space Management – Display Space
- Category Management - Different product groups should be Manageable
- Direct Product Profitability

BENCHMARK SUPPLIER

With out the solid foundation of core services it is very difficult for a company to add value to its services. An effective and efficient core service allows a company to move in to value added areas to crate a mutual benefit for its customers. In doing this, the company becomes acknowledge as an industry expert and becomes a benchmark supplier.

DISTRIBUTION

Distribution is both a core an d value added services. Distribution to the outlet involves the physical movement of stock to the customer. This is a Trade Marketing Representatives responsibility. Distribution in the outlet is aimed at ensuring continuous availability of a company's product to the consumer. The components of distribution include:

- Ensuring accurate order capture
- Ensuring efficient delivery service
- Ensuring uninterrupted availability of stock to consumers at point of sale
- Managing stock freshness at each level
- Ensuring payment for products sold

PHYSICAL DISTRIBUTION

Physical distribution, as part of the core services, supports the entire trade Marketing Process. This involves getting the product in the right place at the right time With out efficient distribution of its products a company finds it very difficult to add value to its services and build business partnerships with its customers. Physical distribution involves accurate order services, efficient deliver service and collect of payment. Distribution also plays a most important role in value added services by ensuring uninterrupted availability of products to the customer at point of sale and managing stock freshness.

PROJECT BACKGROUND

Natural Language Systems : The Primary of these are to enable human to interact with computers in the human's own natural language, rather than a computer language. The distinct advantage this method has is that the user requires no prior training to use the system. Requesting information from such a system is almost the same thing as asking for information from another person

Reasoning Systems

The pursuit of computer systems that can reason about facts assertions in order to solve problems lies at the heart of the AI Field. In general reasoning systems can be divided in three major subsystems.

Knowledge System : Holds Facts and assertions about a specific Problem Area

Language System   : Used for stating the specific problems to be solved

Problem Processing System : Draws from the content of the knowledge system and solves the problem stated with the language

HOW THIS SYSTEM SOLVE PROBLEMS

In this systems a specific problem is solved by examining the relevant facts and assertions in a sequence that results in deriving or discovering a solution to that problem. However at various steps in the reasoning process the system may ask the user for further information and or clarification. Just as in human reasoning, it is imperative that the system can differentiate between the relevant and irrelevant information. It is also important to consider this relevant knowledge in a logical sequence rather random browsing or jumping to conclusions if not the problem solution may be unsound or may take longer to derive.

OVERVIEW

It is beyond the doubt that Decision Support Systems are revolutionizing the nature of organizations and management. They have done so by being assimilated in to the main stream of business computing. This has led to a fundamental re orientation in the in the business computing field and has effected all types of business manufacturing, agriculture, commerce, banking, construction, services, government and so on. Before going direct to the nature of Decision Support Systems it might be wise to inspect the evolution that has taken place in this place in this field of business computing

DECISION SUPPORT

The essence of management is decision making. Up to Date knowledge about the environment which a decision will be made is a necessary precursor for good decision making. In addition the decision maker must have the ability to analysis, evaluate and

reason with this knowledge in suitable ways A. Decision Support System is software that helps the Decision Maker Address the issues.

DECISION SUPPORT SYSTEM MODELS

Research in various disciplines of management (Operations Research, Finance , Applied Economics) have device quantitative Technique and algorithms to assist Decision Makers. These are usually referred to as models and can be used to analyze knowledge about a given environment to produce fact, Expectations, or beliefs as basis of decision making. A model can be described as procedural knowledge a sequence of one or more steps that specify how to generate new knowledge form existing knowledge about the environment . Commonly used models being linear regression, optimization algorithms, inventory control procedures and so forth

BEYOND RECORD KEEPING

Like a MIS, a Decision Support System (DSS) has record"-keeping capabilities. These may not be as advanced as those of an MIS, and are not required to be so. Beyond record-keeping, DSS have the following traits: It can carry out analyses by fitting environmental knowledge into models. It furnishes users with powerful, convenient languages for problem solving. It can be used to support comparatively unstructured decision activities.

