

POORNIMA

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

ISP

Internet Service Provider: The term ISP refers to a company that provides access to the internet to both personal and business customers.

ISP make it possible for their customers to surf the web, shop online, conduct business, and connect with family and friends - all for a fee.

ISP may also provide other services including email services, domain registrations, web hosting and backup packages.

Access of internet has gone from dial-up connection to high-speed broadband technology.

Eg: of ISP:

AT&T provides local and long distance telephone services, managed networking, telecommunications equipment, and gaming products & distribution.

Verizon Communications provides long local and long distance voice, as well as broadband, video, data center and cloud services and security and managed network services.

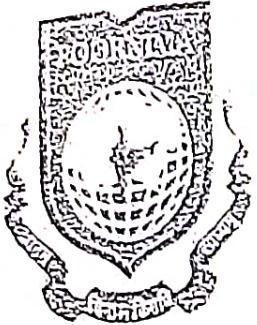
The type of internet access varies depending on what the customer requires.

- ISP connect to one another by forming backbone which is another way of saying a main highway of communication. Backbones usually consist of satellite, copper wire, fiber-optic media.
- Customers who live in remote locations, such as farms, deserts, and mountain areas, may require a satellite Internet service.
- Fiber transmits internet traffic at the speed of light. There are fiber cables that run along the ocean floor, connecting countries across the globe through high speed internet access.
- Copper cable used for DSL or cable broadband. This works by sending electrical pulse through a copper wire.

Classification :

1. Access Providers: For users and small business traditional options include copper wire to provide dial-up, DSL, typically asymmetric Digital Subscriber line (ADSL), cable modem or integrated Service Digital network (ISDN) typically basic Rate interface (BRI).

Customers with more demanding requirements can use higher-speed DSL (ISDN : Primary Rate interface), Asynchronous Transfer Mode (ATM) and Synchronous Optical networking (SONET). Wireless access is another option, including cellular and satellite internet access.

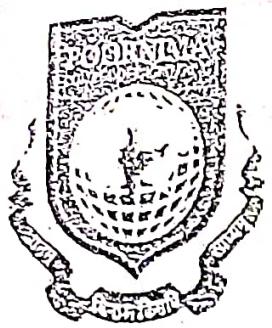


POORINI

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

2. Mail box provider: A mail box provider is an organization that provides services for hosting electronic mail domain with access to storage for mail boxes.
- Many mail box provider are access providers while others are not (e.g. Gmail, Yahoo Mail, outlook etc). Individual ~~or~~ university, organizations manage their mail servers themselves. The task is typically accomplished by implementing Simple Mail Transfer protocol (SMTP).
3. Hosting ISP: Internet hosting Services provide email, web-hosting, or online storage service. Other services include virtual server, cloud services, or physical server operations.
4. Virtual ISP: A Virtual ISP (vISP) is an operation that purchase services from another ISP.



POORNIMA

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

Data :- Data is raw and unstructured/unorganized facts that are useless without proper processing and organizing them to retrieve same information for future use.

Meta Data : Metadata is data about data. Metadata stores basic information about data, which can make finding and working with specific instances of data easier.

Metadata increase the accuracy of searching and operating of data from large amount of data.

Difference between Data and Metadata

Data

1. Concept : Data is any sort of info which is stored on computer memory.

2. Information : Data may or may not be informative.

3. Processing : Data may or may not be processed.

Metadata

Metadata describes relevant information about the data.

Metadata is always informative.

It is always a processed data.

Data

4. Storage: In DBMS data is stored as a file either navigational or hierarchical form.

5. Descriptions: In DBMS data refers to all the single items that are stored in a database either individually or as a set.

Metadata

It is stored in data dictionary.

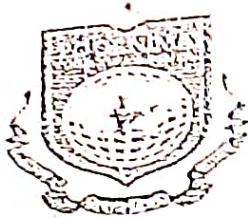
Metadata refers to name of attributes, their types, user constraint, integrity information and storage information.

Metadata types:

There are three main types of metadata: descriptive, administrative, and structural.

- Descriptive metadata: enables discovery, identification and selection of resources. It can include elements such as title, author and subject.
- Administrative metadata: facilitates the management of resources. It can include elements such as technical, preservation, right and use.
- Structural Metadata: generally used in machine processing, describes relationships among various parts of a resource, such as chapters in a book.

