

# DIGITAL NETWORK

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Submitted in partial fulfillment of the requirements  
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**MASTER OF SCIENCE**

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**KUMARAGURU COLLEGE OF TECHNOLOGY**  
**(Affiliated to Bharathiar University)**  
**Coimbatore-641006**

# **DIGITAL NETWORK**



**KUMARAGURU COLLEGE OF TECHNOLOGY**

(Affiliated to Bharathiar University)  
Department of Computer Science and Engineering



Coimbatore – 641006

**CERTIFICATE**


This is to certify that the project work entitled

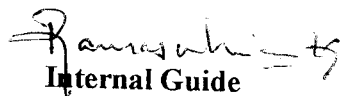
**“DIGITAL NETWORK”**

Done by

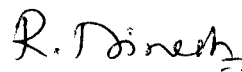
**M.DURAI RAJ**  
Reg. No – 0137Q0035


Submitted in partial fulfillment of the requirement for the award of the degree of  
M.Sc (Applied science - Computer Technology) of Bharathiar University.

  
Professor and HOD

  
Internal Guide

Submitted to University Examination held on 10/5/03

  
Internal Examiner (10.5.03)

  
External Examiner

## DECLARATION

I here by declare that the project work entitled  
**“DIGITAL NETWORK”**

Done at

**EPAGEMAKER PRIVATE LIMITED  
CHENNAI**


and submitted to

**KUMARAGURU COLLEGE OF TECHNOLOGY**  
(Affiliated to Bharathiar University)

in partial fulfillment of the requirement for the award of the degree of  
**M.Sc (APPLIED SCIENCE - COMPUTER TECHNOLOGY)**

is a report of work done by me during my period of study in  
Kumaraguru College of Technology, Coimbatore – 641 006.

**Under the supervision of  
Mr.K. RAMASUBRAMANIAN M.C.A.,**

Name of the candidate	Register Number	Signature of the candidate
M.DURAI RAJ	0137Q0035	

Date: 10/5/03

# **CERTIFICATE**

## CERTIFICATE

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This is to certify that **M.Durairaj**, final year Master of Science [Applied Science-Computer Technology] student of **Kumaraguru college of Technology** has duly completed his project entitled "**Digital Network**" under my guidance during the period December 2002-March 2003.

The student is sincere and hard working and showed keen interest and enthusiasm in the project work. The involvement and the continuous sustained efforts put by the student in the project to achieve the results are highly commendable.

**Date** : 2<sup>nd</sup> April 2003  
**Place** : Chennai

  
**S.K.Alavudeen Basha**  
Project Manager

# **ACKNOWLEDGEMENT**

## ACKNOWLEDGEMENT

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I would also like to thank all the staffs of Department of Computer Science who extended their support in this regard. Last but not the least I thank everyone who helped me directly and indirectly for completing this project work successfully.



## **SYNOPSIS**

## SYNOPSIS

The Client wants a solution to deliver a Web-based application to its organisation. The application has to be integrated with Client corporate systems and allows members across the country to configure and work online.

Concept Preamble:

Digital Network for members in the organization across the country for:

Information Passing

Having Discussions

Time Management

Personal Contacts

Instant Messaging

Sending Greetings

Sending Files

View Salary Reports

Requisition for Leave

Apply for Travel Expenses

Idea Development

### **Digital Network**

Digital Network (DN) is an information centre in terms refers to work scheduling, information passing or sharing and personal communication. In other words this web-based application that helps to organize and manage all the schedules, information and helps each one in the organisation to carry on their works without any time consuming tasks or having any management system for it.

DN - Comprises strategies to optimise profitability, avoid paper works and time constraint

DN focus on proper communication within the organization and have a good interaction altogether.

**Users**

Administrator

Leader

Manager

Members

**Audience**

Management, Maintenance, Head Office, Sales Director etc...

(Grouped as MANAGEMENT)

Member, Project Manager, Project Leader, Solution Provider etc...

(Grouped as TEAM)

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# **INTRODUCTION**

# **1. INTRODUCTION**

## **1.1 ORGANISATION PROFILE**

### **Introducing e-Pagemaker**

e-Pagemaker is an e-service provider incorporated with a vision to provide end-to-end e-services to Corporate and businesses in the process of ecorportization. With a very effective team of Journalists, technical writers, Customer Relationship Managers, web-strategists, and incorporated in 1993, e-Pagemaker has emerged to be a forerunner in the services space in the country.

Experience and constant innovation are e-PageMaker's trump cards. The first, it draws from the background of its team and the second, from its open and progressive working structure.

As an end-to-end e service provider, we recognize the rising need for quality and interactive content. Adapting its abilities to suit this new and dynamic medium, e-Pagemaker sees a future where content will create digital communities and enhance e-business increasing the 'looker-to-booker' ratio.

### **2. Area of Specialization**

---

#### **Content**

Newspapers

Internet

Corporate Intranets

Corporate Presentations

#### **Maintenance of Websites**

Content Upgradation / Additions regularly

Traffic Analysis

CRM – Understanding customer behaviour, reports

Contests / Games

Consulting on advertising and maximizing opportunity

Community Building

#### **Design and Technology**

Internet

Corporate Intranets

Corporate Presentations

## **Internet and Intranets**

B2B

Transaction Modules

Store Builder

## **3. The Team**

---

The team consists of '**news feeders**'- drawn from a national and international network of **journalists and specialized writers**. Stationed in different parts of the country and abroad, they bring in news, information, coverage and interviews.

'**Content developers**' are the analysts in our team for specialized, analytical, research-oriented writing. They are also supported by a team of **web writers and copywriters** who add interactivity and bring in the much-desired personalization to the site. The Tech Team comprises of people specializing in Database Architecture and latest and appropriate technologies in the Internet and Application Development.

The **Web admin team** tracks and analyses traffic, pages visited, unique visitors, mine customer queries, streamline/ moderate discussion forums and offer an analytical report on browser behavior and response. Based on this analysis the content team offers purposeful updating.

Every project is headed and owned by a **project manager**, who will ensure integration of the work processes.

## **4. Web advertising**

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*Web advertising creative including banners, promotional material and micro sites Some of our Projects – A Synopsis*

**www.eparryware.com**

Targeted at Architects, Interior Designers and the general consumer, the parryware site takes the 'glamour room' concept one step ahead. While being one of the pioneering websites in the group, the Parryware site has been largely appreciated.

ePagemaker handles all the backend operations of the website. CRM, Updation of Content, Web Consulting, Strategy and design are the areas e-Pagemaker contributes to the Parryware site.

## Henkelwoman - Picture Perfect

**Henkelwoman.** A vision for the forward-looking Indian woman who knows what she wants and how to get it. A pioneering concept at the time of launch.

A brand building effort by Henkel Spic, the portal contains valuable information for different concerns in a woman's life right from Health to hobbies and community building.

**The site had been rated among the TOP 100 Indian Websites.**

**<http://www.ties2india.com> Concerns and Community**

**ties 2 india-** a joint –venture between Bank of Madura and Satyam Infoway, ties2india is an NRI Community site. At present the site will grow from the community base of **[www.return2india.com](http://www.return2india.com)**.

**[www.return2india.com](http://www.return2india.com)** already had a loyal following. We, at e-Pagemaker maintain the community, the discussion forums, and add value to the content. Living in India, Managing Finance, Housing and the Dilemma- to get back or not to, are the content areas dealt with.

**[www.carstreet.com](http://www.carstreet.com) - One of a kind**

One of the first and important websites among verticals in Satyam Online (now SIFY), Carstreet.com is in the process of completion. Car street is a wonderful example for heavy content, aptly applied. The factors considered were easy-navigation, logic and complete user-friendliness. Content here was integrated with Commerce.

Car street involves multi layering in Architecture, concerning New Cars, Used Cars, involving content and development with Manufacturers, Classifieds, Content Serving based on Target audience.

**[www.sierramaniac.com](http://www.sierramaniac.com)**

An online Club for Tata Sierra owners. A site that targets specific audience, like Present Maniacs – present owners of the Sierra, Former Maniacs – Former owners of the vehicle and Aspiring Maniacs.

A Perfect example for Database and Personalization, the site recognizes the member as a Former, Present or Aspiring maniac, based on which content, maintenance schedules are served.



## CSS

Cabernet Software Solutions is a company based in the US, with offices in Chennai, Singapore and the UK. We are working with the company for managing the entire Communication Strategy. Developing a Corporate Film.

Mitsubishi Lancer – [www.lancerinindia.com](http://www.lancerinindia.com)

Mitsubishi, a global giant in car manufacturing wanted to develop a website promoting the product and the brand in India. A brand developed 4 years back in the country and in need of repositioning, ePagemaker designed and developed the website introducing the first-of its-kind-animation in the country. The website is designed and developed in Flash yet employing optimizing techniques to enable faster downloads.

[www.pajeroindia.com](http://www.pajeroindia.com) - Mitsubishi Pajero

Mitsubishi Pajero, launched recently in the high-end SUV segment.