STRUCTURE OF DSS

In a decision support system, models usually take the form of programs or functions that can be called by the system. This would occur in response to a user's query. The language

used in stating the query usually requires no computer expertise on the part of the user. The system should also support ad hoc queries and ad hoc analysis. This is important in supporting unstructured decision-making.

STRUCTURE BEHIND THE SEEN

	Language System	Problem System	Knowledge System

Use ──────────▶
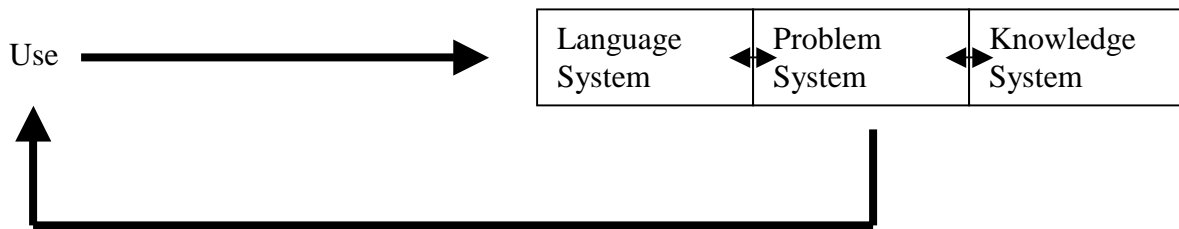
Notice that a DSS has three major parts or subsystems : a Language System Menu Driven a knowledge system and a problem processing system.

A language system is the collection of all linguistics facilities included in the system. They allow the user to communicate with the system and make requests from it.

DECISION SUPPORT SYSTEMS

Knowledge System

The knowledge system consists of knowledge about the decision maker's environment, procedural knowledge and analyzing the environment via modeling.

Problem Processing System

The problem processing system is the core of the DSS. It has the ability to understand the user's request stated using the language system and access the knowledge system to satisfy a user's request for retrieval or analysis. During this field's infancy, DSS's tended

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to be built from scratch using programming languages such as COBOL or FORTRAN. The procedural modeling knowledge was usually incorporated into the problem processor instead of the knowledge system. However, later, the principle of Generalized Problem Processor Systems (GPPS) was introduced. A GPPS is a single, invariant problem processor that is operable for a broad range of decision support applications - from market forecasting and resource allocation to operations management and financial analysis.

GENERALIZED PROBLEM PROCESSOR SYSTEMS (GPPS)

The software of a GPPS never changes regardless of the application it is used for. This is made possible by excluding all application-specific knowledge from it. Since the problem-processor is general all application- specific knowledge is stored in the knowledge system. This may include environment knowledge, procedural knowledge, linguistic knowledge etc. A DSS based on a GPPS can be transformed from a DSS for a specific application to another application simply by exchanging one knowledge system for another. The system can be extended, simply by modifying its knowledge system contents. Therefore the advantages GPPS offers for rapid and economical development and maintenance of DSS's become apparent.

Reasoning with Rules

Once a rule set has been built, the reasoning knowledge it contains can be used by an inference engine. Each rule is a module of knowledge that tells the inference engine what actions to take, provided the conditions stated in its premise are satisfied. When given a problem, the inference engine reasons with the given rules to try and derive a solution for

the problem. The reasoning also involves the ability to recognize which rules are applicable to a specific problem, determining whether a rule's premise is satisfied, carry out the actions specified in a rule's conclusion, and acquire additional knowledge if a problem is encountered.

Adviser Rule Set

This is a set of rules designed by someone who has knowledge in taking decisions within the specified environment in which the DSS functions. These rules can be both general or specific as warranted by the application. These would usually be included within the knowledge system. The challenge in developing the system, is teaching the inference engine to apply the rules in a logical manner that would help the system derive an answer to a user's query.

Dealing with Uncertainty

Humans are sometimes needed to reason about uncertain situations. The person seeking advice may not be able to claim that all data provided are accurate. To deal with this, various techniques are used in inference engines. This is accomplished by factoring varying levels of certainty in the reasoning by using certainty factors.

Certainty Factors

A certainty factor is a number between 0 and 100 that is assigned to a variable. It is a measure of how confident we are about the inference engine's accuracy in assigning a value for a variable. A certainty factor of 0 is the lowest certainty while a factor of 100 represents the highest factor. Usually when a certainty factor is not assigned a factor of 100 is assumed.

