

Unit-5

CORPORATE DIGITAL LIBRARY

Digital Library:

Many organizations manage their information through corporate library, if it provide the architecture to model, map, integrate & information in digital documents is called digital library.

It provides information structures by this organizations & workers access vast amount of data encoded in multimedia formats.

Digital libraries are of two types:

1. Electronic document-based digital libraries.
2. Data-base oriented warehouses.

Document digital library:

The term document is used to denote all non data records I.e. books, reports, e-files, videos and audios.

Digital library is simply a distributed network of interlinked information.

Data warehouses:

It is a central repository for combining and storing vast amount of data from diff sources.

Sources are main frame database, lint-server database, text reports....etc.



1. DIMENSIONS OF THE INTERNAL ELECTRONIC COMMERCE SYSTEM
2. MARKETING A BUSINESS CASE FOR A DOCUMENT LIBRARY
3. TYPES OF DIGITAL DOCUMENTS
4. ISSUES BEHIND DOCUMENT INFRASTRUCTURE
5. CORPORATE DATA WAREHOUSES

DIMENSIONS OF THE INTERNAL ELECTRONIC COMMERCE SYSTEM:

These are the following dimensions for internal electronic commerce organization:

User modeling and interaction:

User models are interposing between the user interface and information sources to filter the available information according to the needs of the task and user.

It associates with each task or each person is a user agent or set of user agents.

Tasks of user agents are:

- Maintaining of model & current state of the task
- Determining of information for each step of the task
- Appropriate combining of information with user.

Effective utilization of information:

Organization decision making cannot be supported with a single tool, a set technology tools are required for effective utilization of information.

Organization needs online –transactions for design, production, logistics and profitability.

Types of On-line transaction:

Two types of on-line transaction are :

1. On-line transaction processing (OLTP).
2. On-line analytical processing (OLAP).

OLTP involves the detailed, day-to-day procedures such as order entry & order management.

OLAP refers to the activity involved in searching the wealth of data residing throughout an enterprise for trends, opportunities.

MARKETING A BUSINESS CASE FOR A DOCUMENT LIBRARY:

This section highlights the role that documents play in today's organization and how business can better meet their customers' needs by improving document management support.

TYPES OF DIGITAL DOCUMENTS:

Four types of digital documents are:

- ☐ Structuring applications around a document interface
- ☐ Structuring interlinked textual & multimedia Documents.
- ☐ Structuring and encoding information using document-encoding standards
- ☐ Scanning documents for storage and faxing.

Issues behind Document Infrastructure:

Document infrastructure addressed these questions:

What is the proper architecture for the corporate digital library?

What are appropriate model?

What protocols required?

What are the best human interfaces?

How does one represent and manipulate the information processing activities occurred in the digital library?

CORPORATE DATA WAREHOUSES:

Data warehouse is used store information of the organization.

Data warehouse is needed as enterprise wide to increase data in volume and complexity.

Characteristics of data warehouse are:

- ☐ An information-based approach to decision making.
- ☐ Involvement in highly competitive & rapidly changing markets.
- ☐ Data stored in many systems and represented differently.

Functions performed by data warehouse are:

- ☐ Allow existing transactions and legacy systems to continue in operation.
- ☐ Consolidates data from various transaction systems into a coherent set.
- ☐ Allows analysis of virtual information about current operations of decision support.

Types of data warehouses:

There are four types of data warehouses:

- ☐ **Physical data warehouse:** It gathers corporate data along with the schemas and the processing logics.
- ☐ **Logical data warehouse:** It contains all the Meta data and business rules.
- ☐ **Data library:** This is sub set of the enterprise wide data warehouse.
- ☐ **Decision support system (DSS):** These are the applications but make use of data warehouse

Advantages of data warehouse:

- ☐ Timely and accurate information become an integral part of the decision-making process.
- ☐ User can manage and access large volumes of in one cohesive framework.
- ☐ Data warehousing has wide spread applicability.
- ☐ It provides point-of-sales reports instead of end-of –day reports.

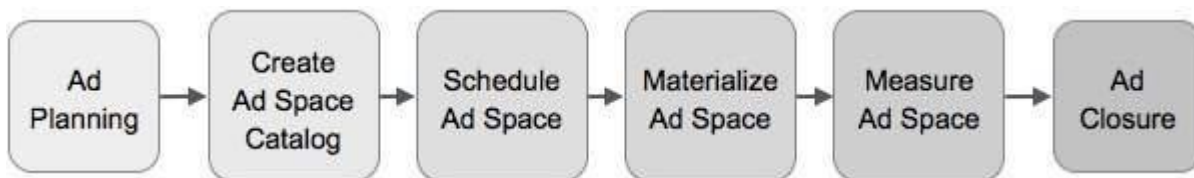
ADVERTISING AND MARKETING ON THE INTERNET

Online advertising is a type of business promotion which uses Internet to deliver marketing messages to attract customers.

With the rapid growth of Internet users and Internet technology, a number of businesses started to advertise their products and services online.