### **Preferred Partners to**

Yahoo India

Satyam Infoway

The Times of India

### **Some of our clients include**

Adobe

Oracle

Mitsubishi Lancer

The Hindustan Motors

EID Parry

The India Cements

TI Cycles of India

First Serve Entertainment

The UB Group

Cabernet Software Systems

The Times of India

## **1.2 PURPOSE**

Digital Network is the use of Intranet technologies within an organization (or company) to achieve better results than the conventional means of data access and transfer. It's a time saving factor where data and communication of information is being sent across the concern with no time and with effort. There is no possibility of left outs of the information to any one how is any where inside.

Digital Network helps in cutting costs, easy and fast accessibility of day-to-day information. In addition you'll have exclusive access to additional features such as a task manager, expense reporting, and premium customer service

### **1.2.1 EXISTING SYSTEM**

The organisation currently uses the tradition way of transferring the information to all it's department. It would pass the news and information through notice boards and the work assignment in the group would be made by the team head by having a common meeting place and each would assigned the job. Each day updations are been sent or passed as paper work to all the employees in the department.

Each individual has to carry on his personal contacts and needed information with him, huge amount of paper work is made at each stage for information passing for various levels of the company.

In the current existing system there may be chance of loss of data or there may be left out information for some members of the department.

### **1.2.2 PROPOSED SYSTEM**

The new system being developed gives many advantages over the existing system. On implementing the new web application the organisation would be able to get the new features given below.

The Primary objectives are as follows:-

To provide users an efficient interface with the computer system it is the point of most contact for the users with the computer system.

Provide attractive and user friendly input screen.

Use of composite documents to reduce the number of different ones.

Save time to process the information which is got as feed back from all the parts of the organisation.

Get into a common place frequently where to have discussions.

Clarify the doubts that arise frequently

Able to have a proper time maintenance

A web Based system is a combination of many assets or resources like hardware, software etc. to perform some function or to provide some service.

These are three types of loss that an organization does not want its computer system to suffer.

Loss of availability

Loss of integrity

Loss of confidentiality

A threat to a computer system is any event whose occurrence would adversely affect one or more of the resources, which make up the system. So it is necessary to take adequate measures, which enforce the security of the system.

### **1.3 SCOPE**

An intranet is a private website where authorized members of companies, teams, departments, and workgroups can share information. With an Internet connection and a web browser, you can access your intranet from anywhere in the world.

The organisation would be able to have an easy control over all the members and have a good communication with all the employees. It becomes easy for all the members to pass on their views to their higher authorities.

It provides:

Ease of use

It allows inexperienced users with minimum computer knowledge to operate the system

Increased speed information passing

To have a proper communication channel

Managing large volume of personal and job details

Accessible from anywhere inside the network.

Help in improving the productivity of each individual and Team.

The Web application focuses on the workflow management and the personnel schedule management System. The scope of the web project is versatile and extensible, in a web oriented way and in terms of interfacing with the users.

## **1.4 OVERVIEW**

The project as a whole provides all the members in the organisation to have update information inside their organisation irrespective of the geographical location where ever they may be located. By the use of this web application the users could be able to fix their work schedules, they could be able to clear their doubts which may be able to cleared by sending mails to the user's who are inside the company.

The polling option gives them to say their decision over a given topic or question, where as in discussion forum lets them to say their views over a particular topic.

When it comes to maintain proper contacts, they could be able to keep trace of all of them in their personnel area. They could even be able to share their calendar with other users.

The member could be able to send his expense reports to the needed officials or to his higher authorities who are in charge of that department, He could be able to apply for Leave application to his next level leader's who are to approve his request.

The other extra features like having calendar, Announcements and News are common to all of them depending on their priority and designation. If a user comes up with a new idea he could be able to ask others about it after it being approved from the proper higher authority.

The DN as over all helps the organisation to over come the hurdles such as passing information and news over the organisation with no means of time and without no change of data to all of them, the higher level authorities could be able get feed back from members and also be able to take decision with the feed backs got from all.

## **GENERAL DESCRIPTION**

## **2 GENERAL DESCRIPTION**

### **2.1 PRODUCT PERSPECTIVE**

The web Application being developed would be hosted on the main server inside the organisation. The whole organisation would be connected the server through a network connection wherever each concern lie in any part of the country.

The project is designed customarily to suit the client's specifications. Moreover the application provides the user friendly edge. The user will be guided through an error free and efficiently validated system.

Thus the application helps in bringing the organisation's member close in all works and thus would get the productivity improved and improving in all parts of the department.

### **2.2 PRODUCT FUNCTIONS**

Post news and announcements.

Post a document that other members can view.

Create personal contacts and work schedules.

Import calendar, contact, and task information from another source.

Add and remove members.

Edit or delete announcements, events, polls, and contacts.

Create polls that only a select group of members can participate in.

View salary reports

Pass the expense report to the desired authority

To pass on an idea to get on with new way of working or product developments

Send on a mail to other members.

### **2.3 USER CHARACTERISTICS:**

The user is essentially a valid user. He is required to know the way to handle mouse and GUI supported windows environment. Moreover he should have minimum reading skills.

He should be able to connect to the network using his login name and password to him and keep it secure. More the knowledge about the web more the result he would be getting from it.

The web application being developed is being considered all the users in mind so that it would help all of them to easily get on with the application very easily and would be able to learn very quickly.

### **2.4 GENERAL CONSTRAINTS:**

The user should be a legal one and must know the login id and password. to enable the application. The data of the user has to be updated every now and then so that the system is effective and efficient in giving back the required responses to the queries of the user. The network should be made available all the time within the organisation where by allowing all of the users to access it whenever necessary, so that it would be very much useful when a user needs to fetch some data or he wants to update some data.

There are many constraints that had to be taken into account so by making the system available to all at any time.

User Login and User Area

Network Availability

System Resources



## **SPECIFIC REQUIREMENTS**

### **3. SPECIFIC REQUIREMENTS**

#### **3.1 FUNCTIONAL REQUIREMENTS**

##### **3.1 1. INTRODUCTION**

The overall data of employee is gathered and subsequently stored in respective sections. This is interfaced with all modules such as Work Sheet, Utilities and Communication. All this Modules need the details regarding the user who is subsequent to use the application from any where inside the Intranet.

##### **Software Description**

###### **Active Server Pages**

Active Server Pages are Microsoft's solution to creating dynamic Web pages. As the internet has matured into a variable marketplace, Web site design has changed in step. In the early days of the World Wide Web, HTML was used to create static Web pages. Today, though, static web pages are quickly becoming obsolete. Imagine if Amazon.com was composed of nothing but static Web pages –you couldn't search its inventory;

###### **ASP VARIABLES**

Any script in the ASP file can change a variable declared outside a procedure. A variable declared inside a procedure, is created and destroyed every time the procedure is executed.

###### **Session Variables**

Session variables store information about one single user, and are available to all pages in one application. Common information stored in session variables are username and userid. To create a session variable store it in a Session Object.

###### **Application Variables**

Application variables are also available to all pages in one application. Application variables are used to hold information about all users in a specific application. To create an application variable store it in an Application Object.

## **ASP Session Object**

The Session object is used to store information about, or change settings for a user session. Variables stored in the Session object hold information about one single user, and are available to all pages in one application.

When you are working with an application, you open it, do some changes and then you close it. This is much like a Session. The computer knows who you are. It knows when you start the application and when you end. But on the internet there is one problem: the web server does not know who you are and what you do because the HTTP address doesn't maintain state.

## **ASP Application Object**

A group of ASP files that work together to perform some purpose is called an application. The Application object in ASP is used to tie these files together.

An application on the Web is a group of asp files. The files work together to perform some purpose. The Application object in ASP is used to tie these files together.

The Application object should hold information that will be used by many pages in the application (like database connection information).

## **The Global.asa file**

In Global.asa you can specify event scripts and declare session and application objects that can be accessed by every page in an ASP application. The Global.asa file must be stored in the root directory of the ASP application, and each application can only have one Global.asa file.

The Global.asa file can contain four types of events:

### **Application\_OnStart**

This event occurs when the **FIRST** user calls the first page from an ASP application. This event occurs after the Web server is restarted or after the Global.asa file is edited. When this procedure is complete, the "Session\_OnStart" procedure runs.

### **Session\_OnStart**

This event occurs **EVERY** time a new user requests the first page in the ASP application.

## **Session\_OnEnd**

This event occurs EVERY time a user ends a session. A user ends a session after a page has not been requested by the user for a specified time (by default this is 20 minutes).

## **Application\_OnEnd**

This event occurs after the LAST user has ended the session. Typically, this event occurs when a Web server stops. This procedure is used to clean up settings after the Application stops, like delete records or write information to text files.

## **ASP Built-in Objects**

### **Application**

This object is used to share information among all users of a given application

### **Response**

This object is used to send output to the user

### **Request**

This object is used to get information from the user

### **Server**

This object is used to access properties and methods on the server

### **Session**

This object is used to store information about or change settings for a user's session

### **Error**

This object is used to display detailed information of any error that occurs in scripts in an ASP page.

## **Active Server Components:**

### **Components**

Components are reusable code blocks. The code block performs a common task (like deleting a record in a database). Components can be accessed by other pages and other applications. This is very powerful; you do not have to write the same code over and over again on different pages or in different applications. Components can be created in C, C++, Java, VB, etc.