Certainty of a Premise

When considering two or more certainty factors to determine the overall certainty factor for a premise it is common to use two approaches. Namely,

. **Joint Certainty for a Premise**

If all conditions must be true in order for the premise to be true, then it is reasonable to assume that the overall certainty should not exceed that of the least certain condition. Therefore that is taken as the overall certainty of the premise.

. **Confirmative Certainty for a Premise**

If only one condition must be true in order for the premise to hold true, then it is reasonable to assume that the overall certainty should at least be that of the most certain condition. Therefore in this context, that value is taken as the overall certainty of the premise.

THRESHOLD OF THE UNKNOWN

When a human expert reasons about a problem, it may happen that the degree of certainty about something is so low that it may be considered as being unknown. But how low, is "low"? Where is do we draw the line between the known and the unknown? This is usually application specific, and can be drawn at different levels. For one application this maybe 70 while for another it may be 15. Similarly an inference engine that processes certainty factors will have a threshold of the unknown. If the certainty value falls below this threshold, then the value can be considered unknown.

DEVELOPING A RULE SET

The activity of rule set development is perhaps more of an art from rather than a science. Practice may well be the best teacher. Nevertheless there are a few considerations which, if kept in mind, can be helpful in this process.

DSS OPPORTUNITIES

Rule set development begins only after an DSS opportunity has been identified. Such opportunities are abundant in most organization and managers should develop a knack for recognizing them. The manager should look for problem-solving activities where human experts are in short supply, overburdened, unavailable when needed and very expensive.

IDENTIFY DSS OPPORTUNITY

A DSS opportunity usually exists if the activity in question involves reasoning for the Following purposes
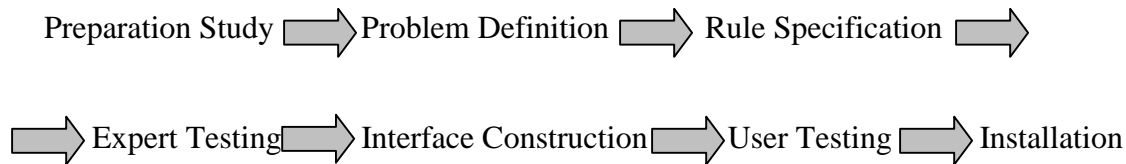
- Diagnosing the Queue of Situation(Auditing trouble Shooting Debugging)

- Prescribing the cause of the action (Planning Designing Repairing)

- Understanding What is Happening (Interpreting Teaching Monitoring)

- Governing What is Happening (Implementing Teaching Monitoring)

- Evaluation Diagnoses , Prescription, Prediction, Situation and Actions

DSS Opportunities exists not only where human experts need relief of need to be replicated: They also Exists where human expert have not yet venture. A Stock trade is good example for this. If he were to make his trades the conventional way, His Expertise could only be applied to a limited amount of trades. However if his knowledge is used to

build a DSS, Then the volume trade using his knowledge would drastically improve thus increasing profitability.

DEVELOPMENT PROCESS

Ones an opportunity has been recognized and a plan for its implementation has been accepted. The actual development can begin.

Preparation Study ⇨ Problem Definition ⇨ Rule Specification ⇨

⇨ Expert Testing ⇨ Interface Construction ⇨ User Testing ⇨ Installation

Shown above is a typical cycle of activities that recurs repeated during the Development of a DSS

This cycle consists of several stages: study, problem definition, rule set specification, expert testing, interface construction, user testing, installation. These stages are major considerations facing a developer but they are not engraved in stone. Novices may want to follow them closely while the more experience developer would probably follow his own cycle which would be adapted to his style, needs and tastes. Each iteration of this cycle results in a better DSS that that produced by the previous iteration. Thus the development of a DSS tends to be incremental and evolutionary in nature. Due to the dynamic nature of certain problem areas, a "final" expert system may never be reached: Objectives can be open ended, allowing the system to perpetually grow.

EXPLORER THE MIND OF EXPERT

Developing a DSS is a learning process for the developer and should be approached with an investigative and experimental spirit. The developer must explore the mind of the expert, discovering what the expert knows and understanding his reasoning behavior.