Publishing an Online Advertise

Publishing an online Ad is a sequential process. The following diagram shows the basic steps an Ad publisher takes to create and post the Ad online –



Ad Planning

The marketing team conducts analysis of various domains.

- Marketing analysis
- Product targeting analysis
- Audience analysis
- Customer targeting analysis

Based on the analysis results, the advertiser decides on –

- Selecting a publisher
- Ad presentation approach
- Approach of posting the Ad
- Ad posting schedules

Creating Ad Space Catalog

Ad space list is created to record Ad space availability status, space profile, location, presentation, scheduling method, frequency, etc.

Trading Ad Space

Advertisers and Publishers interact to determine online Ad space. There are three types of Ad space trading –

- **Buy and Sell** – Publishers sell the Ad space schedule to Advertisers on first-come-first-serve basis.
- **Space Auction** – Ad space bidding is conducted to settle the trade.
- **Space Exchange** – Multiple publishers interact with each other to sell the space schedules available with them, which have not been sold.

Scheduling the Ad Space

The online publishers create and maintain advertising schedules for the online Ad space. They help the advertisers for booking, purchasing, and confirming various schedules for online advertisements.

Materializing the Ad Space

The online publishers collect advertisement from the advertiser and materialize the specified ad spaces by displaying the advertisement as per the specified schedules.

Measuring an Ad Space

All active Ad spaces in the publishing websites are monitored and measured. After the Ad is actually visible and accessible online, it is evaluated regularly for performance. The analyzers collect data and evaluate the effectiveness on the viewers, its popularity, Ad space management, etc.

Ad Closure

The advertisers pay the publishers by pre-decided terms of payment for the published online Ad.

Online Advertising Performance Measurement

The performance of an online Ad is measured to enable the marketing team to analyze the readings of measurement.

The performance measurement can uncover the following facts –

- Effectiveness of the Ad on views.
- Problems related to the Ad such as inappropriate content, incorrect targeting of people, Ad place, and timing for publishing.
- Estimation and prediction of sales in short and long terms.

The performance metrics of Online Ad are as follows –

Clicks – It is the number of times viewer clicks the Ad. It can be taken as viewer's acknowledgement to your Ad. It suggests that the viewer has seen the Ad and wants further information.

Impressions – It is the number of times your Ad is displayed on the web page.

Click Through Rate (CTR) – It is the ratio of Ad clicks to Ad impressions. The higher the CTR, the more relevant your Ad is.

Cost Per Click (CPC) – It is the amount advertiser pays for each click on the Ad. The number of clicks determines the amount of payment. The lower CPC is better.

Cost Per Thousand Impressions or Cost Per Mille (CPM) – It is the amount the advertiser pays for thousand clicks.

Return On Investment (ROI) – It is $(\text{Return} - \text{Investment}) \times 100$. The higher ROI is better.

Advantages of Online Advertising

Online advertising is beneficial over conventional advertising in many ways.

- Internet access is easy and affordable. Today, the number of global internet users is almost 3 billion. No other conventional advertising medium can bring such huge audience for your products or services.
- Internet is capable of serving multimedia substance such as audio and video content apart from text and graphics. Multimedia advertisements are highly persuasive.
- Internet by nature is interactive. It can provide a reliable platform for smooth shopping experience for people. The conversion rate is high for compelling advertises.
- No time or demographic constraints on delivering the online advertise.
- Online advertising is promotional as well as informational.
- It brings speedy outcomes.
- It provides effective performance tracking.

ELECTRONIC COMMERCE CATALOGS OR DIRECTORIES:

A directory performs an essential support function that guides customers in a maze of options by enabling the organizations of the information space.

Directories are of two types:

1. The white pages
2. Yellow pages

The white pages are used to people or institutions and yellow pages are used to consumers and organizations.

Electronic white pages:

- ☐ Analogues to the telephone white pages, the electronic white pages provide services from a static listing of e-mail addresses to directory assistance.
- ☐ White pages directories, also found within organizations, are integral to work efficiency.
- ☐ The problems facing organizations are similar to the problems facing individuals.
- ☐ A **white pages schema** is a data model, specifically a logical schema, for organizing the data contained in entries in a directory service, database, or application, such as an address book.
- ☐ A white pages schema typically defines, for each real-world object being represented:
 - ☐ What attributes of that object are to be represented in the entry for that object.
 - ☐ What relationships of that object to other objects are to be represented?
- ☐ One of the earliest attempts to standardize a white pages schema for electronic mail use was in X.520 and X.521, part of the X.500 a specification that was derived from the addressing requirements of X.400.
- ☐ In a white pages directory, each entry typically represents an individual person that makes the use of network resources, such as by receiving email or having an account to log into a system.
- ☐ In some environments, the schema may also include the representation of organizational divisions, roles, groups, and devices.
- ☐ The term is derived from the white pages, the listing of individuals in a telephone directory, typically sorted by the individual's home location (e.g. city) and then by their name.