Metadata allows XML-based applications to categorize and contextualize pieces of data - for marketess, job is usually a web page. A search engine's its relevancy to a given search query.



POORVIMA

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

PAGE NO.

Enterprise Information Portal (EIP):

An Enterprise Information Portal is a framework used to support and integrate processes, people and information across an organization. It gives a unified and secure gateway for information and a knowledge base for employees, partners and customers.

The application interface provided by an EIP is often web-based and provides instant deployment, centralized maintenance and ergonomics which are intuitive and user-friendly.

Integration and presentation are the two main functions of an EIP. An EIP should be able to extract information from multiple sources and adjust the information in the portal.

Features of an EIP:

- Integration: provides an integrated navigation gateway for multiple systems and components.
- Customization: provides an environment for users to customize.
- Access control and security: The ability to gene

the limitations needed for specific contents and services as needed.

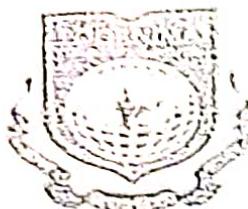
- Single sign on: Capabilities for single sign-on can be given to users and other systems.
- Categorizations and collaboration: can categorize all information and also provide users the ability to collaborate regardless of physical location.
- Personalization: based on the role and job function, the personalization is possible. The matching content for users is provided and matching services are used.

Purpose of Portals: A portal is a web-based platform that collects information from different sources into a single user interface and presents users with the most relevant information for their content.

~~Elements of enterprise information Portal~~

- Access/Search: Access/search allows a user to get all the information needed (but no more) in the desired content. For example, a loan officer does not need marketing information to approve a loan. An EIP makes sure the loan officer gets only the information needed.

- Expertise and profiling: Expertise and profiling is essential for collaboration element of EIP, individuals within an enterprise are profiled according to



POORNIMA

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

PAGE NO.

the experience and competency. If an individual needs to collaborate with others, he can choose those that are qualified for the project.

Web portals benefits for business users:

- Save time by consolidating back-end applications into one point of access.
- Increase security by providing a single sign-on for all business applications.
- Promote products to customers in a consistent way, with tailored branding.
- Enable staff to quickly and safely share documents and organise their work.

Web portal benefits for IT professionals:

- Reduce maintenance effort and operation costs due to multiple web applications.
- Boost security with a central point of control for all back-end applications.
- Accelerate development by removing duplications of common functionality.
- Eliminate unregulated "shadow IT" systems with IT-managed alternatives.

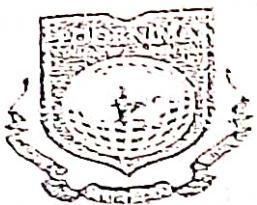
Online Publishing: Online Publishing includes the digital publication of e-books, digital magazines and the development of digital libraries and categories.

In short, it is the use of online technology to digitize print material and share it digitally. Digital publishers create content and distribute it online to:

- Deliver media to the public through digital devices
 - Reach a wider audience
 - Save money
 - Analyze website visitors and optimize content accordingly
 - Collect market research data
- As new generations become accustomed to digital technology, electronic and web publishing is rapidly replacing traditional print media and with good reason.

Advantage of online publishing:

1. Visual content domination: Visual content encourages readers to spend more time with a website or media channel.
2. Huge cost savings: By reducing or eliminating print media, publishers can reduce publication cost drastically.
3. Interactive advertising: Publishers are pretty limited when it comes to advertisement with print media. But with a digital publishing platform, advertisement



Poornima COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

PAGE NO.

become interactive. Publishers can insert an ad. multiple times, and consumers have the option to click on compelling CTAs (calls-to-action) that take them to advertiser's website.

4. Social media exposure: Social media boosts digital publishing platforms. Publishers can increase their visibility by sharing links from their website or uploading their media to social media platforms.