Usually, the expert's reasoning knowledge would not have been previously formalized. It exists informally and must be systematically scrutinized. Therefore development is a process of making the informal formal, of making the implicit explicit. Therefore a developer is a student, a transformer, a designer and an organizer. He grasps the heretofore unseen and gives it a form that is understandable.

DISCOVERING THE VARIABLES

This is another important aspect of the system development. Usually the developer pursues a line of questioning aimed at discovering the variables that will ultimately be referenced by rules, initialization sequence and completion sequence. These would include goal variables, input variables and intermediate variables. The problem definition is usually a good place to find what the requirements are.

DISCOVERING THE RULES

Once the variables have been found. The next important step is defining the rules. These are application specific and are those that need to be applied by the inference engine to derive a solution to a given problem. These rules would usually be based on an experts knowledge and the developer must create the necessary structure for these rules so that it is possible to apply then in a logical and coherent manner in which a final solution can be derived.

EXPERT TESTING

Once all the necessary knowledge has been given to the system and the inference engine is running as expected by the developer, Expert Testing takes place. The Expert tests the system to check if it has correctly captured the expert's knowledge. Both the developer

and the expert go through this process together with the expert critiquing the system reasoning behavior and advice. This is usually where discrepancies and faults in the rule set are detected. If the expert is not satisfied that the system is functioning properly, the developer must alter the system and keep testing it with the expert until both are satisfied that the system functions as expected.

CERTAINTY FACTORS FOR EXPRESSIONS

The inference engine for a DSS is apt to encounter many expressions during a consultation. While some may be numeric others may be logical. When an expression is encountered the inference engine will try to evaluate it using the values of the variables involved. If the inference engine's evaluation is successful, then the expressions value is known to a specific degree of certainty. This certainty depends on three things. . The certainty factors of the variables used in evaluating the expression

- . The kinds of operators specified in the expression
- . The certainty factor algebra that is applied in that case

TRAINING

Rudimentary computer literacy is, of course, a necessary foundation for knowledge worker training. It is rapidly becoming just as much a basic skill as the traditional writing, reading, and maths. But basic computer literacy by itself is insufficient preparation for knowledge workers. If truly knowledge-based organizations are to be realized, there must be a keen appreciation of the very nature of knowledge. This includes a taxonomy of knowledge types, repertoire of knowledge representation techniques, a familiarity with knowledge-processing methods and an understanding of knowledge is concerned more with pragmatics that abstract epistemological issues. As the pragmatics

of knowledge are more fully comprehended, they will become an essential aspect of knowledge worker training.

COOPERATION

This is a vital part of the DSS development. The sharing of an organization's knowledge resources among knowledge workers is essential from two standpoints. Firstly, it avoids duplication of effort in knowledge collection and maintenance. Secondly, it promotes consistent decision making since all knowledge workers have access to the same body of knowledge. Another aspect of co-operation is that between the expert and the system developer. If the expert does not give his full co-operation to the system developer then the final product will not be successful. Here it is vital that the expert does not hide any knowledge from the system developer.

PROJECT MANAGERS ROLE

It is important to remember that a Developing a Decision Support System is a project of considerable size. By considering it as a project, and structuring it accordingly, we can ensure that it has the management and controls necessary for success. It is also important to remember in addition to this the Decision Making process of Human differs from one to another, making it more difficult to find the boundaries and scope of the project

FACTORS WHICH NEED TO BE CONSIDERD

The implementation of the DSS, consist of five stages:
- preparation
- planning
- data collection
- data entry
- analysis and reporting

At each stage there are a number of pivotal decisions which have direct impact on the system's criteria and hence the operations of the DSS. Remember the validity and reliability of information and reports produced from the DSS, depends entirely on the criteria chosen when setting up the system and the accuracy and validity of the information input.