ELECTRONIC YELLOW PAGES:

- ☐ The term Yellow Pages refers to a telephone directory of businesses, categorized according to the product or service provided.
- ☐ The traditional term Yellow Pages is now also applied to online directories of businesses.
- ☐ To avoid the increasing cost of yellow paper, the yellow background of the pages is currently printed on white paper using ink. Yellow paper is no longer used.
- ☐ The name and concept of "Yellow Pages" came about in 1883, when a printer in Cheyenne, Wyoming working on a regular telephone directory ran out of white paper and used yellow paper instead.
- ☐ In 1886 Reuben H. Donnelley created the first official yellow pages directory, inventing an industry.
- ☐ Today, the expression Yellow Pages is used globally, in both English-speaking and non-English speaking countries.
- ☐ In the US, it refers to the category, while in some other countries it is a registered name and therefore a proper noun.

Third-party directories can be categorized variously:

- ☐ **Basic yellow pages:** These are organized by human-oriented products and services.
- ☐ **Business directories:** This takes the extended information about companies, financial health, and news clippings.

- ❑ **State business directories:** this type of directory is useful in businesses that operate on a state or geographic basis.
- ❑ **Directories by SIC :**(standard industrial classification) directories are compiled by the government.
- ❑ **Manufacturer's directories:** if your goal is to sell your product or service to manufacturers, then this type of directory is used.
- ❑ **Big-business directory:** This directory lists companies of 100 or more employees.
- ❑ **Metropolitan area business directory:** It develops sales and marketing tools for specific cities.
- ❑ **Credit reference directory:** this directory provides credit rating codes for millions of US companies.
- ❑ **World Wide Web directory:** this lists the various hyperlinks of the various servers scattered around the internet.

ON DEMAND EDUCATION AND DIGITAL COPYRIGHT:

Copyright not only protects databases but also software, website design, creative content such as text, images, audios, videos and graphics.

Having Copyright protection in the E- Commerce Industry stipulates monetary penalties against infringers using work without permission.

- ❑ Copyright is a form of intellectual property rights (IPR) that grants the creator of an original work (creative work) certain rights over that work for a limited period of time. The copyright holder has an exclusive right to reproduce his or her work in forms such as printed publications or sound recordings, to distribute copies and translations, to broadcast the work or make it available, to license and/or lend it, to adapt it
- ❑ Independently from economic rights, authors are granted moral rights, such as the right of authorship, the right of integrity of work, the right to be credited, and the right of divulgation. These rights can be maintained by the author even if the copyright has been transferred to a third party.
- ❑ Types of works that are protected under most national copyright laws include the following: literary works (such as novels, short stories, poems, and any other fiction and non-fiction writings), dramatic works, musical works, artistic works (whether two-dimensional as drawings, paintings etc. or three dimensional as sculptures, architectural works), maps and technical drawings (including cartographic works, plans, blueprints, diagrams etc.), photographic works, cinematographic works, and computer programmes and the creative aspects of databases. It should be highlighted that copyright applies to all original works,

irrespective of the quality of their content. Copyrights do not cover ideas, procedures, methods of operation (know-how) or mathematical concepts.

- The core copyright-intensive industries are industries that are wholly engaged in creating, producing and manufacturing, performing, broadcasting, communicating and exhibiting, or distributing and selling works and other protected subject matter. WIPO(World Intellectual Property Organization) identified the following nine groups as core copyright industries: press and literature music, theatrical productions, operas motion picture and video radio and television photography software and databases visual and graphic arts advertising services copyright collective management societies.
- In addition to the core copyright industries, WIPO also defines three groups of industries whose activity is related to copyright industries to some degree: interdependent, partial, and non-dedicated support industries.

Interdependent copyright industries are industries that are engaged in production, manufacture and sale of equipment whose function is wholly or primarily to facilitate the creation, production or use of works and other protected subject matter.

Partial copyright industries are industries in which a portion of the activities is related to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.

Non-dedicated support industries are industries in which a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter, and whose activities have not been included in the core copyright industries

APPLETS, BROWSERS AND SOFTWARE AGENTS:

Applets are external application (think of them as a software agent) that expand the

capabilities of a core browser, to invoke specialized application that range from interactive shopping application educational material and games.

Today, client application such as web browser's allow user's to manipulate information spread across the internet as a whole. Web browser's integrate the function of fetching the remote information figuring out what format it is and displaying it. The browser's contain detailed hard wired knowledge about the many different data types, protocol, and behaviour necessary to navigate the web.

In the case of the web the core file type that most browser's understand in the hyper text markup language (HTML). HTML allows text documents to embed simple formatting information and reference to other objects. In short the data viewed in existing www browser's are limited to text, graphic low quality sound and videos.

If a user give this situation, wants to access data on multiple server's each having a proprietary new protocol, the user needs multiple browser's. Needing several browser's is clumsy and defeats the universal leadership purpose that make the www so useful. Another problem with this approach is that the user has to decide which browser he or she wants. The decision to go for a particular browser locks the user into an environment, denying him or her the necessary flexibility.

The situation can be avoided by using applet-based browser's like software agents, applets can transparently migrate across the network.