## **Active Server Components**

ASP comes with some built-in components that can handle common tasks:

### **AdRotator**

Creates an AdRotator object that displays a different advertisement each time a user enters or refreshes a page

### **Browser Capabilities**

Creates a BrowserType object that gives you a description of the capabilities of the client's browser

### **Content Rotator**

Creates a ContentRotator object that displays a different HTML content string each time a user enters or refreshes a page

### **Content Linking**

Creates a Nextlink object that holds a list of urls, which is used to treat web pages like a book

## **SQL Server**

Use the Microsoft Access Workflow Designer for Microsoft SQL Server 7.0 to create and enforce business rules for your Microsoft Access 2000 data projects.

An Access 2000 data project makes it possible for you to use familiar Access tools to build SQL Server databases. When the Microsoft Office 2000 Developer Access Workflow components are installed, a data project can be registered as a team solution and enhanced with workflow processes to create and enforce business rules.

A user interface comprised of data access pages can be used to create web views of your database in minutes. The Office 2000 Developer Workflow Toolbar can be added to the page to provide access to the workflow steps, offline capability,

In this walkthrough, you can create a basic team solution using Access and the Access Workflow Designer. This solution will include a relational database called Project Tracker, business rules, publications and permissions, and a user interface comprised of data access pages.

A client/server database system comprises two components: programs that provide an interface for client-based users to access data, and the database structure that manages and stores the data on the server.

For example, if you use Microsoft SQL Server to create a checking account application, you must set up a database structure to manage the account transaction data and an application that acts as the user interface to the database, allowing users to access checking account information.

## **Microsoft SQL Server 2000 Features Includes**

### **Internet Integration**

The SQL Server 2000 database engine includes integrated XML support . It also has the scalability, availability and security features required to operate as the data storage component of the largest web sites. The SQL Server 2000 programming model is integrated with the windows DNA architecture for developing web applications, and SQL Server 2000 features such as English Query and the Microsoft Search Services to incorporate user-friendly queries and powerful search capabilities in web applications.

### **Scalability and Availability**

The same database engine can be used across platforms ranging from laptop computers running Microsoft Windows 98 through large ,multiprocessor servers running Microsoft Windows 2000 data center Edition. SQL Server 2000 Enterprise Edition supports that allow it to scale to the performance levels required by the largest Web sites.

### **Enterprise -Level Database Features**

The SQL Server 2000 relational database engine supports the features required to support demanding data processing environments. The database engine protects data integrity while minimizing the overhead of managing thousands of users concurrently modifying the database. SQL Server 2000 distributed queries allow you to reference data from multiple sources as if it were a part of a SQL Server 2000 database, While at the same time, the distributed transaction support protects the integrity of any updates of the distributed data.

### **3.2.1 LIST OF INPUTS**

The input to the system is a valid user id and password provided by the user. In the application, to update the user information, mostly the user id is used that is auto generated. Depending on the requirement of the user the input varies,

If he wants to send message to a user he has to provide address for the User he likes to communicate.

In the Discussion module the topic would be provided by one user and the other users who view the page would provide their views about the particular topic.

If he likes to schedule his work he has to provide all the necessary information like date and other details.

In the contacts the user would be inputting all the member details which he would like to save it in his particular area.

### **3.1.3 INFORMATION PROCESSING REQUIRED**

The system needs to take care of some functions when it comes to real time access, some of the functions to be taken into account is it should have to take care of checking for valid user name and password.

When the input is been validated the user is allowed to log into his environment. The user page is customised according to his designation in the organisation. When it comes to processing of information his mail box has to be checked for the availability of mails being sent to him. The News and the Discussions to which he had to participate in and Polling which he can vote and the access rights to view the Documents available and the Files which were put on the server.

The schedules which he had added to his time sheet and his time scheduling for the events to happen, When it comes to mailing part the user would be entering the up an mail address to whom the mail to be sent. It is responsibility of the system to check for the user validity (To check if the user to whom to send is a valid one) etc. There may a possibility for sending mail to an invalid address such as which does not exist in the system, in such case the sender should be intimated by sending a bounce mail to him.

## **3.2 PERFORMANACE REQUIREMENTS**

### **3.2.1 SECURITY**

Using DN, all of this is controllable. Not only are certain groups and individuals allowed to be invited to meetings and functions of your company. There are controls on who is allowed to manage and specific reports, who can read certain documents and who controls these security settings, all managed by the administrator in this package.

Every user would be handled only according to their designation for which they would be provided with the access permissions. The web application would be available to every user with the level of access privileges provided to them. This becomes essential to have this sort of permissions so that it would be important to maintain some sort of information at each level of work.

When it comes to the play of organisation different levels of permission for is needed to maintain some level of information is to be maintained as privacy. So security is a must at each level of work.

### **3.2.1 AVAILABILITY**

The product is being developed with great care to take into account of the real time difficulties that exist. The product is being developed such that it could be able to support the minimum requirements that c\ould be available over the network.

The basic need could be the system to be connected to the Intranet that exists inside the company. The speed of getting connected depends on the network inside the company. The actual speed depends on the number systems that would be supported by the server that runs the central system.

The main sever should be available to the entire client's at any time because there is the possibility that the client's would be accessing their data at any part of time from any part. When it comes to the play of server the server should be having a good configuration to support the clients who are being connected to it.

A good server would provide the resources needed by the client with the speed it is able to process the information and return back the results.



### **3. 3 DESIGN CONSTRAINTS**

#### **3.3.1 Hardware Limitations**

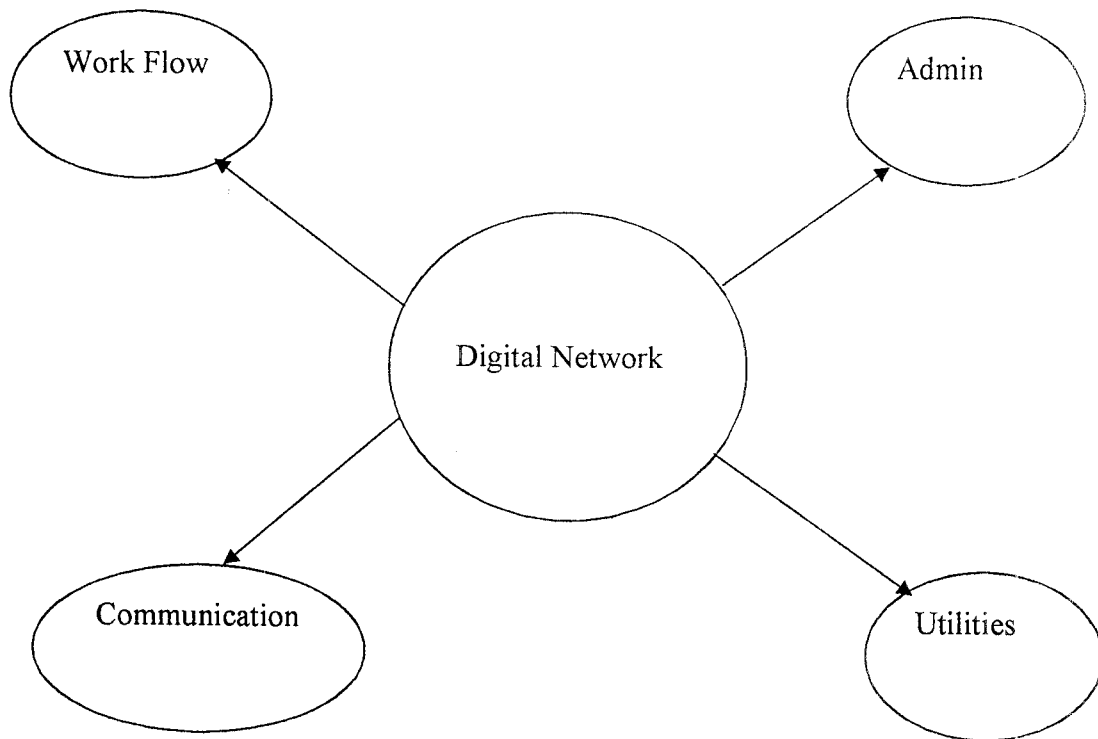
Processor : Intel Pentium Processor III  
Mother Board : Intel 815 Chipset  
RAM : 128 MB  
Hard Disk : 20 GB HDD  
Floppy Drive : 1.44 MB  
Keyboard : Logitech  
Mouse : 2 Button Mouse  
Monitor : 14 inch colour Monitor  
Network card : Dax 10 Mb/s NIC Card

#### **3.3.2 Software Limitations**

Front End : ASP, HTML, VB Script , Java Script.  
Back End : SQL SERVER 2000.  
Editor : Microsoft Front Page  
Platform : Windows Family  
Browser : Internet Explorer, Netscape Navigator