WHAT PREPARATION IS REQUIRED

The first stage in the preparation for the implementation of the DSS is to determine the roles and responsibilities of everyone involved in the project. Key roles and responsibilities include:

- Project Manager/Developer
- Trade Marketing Experts
- Trade Marketing Executives

PROJECT MANAGER/ DEVELOPER

With a project of this scope where major and complex decisions are required in setting up system parameters, it is essential that the project is coordinated and led by an effective Project Manager. Here the effectiveness is very important. We should identify the

- ***Correct person to interview***

WHAT KNOWLEDGE SKILLS

What knowledge, skills and attitudes do you think are required in a Developer? In this case I mean that even to ask the questions in the trade marketing executive regarding how he handle the problems, we should have some sort of a knowledge about the subject. Otherwise it is very difficult to sense what type of decision making process taking place in each Function. In addition to this my past experience in system development gave me

the courage to deal with different type of people in different capacities and analyze the whole project.

DATABASE CONTENTS

Decisions are made on what information to collect and how to set up the system.

WHAT PLANNING IS REQUIRED

The first step is to decide the project's scope. This requires determining:

- Data to be collected;
- People, whom to meet;
- Method of interviewing the person

DATA TO BE COLLECTED

The data to be collected for the system should be determined purely based on the type Decision that we are planning to support. In my case I decided that I will planning to support Specially the promotional outlets and for that instances how the decision to be taken to select the best set of outlets. Also I had to planned how to extract the knowledge in to a peace of paper. For most of the people I prepared a table which include all possible outcomes, which can be considered for the selected object; as a example in a case of selecting a outlet I had to consider the most important Data referring to the outlet such as Volume Classification Exclusive Brand, Consumer Profiles etc.. and then I ask the person to give some sort of a weight (which can be treated as a fuzzy weight later on) represent the importance of that data for the decision.

PEOPLE WHOM TO MEET

In this project, one of the task is to identify the expert who are willing to give there knowledge. In some cases half way of the conversation I found that the person whom I was interviewing was not very reluctant to give the information How and Why they take particular type of decision. One advantage is that in a company you can find more than one experienced Trade Marketing executive who seems to be the expert of some of the Trade marketing Executive activities. Even though you have enough people to interview when it come to the higher in the ladder it is quit different. Some top level managers they start with the security issues regarding the information. In the other hand some feels that this could be a threat for their Jobs. So in this part of the project I really understood one of the famous criteria to decide whether to implement an Expert System - "The Willing Experts Exists". In addition to that I had to spent a considerable amount of time on selecting the experts to extract the knowledge.

DATA COLLECTION PART

- Interview People

- Asking Questions Based on theory

- Asking the Questions Based on What You Have Seen

- Then Getting all the Possible Out Comes and Categorized

CHANNEL INFORMATION

Overview

In trade marketing it is possible to Identify five channels in which outlets are grouped based on the way in which we can communicate with the consumer and the consumers

buying behavior in the different outlet types. It is also important that we keep these information in such a way that we can extract information as the same way that human extract the information to his brain to get a decision. The reason for how and why we categorized is given in detail below.

Convenience

Convenience, Where consumer mainly visit to fot: off-premise consumption. Communicating .to the consumer is mainly through merchandising at the counter

Grocery

Grocery, where consumers mainly visit with a pre-defined reason e.g. to do monthly grocery shopping. Communicating to the consumer is mainly through merchandising at check-outs;

Horeca

Horeca ,where a consumer mainly visits for one-premise consumption i.e. bars, restaurants, discos, etc. The word Horeca is a combined abbreviation for Hotels, Restaurants and Cafes. The scope for communicating with the varies widely in Horeca outlets-much more imaginative use of merchandising can be used in this channel;

Duty Free

Duty free, where consumers mainly are in transit between different countries and buy goods for the reason that it is exempt from local taxes. Communicating to consumers is generally through large displays in the duty-free outlet or through brochures