5. Revenue Potential: The greatest advantage of digital publishing is its accessibility to online revenue opportunities.

Online publishing ex:

- Digital magazines
- Online newsletters
- Digital catalogs
- Digital brochures
- Presentations
- Online newspapers
- Blogs
- eBooks

Online Publishing Strategies:

As with any new development, there are generally three strategies for publishing companies to consider:

- Early Movers: These are highly skilled independent publishers with early access to such key capabilities as direct marketing and order fulfillment. These publishers have the capacity to derive the highest benefits from new media as their learning curves are much steeper than others, and they already have many of the necessary resources at hand.
- Watchers: These are large publishing companies that employ scale-sensitive economics. This category includes publishers of unbranded or less distinctive content who cannot attract a sufficiently large initial consumer franchise.
- Testers: These are majority of publishers that face either attractiveness and/or skill challenges. Testers include branded general publishers with robust consumer franchises and attractive distribution channels already in place.

Online Publishing approach:

There are four contrasting publishing approaches:

1. The online archive approach: The online archive approach (including bibliographic database and full-text search retrieval services) is one that appeals to corporate publishers and to some extent commercial publishers (such as academic or journal



Poornima COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

Publishers) who have an existing digital archive that they want to deliver over the web as well as on paper, CD-ROM or other media. One of online archive approach is library catalogs and bibliographic database.

2. The New medium approach: The new medium approach (including real-time news delivery, personalized news delivery, and entertainment) aims to create new material for the web to treat the web as its own medium, one deserving its own material. Get by this web as an alternative source.
3. The Publishing intermediate Approach: The publishing intermediate approach (including online directories) explores new service opportunities for intermediaries. There will be a demand for intermediaries because there will always be a need for a good directory to help people locate goods, services and products.
4. The Dynamic and Just-in Time Publishing approach: Online content is no longer static information. Content can now be created in

content and transmitted on the fly in the format best suited to the user's location, tastes and preferences.

Different ways to create Portal website:

1. Open Source Frameworks: The cost effective way to quickly put ~~your~~ business online, you can use can build online web portal using industry established open sources. WordPress, Drupal and Joomla are free Open-Source Content Management System framework to build our business website easily and quickly.
2. Proprietary Enterprise Framework:

An Enterprise web portal represents our enterprise on internet. A proprietary S/w, also known as licensed S/w or closed source S/w.

Salesforce provides enterprise suite for customer relationship management system, focused with customer service, marketing automation, sales and tools and analytics.

3. Free website builders: Of our organization, whether its small business, or a start-up appetite, we need a quick web solution with cost constraint to share of our new idea to the world.

Website builders are a perfect way to create any kind of web portal without having any web developers or web designers.



Poornima

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

PAGE NO.

6. Ready website Templates & Themes:

Ready web templates provide hold the balance of supremacy if you need a ready high-quality template, or ready-to-install themes solutions. we can find suitable templates for service parts like online education, wedding ~~rose~~ and event management.

6. Server less Mobile App: Dynamic websites with pre-built serverless technologies is an easier way to build ~~your~~ business applications portal on a cloud.

7. Microservice Architecture: It is a set of application as a collection of loosely-coupled services. Microservice based web applications are being developed as a single application from the set of small services; with each service running on its own process.

8. Ready Portal Script: Such script selling firms offer readymade, especially PHP scripts including source code with all rights.

9. Custom Web Development: Complex web portal

Software always requires certain programming approach, we need to follow a ~~series~~ series of steps to begin with, like what query we aim to solve with our portal, who are our customers and our portal visitors? what technical skills and workforce we have to operate it?

Build our First Portal :

Step 1: Start the service.

Step 2: Create a new Portal Site

Step 2A: Create and Deploy the Portal

Step 2B: View New Changes in the Portal Administration Tools and Browser

Step 3: Create a Portlet and make it visible to the portal

Portlet are applications or collections of data that are shown within a larger portal.

For eg: a human resources portal at a large corporation might provide a portlet that allows an employee to log in and view their paycheck information and another portlet that allows them to update insurance information.

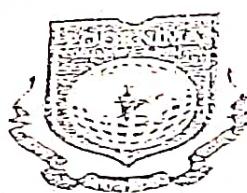
Step 3A: Create a Portlet.

Step 3B: Make the new Portlet visible.

Step 3C: View the result in web browser.

Step 4: Update the look and feel of the portal

Step 4A: Make skins and layout available for use in a portal.



POORNIMA

COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

PAGE NO ...

Step 4B: Create the New Page.

Step 4C: Synchronize the Modified Portal

Step 4D: Add new skins, layouts and
portal

Step 4E: View the modified portal.