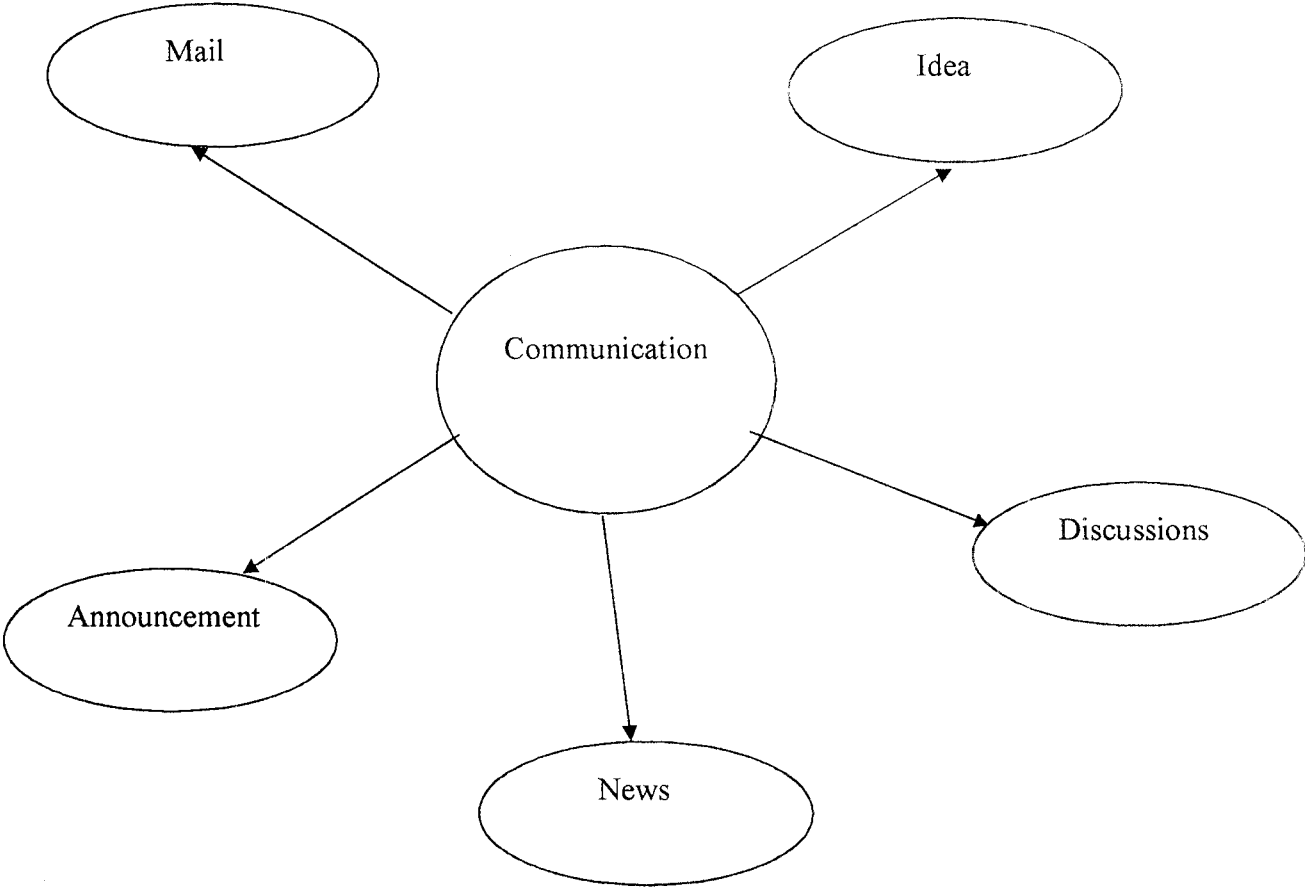
### 3.3.3 PROCESS DESIGN

#### DFD for Digital Network



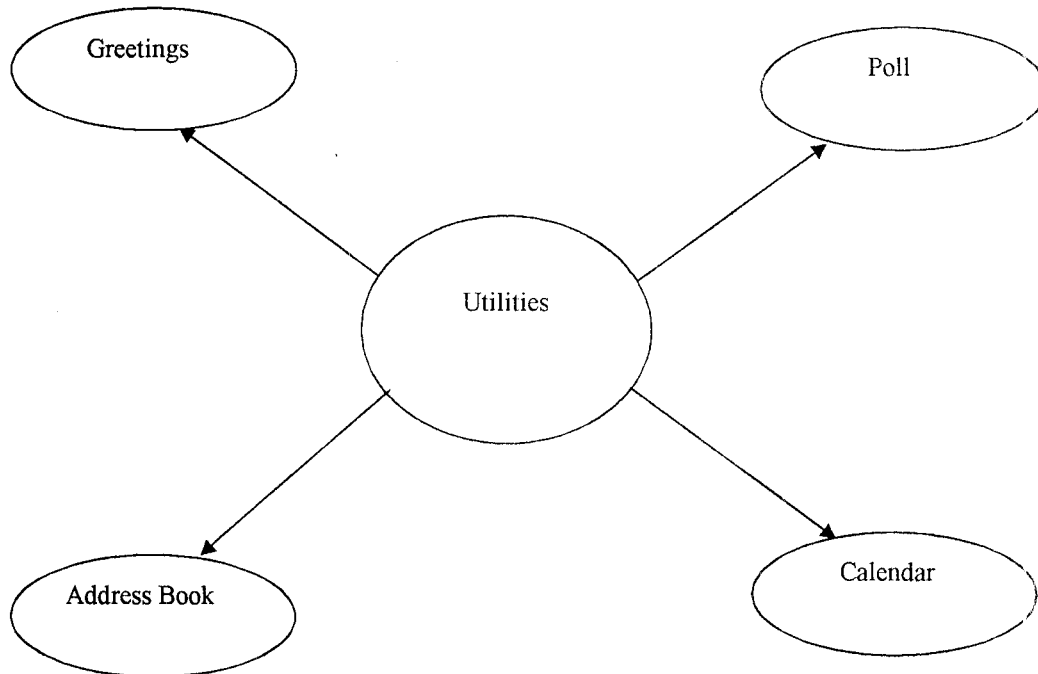
**LEVEL 1 DFD**

**COMMUNICATION MODULE**

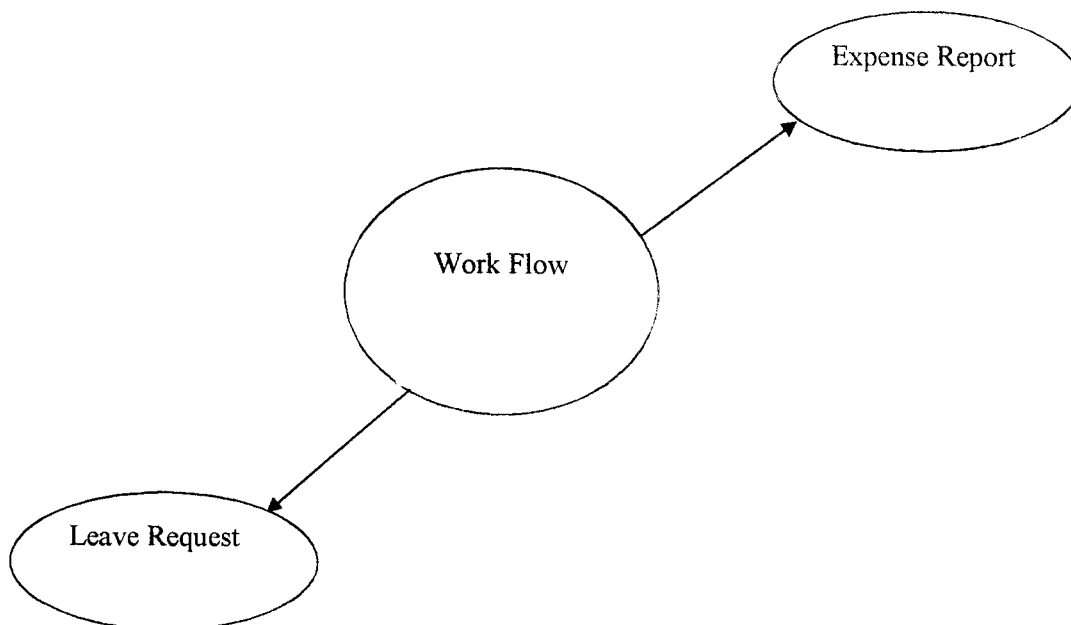


**LEVEL 1 DFD**

**UTILITIES MODULE**

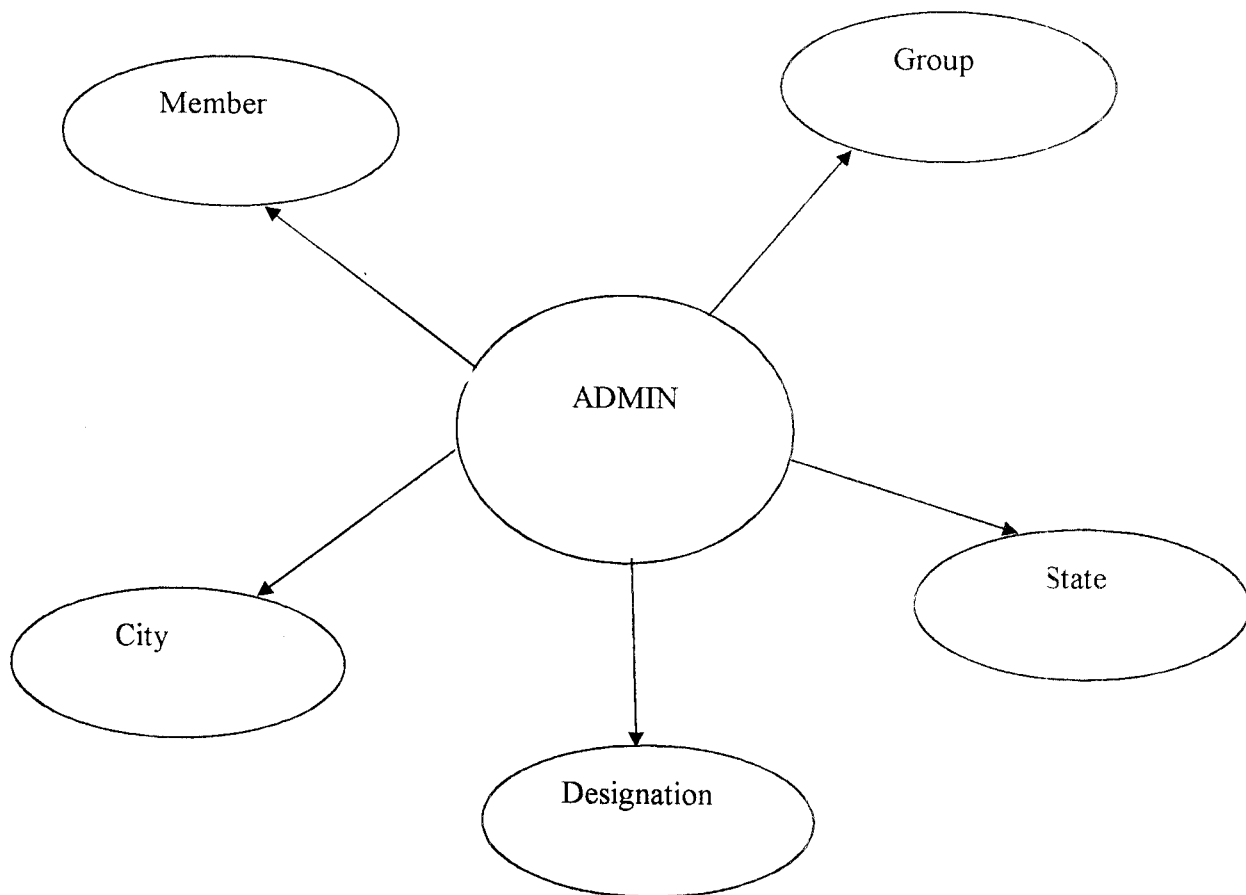


**WORK FLOW**



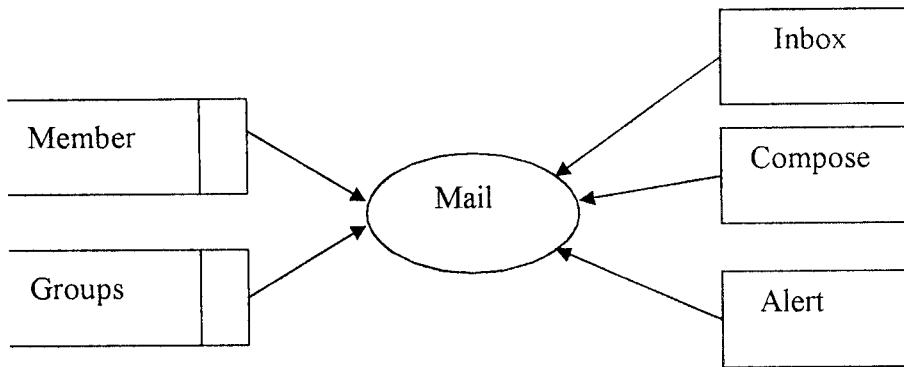
**LEVEL 1 DFD**

**ADMIN MODULE**

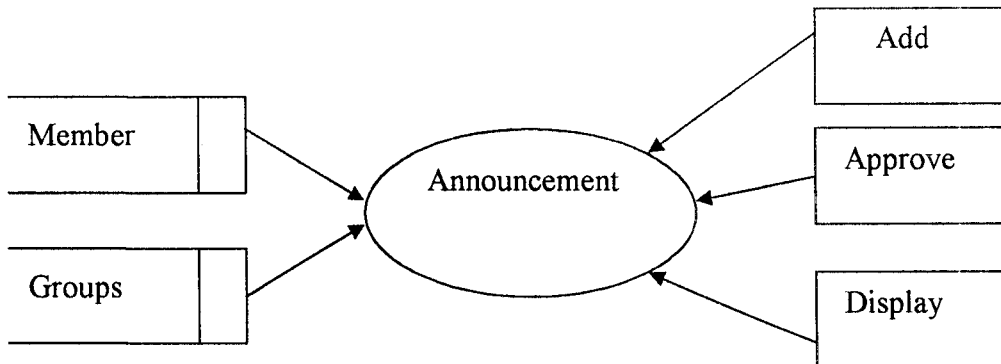


## LEVEL 2 DFD

### MAIL



### ANNOUNCEMENT



### **3.3.4 DATABASE DESIGN**

With the need of customer, to develop the DN for the Computerization of its various activities, it becomes essential that the existing system be studied well. An extensive and intrinsic study of the system alone would facilitate the proper designing of the system. Hence, the proposed system was well studied and utmost care was shown in the designing of the system. The designing of the system has to be done with the end user mind and hence in this system, proceedings after the process of designing have been carried out only after obtaining approval from the end user.

Designing of a system includes design of the databases, design of flow of data within the system, thereby identifying design the inputs and outputs of each module .Also, designing facilitates the identification of entities and their attributes and the relationship between them in each step.

#### **TABLE STRUCTURE:**

Once, the study of the system is accomplished, and analysis is also done with, the nature of the data that would have to be input for each process and the nature of output that would have to be input for each process, and the nature of output that would be required can all be clearly understood. This would facilitate the design of the database, namely the different tables which would be employed in the modules.

The design of databases given as follows:-

#### **Member Master**

Field Name	Data Type	Remarks
Mem_Id	Number(5)	Primary key
Name	Varchar(20)	
Login	Varchar(10)	
Password	Varchar(10)	
Dob	Date	
Doj	Date	
Designation	Varchar(20)	
Phone	Number(15)	
resPhone	Number(15)	
Address1	Varchar(200)	
Address2	Varchar(200)	
Cell	Number(10)	
Emailid1	Varchar(100)	
Emailid2	Varchar(100)	
Address	Varchar(200)	
App_flag	Varchar(1)	