MOTIVATION FOR PURCHASE

It must be appreciated that shoppers regularly migrate across these different channels and therefore the same consumer maybe found in different channels, at different times and the only change will be the consumers' motivation for purchase.
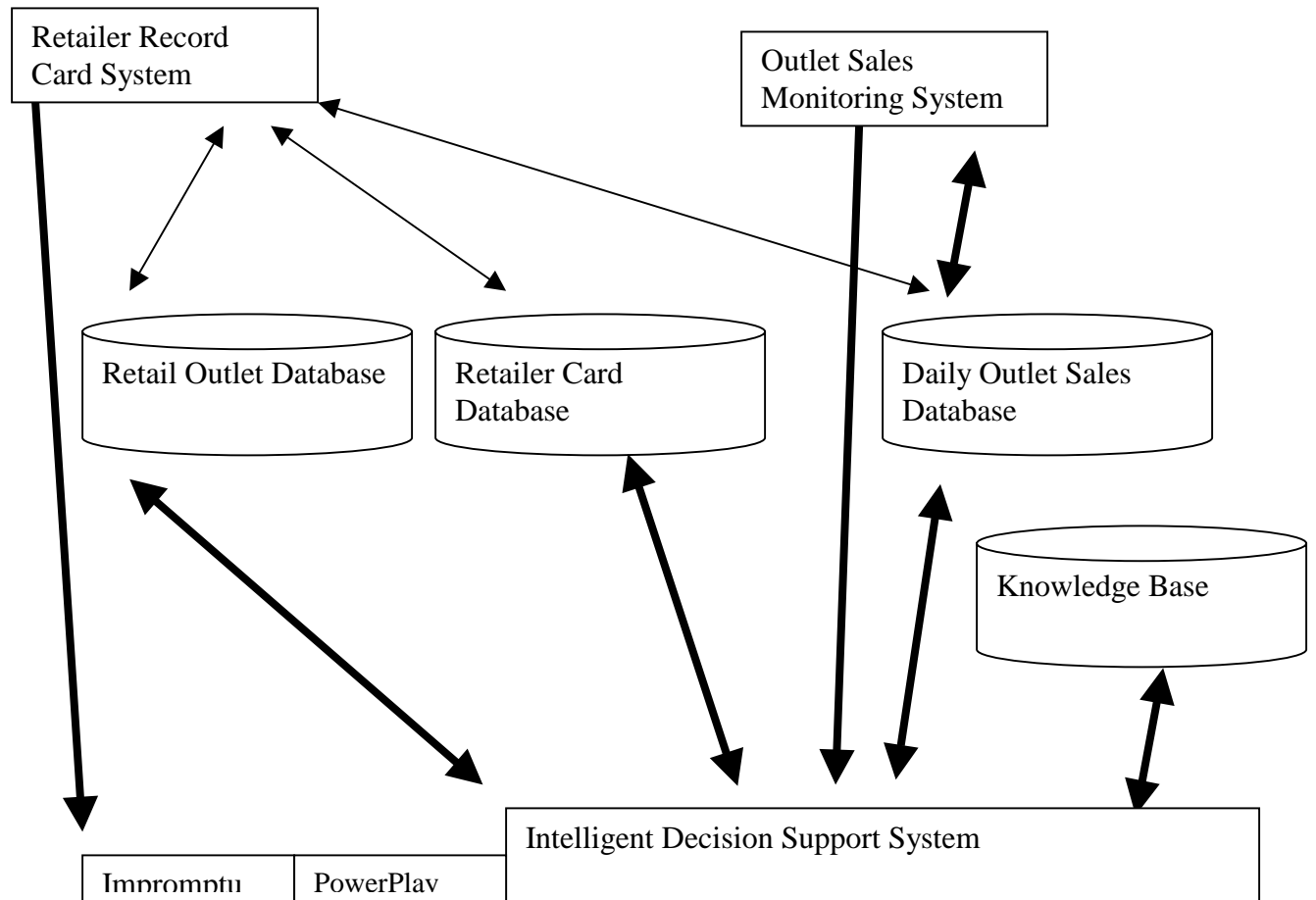
ASSUMPTIONS

The same consumer may:

- Shop in the Grocery to stock up on products on a pre-planned basis and therefore normally in greater quantities in order to have enough products for a period of time;
- Shop in the Convenience Channel when a product(s) runs low or runs out before the next planed visit to the Grocery outlet;
- Shop in the Horeca Channel when the consumer has no product with him/her and is captive for a period of time in the same location making it easier to replenish a small quantity immediately;
- Purchase additional, planned or unplanned, quantities in duty free because of the price advantage for own consumption or as gift for some one

After the Above Stages Your are Ready with the Knowledge Base

THEN AFTER THAT USE CYCLE PLANNING :

Best practice planning, when implemented it provides a consistent approach to achieving our objectives and ensure direction. Cycle planning is fundamental part of Trade Marketing operations. In order to effectively carry out cycle planning we must be able to effectively target the correct outlets. his can be achieved at two levels firstly by carrying out micro marketing if you knows which kind of outlets you wish to target: secondly by running key reports to give details on outlets in order for you to determine which type of outlets to target.