## Groups

Field Name	Data Type	Remarks
Groups_id	Number(5)	Primary key
Name	Varchar(10)	
App_flag	Varchar(1)	

## Groups Member

Field Name	Data Type	Remarks
Groups_id	Number(5)	References groups_id of Groups table
Mem_id	Number(5)	References mem_id of Member table
App_flag	Varchar(1)	

## Address Book

Field Name	Data Type	Remarks
Addr_book_id	Number(5)	Primary key
Fname	Varchar(15)	
Lname	Varchar(15)	
Dob	Date	
Address1	Varchar(200)	
Address2	Varchar(200)	
Emailid1	Varchar(100)	
Emailid2	Varchar(100)	
resPhone	Date	
Phone	Date	
Cell	Number(10)	
App_flag	Varchar(1)	

## Poll

Field Name	Data Type	Remarks
Poll_id	Number(5)	
Question	Number(5)	
Ans1	Varchar(50)	
Ans2	Varchar(50)	
Ans3	Varchar(50)	
Ans4	Varchar(50)	
Ansnum	Number(5)	
Mem_id	Number(5)	References mem_id of Member table
Type_id	Number(5)	Indicates the participate can participate more than once
Close_status	Varchar(1)	Indicate whether the poll is closed by own or manual
Valid_till	Date	
Status	Varchar(1)	



### Designation

Field Name	Data Type	Remarks
Designation_id	Number(5)	Primary key
Designation_Name	Varchar(1)	

### Poll Member

Field Name	Data Type	Remarks
Poll_id	Number(5)	References poll_id of Poll table
Mem_id	Number(5)	References mem_id of Member table
Ans_num	Number(5)	
Polled_date	Date	

### Poll Type

Field Name	Data Type	Remarks
Type_id	Number(5)	Primary key
Type_name	Varchar(20)	

### Announcement

Field Name	Data Type	Remarks
Announce_id	Number(5)	Primary key
Announce	Varchar(500)	
Posted date	Date	
App_flag	Varchar(1)	

### Accouncement member

Field Name	Data Type	Remarks
Announce_id	Number(5)	References Announce_id from Announce
Mem_id	Number(5)	Reference mem_id from member
Status	Varchar(1)	
View_date	Date	

### Files

Field Name	Data Type	Remarks
File_id	Number(5)	Primary key
Name	Varchar(20)	
Path	Varchar(100)	
Posted_date	Date	
Key_words	Varchar(20)	
Description	Varchar(50)	

### Folders

Field Name	Data Type	Remarks
Folder_id	Number(5)	Primary key
Folder_name	Varchar(20)	

### File Member

Field Name	Data Type	Remarks
File_id	Number(5)	References file_id from file table
Mem_id	Number(5)	References mem_id from member table
Folder_id	Number(5)	References folder_id from folders table
Status	Varchar(1)	
View_date	Date	