PROPOSED SYSTEM ARCHITECTURE

Retailer Record Card System

Outlet Sales Monitoring System

Retail Outlet Database

Retailer Card Database

Daily Outlet Sales Database

Knowledge Base

Impromptu	PowerPlay

Intelligent Decision Support System

RETAILER RECORD CARD SYSTEM

This system provides the trade marketing executives to update the important information such as
- . Merchandising material and there investments
- . Weekly sale and Stock on Hand (week that he visited)
- . Transit or competitor brand sales and Stocks on hand
- . Objectives and Follow up
- . Facility to edit the Retail Outlet Classification database fields

OUTLET SALES MONITORING SYSTEM

This system enables to monitor the sales of the outlets on daily basis. In practice this module should be installed at a Distributor Location where they update the daily sales of each route outlets. Information to update this system is taken from the salesman outlet record card. It is practically difficult and not necessary to keep track of daily sales of all the outlets. Instead we can keep only the selected outlets. For this we can apply the I80-20 principle, which say s that 80% of the volume is given by 20% of " the outlets. So we capture only the 20% the outlet universe. But if possible I it is open to capture all the outlets. In marketing terms we call this 20% of the outlets as "BIG FISH".

DAILY OUTLET SALES DATABASE

This database consist of the brand wise sales targets etc. of the selected outlet on daily basis. The outlet number of is database is Identical to the number in Retail Outlet Classification Database and Retailer Card database. So that at any given time queries can be executed using the unique Outlet Number. Also this database is design to keep each distributors Territory outlets so that when we design the outlet number we can allocate four digits for the distributor code Trade marketing executive will have to copy this database to his Note book computer whenever he visits his distributors.

RETAIL OUTLET CLASSIFICATION DATABASE

This is the heart of the outlet information data collection where all the necessary static outlet information in stored. The decision support process mainly depend on this information. So it is vital that this database is kept up-to-date for references. On executive visits to the outlets he updates this information though Retailer card system the detail explanation about the data available in this database is given later in this chapter.

RETAILER CARD DATABASE

This database keeps the information that the executive updates during his visits to the outlet. Part of his updates goes to the Retail Classification Database and the other part goes to the Retailer Card database. One of the major advantage of keeping this database is that it keep the information about Competitor Stocks, Weekly sale, Stock on Hand, Outlet Profitability and the objectives and follow up of each visit. So that he can revise later on regarding what to be done for the improvement of that outlet.

KNOWLEDGE BASE

Knowledge Base keeps the information about the decisions that it can support and the relevant information for each decision and the reference for each information element giving the actual field name of the respective database and the corresponding weights for each information element.

ANALYZING

PowerPlay is tool that we have using for the data analysis part of the TRADEX (System) and also it supports as a graphical analysis tool as well. PowerPlay provides multi dimensional analysis using a thing called Transformer. Transformer He1ps you to transform your two dimensiona1 data into a mu1tidimensiona1 powerplay app1ication which gives you the immediate insight into the data. When Creating the Tansformer we have to consider the Dimensions and the Measures. Dimensions provides the abi1ity to ana1yze mu1ti dimensiona11y against the measures that you have given the tab1e given be10w show one transformer design in Tradex.

This design enables you to Ana1yze any of the Dimensions against any of the measures. As a examp1e you can know distributors Total Soft drink Annua1 sa1e in Channe1 Horeca. In order to do this we have to make sure that there are corresponding data avai1ab1e in our database. In other words when I was designing the database I had to think about the dimensions that I wanted to give to the user. Normally this happened in the other way but in my case I knew before even I design the database that I have to give certain analysis features As well as we can generate the Graphical View How it is analysis the system Using Power player Tool.

CONCLUSION

We can suggest this system will give more useful benefits to Its target executive group.