### Discussion topic

Field Name	Data Type	Remarks
Topic_id	Number(5)	
Discussion_topic	Varchar(50)	
Created_date	Date	
App_flag	Varchar(1)	

### Discussion Message

Field Name	Data Type	Remarks
Message_id	Number(5)	Primary key
Topic_id	Number(5)	References topic_id from discussion topic table
Message	Varchar(200)	
Posted_date	Date	
Watch_date	Date	
Notify_flag	Varchar(1)	

### Discussion Member

Field Name	Data Type	Remarks
Topic_id	Number(5)	References topic_id from discussion topic table
Mem_id	Number(5)	References mem_id from member table

## News

Field Name	Data Type	Remarks
News_id	Number(5)	Primary key
News_title	Varchar(20)	
Message	Varchar(200)	
Display_id	Number(5)	References mem_type_id from member type table
App_flag	Varchar(1)	

## Expense Category

Field Name	Data Type	Remarks
Expense_category_id	Number(5)	Primary key
Category	Varchar(50)	

## Expense

Field Name	Data Type	Remarks
Mem_id	Number(5)	References mem_id from member table
Expense_category_id	Number(5)	References expense_category_id from expense category table
From_date	Date	
To_date	Date	
Description	Varchar(200)	
Amount	Number(10)	
Advance	Number(10)	
Status	Varchar(1)	Indicates the expense is paid or hold within

## Mail

Field Name	Data Type	Remarks
Mail_id	Number(5)	Primary key
From_id	Number(5)	References mem_id from member table
To_id	Number(5)	References mem_id from member table
Mail_subject	Varchar(200)	
Mail_content	Varchar(5000)	
Folder_id	Number(5)	References folder_id from mail folder table
Attachment_path	Varchar(200)	
Mail_date	Date	
Mail_time	Date	
App_flag	Varchar(1)	

## Mail folder

Field Name	Data Type	Remarks
Folder_id	Number(5)	Primary key
Folder_name	Varchar(20)	
Created_date	Date	
Member_id	Number(5)	References mem_id from member table

### 3.3.5 TESTING AND IMPLEMENTATION

#### TESTING

Software testing is the stage of implementation, which is aimed at ensuring the system works accurately and efficiently before live operation commences. Software testing is a critical element of Software Quality Assurance (SQA) and represents the ultimate review of specification, design and coding. Testing includes verification of the basic logic of each program and verification that the entire project works properly. Test case design on a set of techniques for the creation of test cases that meet overall testing objectives.

#### **Testing Objectives are,**

Testing is a process of executing a program with the intent of finding an error.

A good test case is one that has a high probability of finding an as-yet-undiscovered error.

A successful test is one that uncovers an as-yet-undiscovered error.

A good test is not redundant.

A good test should be “Best of Breed”

The Debugging process is the most unpredictable part of the testing process.

The program testing checks for two types of errors Syntax and Logical Errors.

#### **Various Testing methods are,**

Validation Testing

Unit Testing

System Testing

Integration Testing

## Validation Testing

Software is completely assembled as a package, interfacing errors have been uncovered and corrected, and a final series of software tests is-Validation Testing. In other words, Validation Testing succeeds when software functions in a manner that can be reasonably expected by the customer. After validation test case, two possible conditions exist:

The function or performance characteristics conform to specification and are accepted

A deviation from specification is uncovered and a deficiency list is created.

Once the application was made free of all logical and interface errors, validation testing was done by inputting dummy data to ensure that the software developed satisfied all the requirements of the user. A test case is a set of data that the system will process as Normal input. However, the data are created with the intent of determining whether the system will process then correctly.

S.No	Screen Name	Input	Expected	Actual
1	Contacts.asp	Click on Email	Goto Mail.asp	Yes
2	Polling.asp	Click Option	one selection	Yes
3	Polling.asp	Click Option	Count total	Yes
4	Discussion.asp	New task	Add to List	Yes

## Unit Testing

Unit testing focuses on the verification of the smallest unit of software design and module. Using the detail design description as a guide, important control paths are tested to uncover error within the boundary of the module. When a module addresses only one function, the number of test cases is reduced and errors can be more easily predicated and uncovered. The relative complexity or tests and uncovered errors is limited by constrained scope established for unit testing. The entire purpose of the unit testing is to reduce the effort of integration testing.

### Test Cases being checked are

In this testing technique the application is made to test with some needed constraints to test the actual functioning of the software.

When a user gets logged in and he polls for a particular poll, it is being tested with the admin part for the results whether the appropriate result being updated and it is being taken into account.

When a user passes a mail to a user then the User to whom the mail is send is checked whether if he had received the mail.

## **IMPLEMENTATION**

The application being developed and it is being passed through various testing modules. The outcome of the testing is an error free application which can able to with stand various constraints such as invalid inputs and error due to integrity etc.,

The final Web application is moved to the main server which is the central system to which all the clients are being connected,the server is the main source for the entire clients that exist in the organisation each and every client that exists in side the organisation would be interconnected and they form an intranet.

The next step the IIS server is started and the web Application is made available to the entire client Systems. A test is made at various points of the organisation to check whether the clients are available with the application running in the server.

## **CONCLUSION**

## **4. CONCLUSION**

### **BENEFITS**

The web application being developed has many new advantages and gives a greater flexibility to the organisation. The application gives some of the benefits like Improving Productivity, Fast transfer of Information within the organisation, Improving member interactions among the groups and with the other needed officials and in Savings on cost needed for the processing of information.

Thus as an overall the web application would help to overcome the hurdles that are currently existing in the company with great ease.

### **LIMITATIONS:**

When it comes to accessing of this intranet application certain limitations arise such as Speed is restricted to Intranet access and it depends on the speed of information processing by the server.



## **FUTURE ENHANCEMENTS**

## **5. FUTURE ENHANCEMENTS:**

This system is stand alone package that has to be developed to work in a network based environment. Though this project covers most of the details relating to the Inter connection within a group it has to be modified according to the future needs.

This system can be developed with more information by adding new modules.

More effective and user friendly graphical user interface can be adopted.

Graphical notation can be added to each module for easy understanding.

Storage spaces may be reduced.

Increasing Security features.

Non-erasable backups can be made in future.

Additional features may be included such as animation, graphics, and voice.

Integration with CRM.

Integration with ERP.

The Successful Testing and implementation of the system by itself stands as a testimony to the corrective ness of the system, and its use in the company. The new system has been found to be user friendly, and at the same time to possess many advantages.

With all the activities of the proposed system being computerized the job would be to make use of the menu utility presented to them for carrying out the process of the proposed system, there by reducing the work load considerably.

Thus the drawbacks of the existing system have all been overcome, and the proposed system has been stood up to the requirements specified and then the theoretical system has been put up into a successful practical application.

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## **6. BIBLIOGRAPHY**

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### **3. Using Sql Server**

**Scott Mitchell**, O'reilly Publications

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**Rick Darnell, Et Al.**, Techmedia

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**Jason Gilliam And Charlton Ting** , O'reilly Publications

**Web sites referred are**

**1. [www.intranets.com](http://www.intranets.com)**

**2. [www.ramuius.com](http://www.ramuius.com)**

## **APPENDIX A**

## **ABBREVIATION**

DN – Digital Network

CRM – Customer Relationship Management

ERP – Enterprise Resource Planning

IIS – Internet Information Server

ASP - Active Server Pages

# **APPENDIX B**

**(screen shots)**

## Contacts Screen

Microsoft Internet Explorer

Address: [http://digitalnetwork/contacts.asp](#)

**ePagemaker** Sales & Marketing

ADD DOWNLOADS TOOLS PARRY ORG KNOWLEDGE CENTER

Home  
 Newsletters  
 Documents  
 Discussions  
 Tasks  
 **Contacts**  
 Polls  
 Expense Reports  
 Instant Messaging

Search

**Best Performer**  
 Query Letters That Sell Your Story Learn how to learn editors wanting more.  
[contact messaging](#)  
[click for the story](#)

**Contacts**

The Contacts list helps you share important contact information with other members of your intranet.

View by:  Show:   personal  contact

Name	Company	Title	Email	Phone Number
<input type="checkbox"/> ePagemaker	ePagemaker		crm@e-pagemaker.com	4908654
<input type="checkbox"/> anand	HCL		anand@hcltech.com	2123456

Done Local intranet



## Discussions

Digital Network - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://www.digitalnetwork.com/discussion.asp

**Sales & Marketing**

ADD DOWNLOADS TOOLS PARRY ORG KNOWLEDGE CENTER

Home Newsletters Documents Discussions Tasks Contacts Polls Expense Reports Instant Messaging

Search

**Best Performer**  
Query letters that sell your story: learn how to lease editors wanting more.

Instant Messaging  
click for the chat

### All Discussions

This is your group's online discussion forum. Click a forum below to read or respond to a particular discussion. "Recent" messages have been posted within the last three days. To hold a private discussion, set permissions on the forum.

[add forum](#) 43% new postings made today

Forum	Topics	Posts	Recent	Lead Post	Started By
An effective marketing program is the vital force in customer retention.	1	1	1	1	Balaji

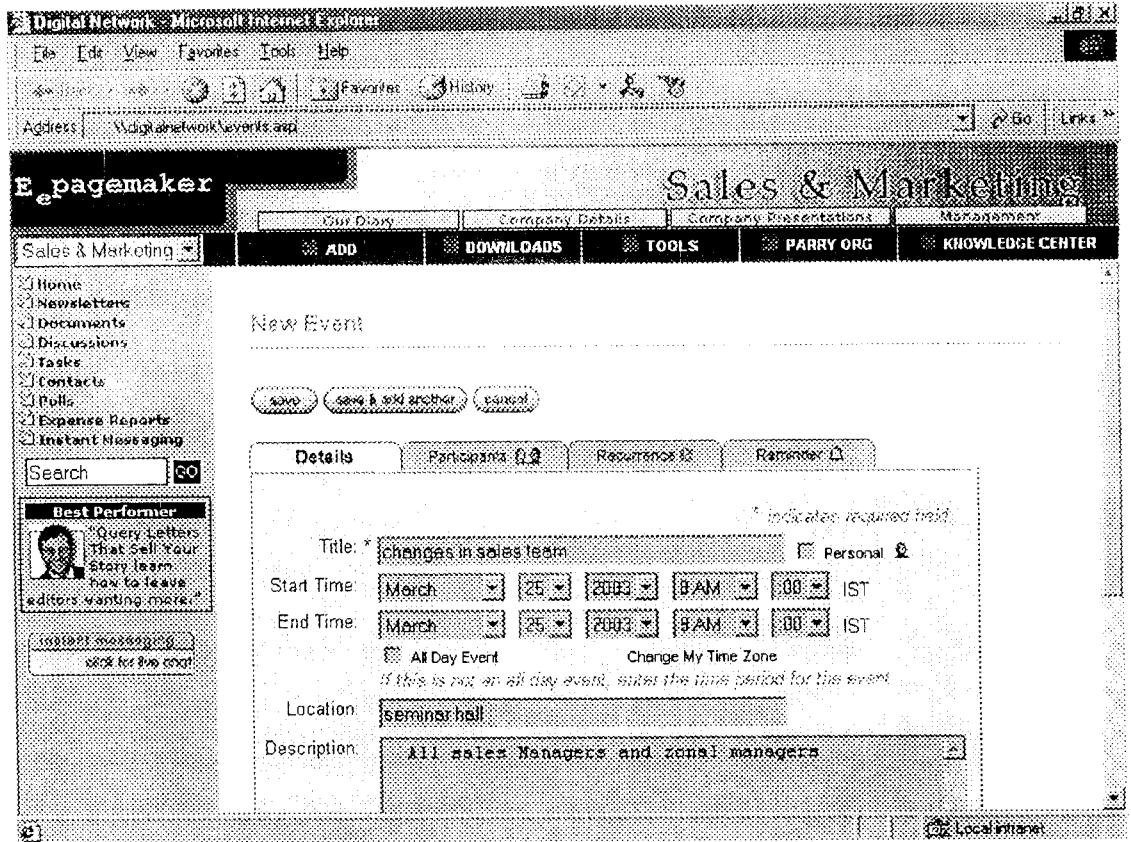
*yes indeed there is usually so much concern for getting you new business that maintaining and expanding existing business easily forgotten. ....*

.....

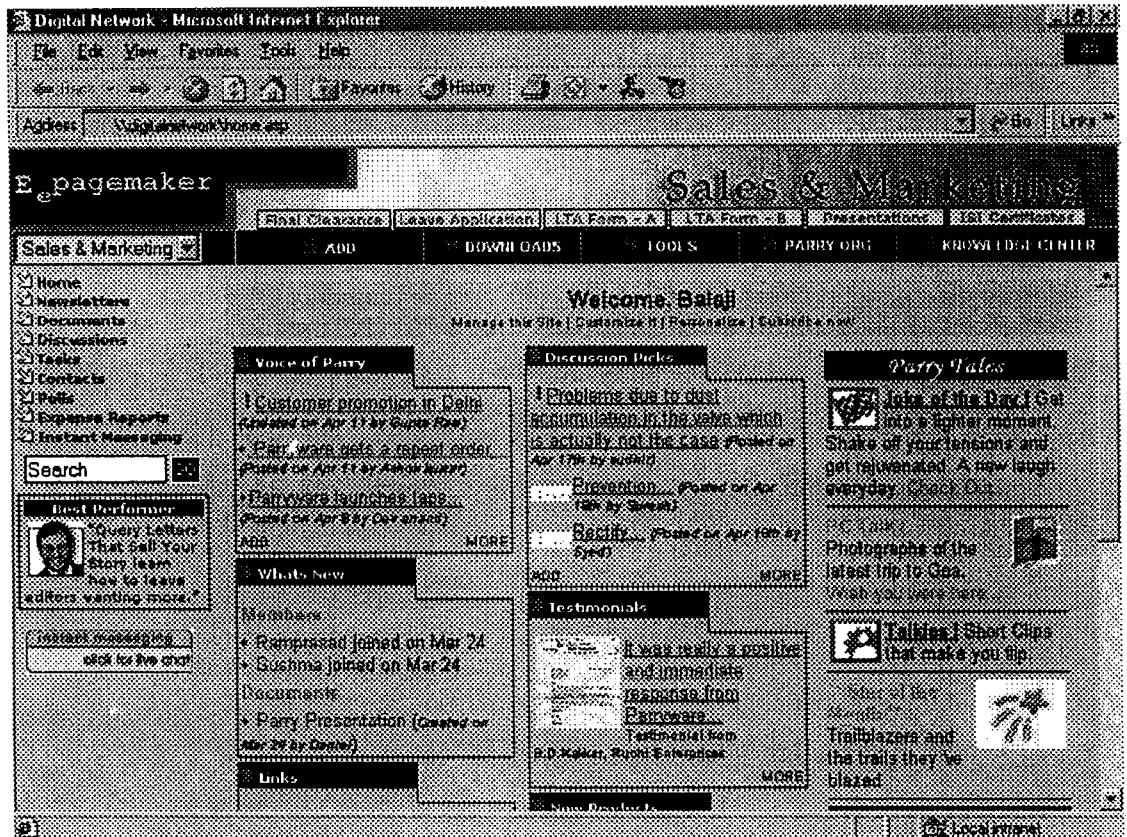
All times are IST.

Local intranet

# Events



# Home page



# Poll

**Sales & Marketing**

ADD DOWNLOADS TOOLS PARRY ORG KNOWLEDGE CENTER

Home Newsletters Documents Discussions Tasks Contacts Polls Expense Reports Instant Messaging

Search

**Best Performer**  
 Query Letters that sell your story learn how to leave editors wanting more.

Instant Messaging  
 click for live chat

### Polls

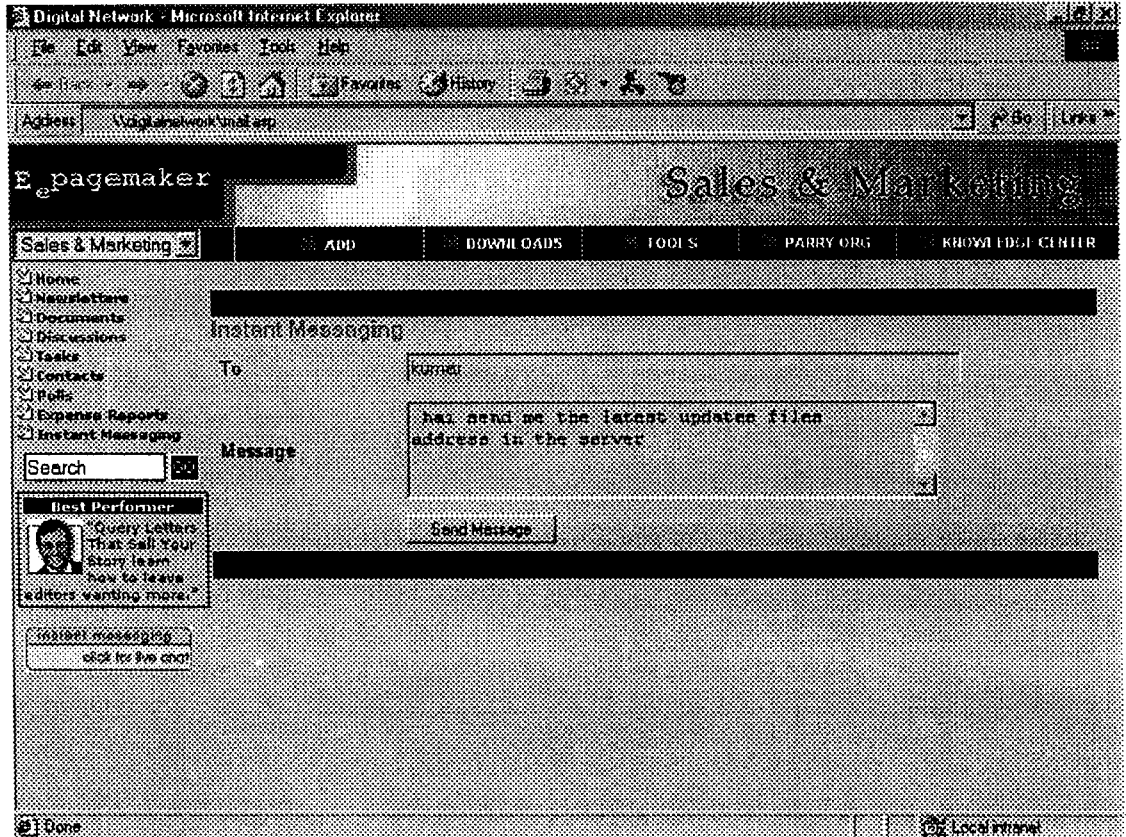
You may vote in any of the open polls. Once a poll is closed you may only view the results. You may change your vote until the poll is closed.

[add poll](#) [done](#)

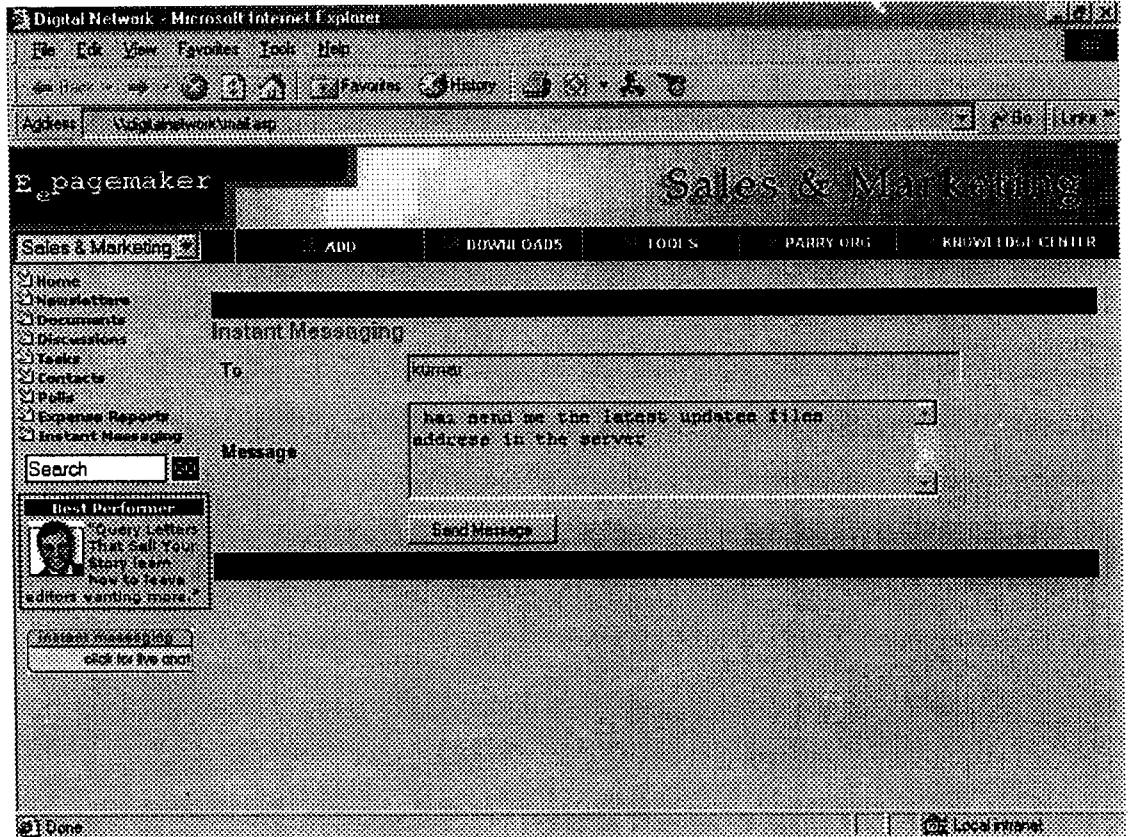
Status	Votes	Results	Vote	Notify	Change Status	Edit	Delete	Author
<i>Should Ingeen have won s Oscar ?</i>								
Open	6	Results	Vote!	Send Link	Close Poll			Brijesh
<i>Can we increase the Departments for marketing?</i>								
Open	28	Results	Vote	Send Link	Close Poll			kumar

Local intranet

# Mail



# Mail



## Tasks

The screenshot shows a web browser window with the address `http://www.digitalnetwork.com`. The page title is "Sales & Marketing" and the main content area is titled "Tasks".

**Navigation Menu:** Home, Newsletters, Documents, Discussions, Tasks, Contacts, Pubs, Expense Reports, Instant Messaging.

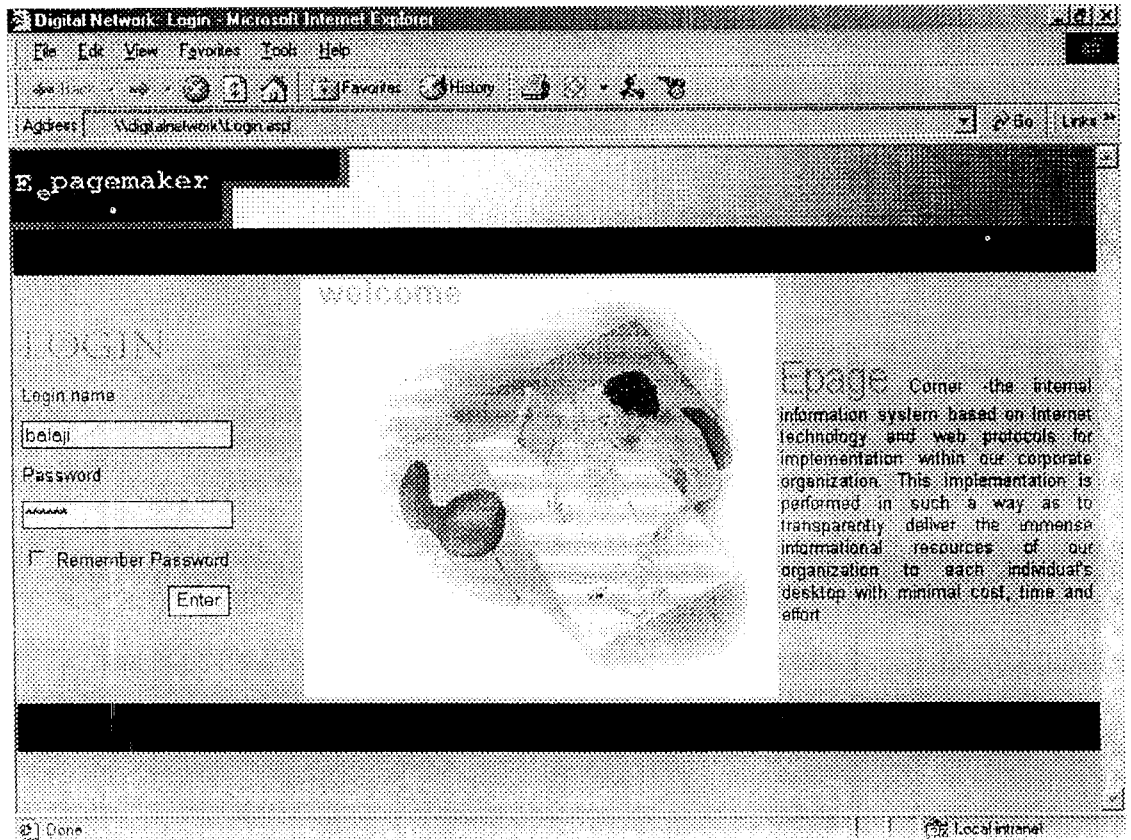
**Search:** A search bar with the text "Search" and a magnifying glass icon.

**Task List:** A table with columns: Tasks, Due Date, Status, Assigned To, and Details.

Tasks	Due Date	Status	Assigned To	Details
Project Sign up	24/4/03	In Progress	Senthil kumar	
Second Module Demo	15/4/03	Final stage	Basha	

**Quick Add (Add a personal task):** A form with fields for Task, Priority (Normal), and Due date, followed by an "Add" button.

## Login





## Expense Report

**Production & Manufacturing**

Production | ADD | DOWNLOADS | TOOLS | PARRY ORG | KNOWLEDGE CENTER

Home | Newsletters | Documents | Discussions | Tasks | Contacts | Pull | Expense Reports | Instant Messaging

**Best Frontliner**  
Mr. S. Palani, member of 'Panni Vayal Team' has won the Best Frontliner Award

**Best Team**  
'Kanthava Team' working on first fair 80% of Stallions Claret has been selected as the best team.

Instant messaging  
click for live chat

### Expense Report

To Print: Click here or select File and then Print from your browser's menu.

List My Expense Reports

[add](#) [delete](#) [done](#)

**Report for:** Ramesh R  
**Expenses from:** March 20, 2003 to: March 25, 2003  
**Purpose:** travel  
**Cash advance:** Rs. 0.00

Date	Type	Payee / Kilometers	Description	Amount
3/25/03	Ground Transportation	Parry Travels	Meeting with ePagermaker	Rs. 1,000.00
3/25/02	Mileage	180	Travel to Ranipet	Rs. 418.00
<b>Total:</b>				<b>Rs. 1,418.00</b>
Less Cash Advance:				<b>Rs. 0.00</b>

Done Local intranet