

PHYSICS PRACTICAL SHEETS

CAMPUS

Date:

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Class:

Experiment No.:

Roll No.:

Group:

Shift:

Sub.:

Object of the Experiment (Block Letter)

Set:

1. Explain SDI concepts with its components.

The explosive growth of the internet continues to revolutionize the way modern day business is conducted and service provided. In recent years geographical information systems (GIS) and enterprises have continued to evolve towards distributed models in order to better exploit the potentials presented by internet computing paradigm. SDI concept is emerged to advance spatial data sharing by taking advantages of the ubiquity of the internet and its use has matured and is evolving into an infrastructure. Spatial data infrastructure is used to denote the relevant base collection of technologies, policies and institutional arrangements that facilitate the availability of and access to spatial data. It provides spatial data discovery, evaluation and application for users and provides within all levels of government, commercial sector, non-profit sector, academia and by citizens in general.

Main aim:-

1. To link existing and upcoming database of the respective level. (product based model)
2. To define a framework to facilitate the management of information assets (process based)

Component of SDI

. organizational components

Governance and monitoring, users, producers, strategy/objectives

Functional components

Scope, contents, SDI features, Implementation

Technical components

Data, services, applications, Technical infrastructure

Technical core components

Content repositories, geographical data catalogues for viewing and manipulation

Geoprocessing services

Coordinate transformation, image classification, vectorial analysis.

Q. How does a clearinghouse work?

A clearing house is a distributed n/w of spatial data producer managers and users that are linked electronically together. It is a system of gov and institutions that are to facilitate the discovery, evaluation and downloading of digital spatial data and provides to inventory, document and data sharing

Working

The data providers are allowed to register their geographic data sets, quality of data and methods to access these data. The data providers also provide additional information about the data sets. Client consults server registry to get geographic data access. Functions as a detailed catalogue service will support for links to spatial data and browsing capabilities. The registry pass the distributed response in the form of headlines. Client request metadata entry. Metadata or data are downloaded or connection to data is made.

3. What is meta data? list its roles.

Metadata is defined as background information that describes the content, quality, condition and other appropriate characteristics of data. So metadata is a simple mechanism to inform others of the existence of the data sets, their purpose and scope. Metadata answers the WHO questions about all facets of the data made available.

Roles

Applicability :- Information needed to determine the data sets that exists for a geographic location

Fitness for use :- information needed to determine whether a data set meets a specified need.

Access :- information needed to acquire an identified dataset

Transfer :- information needed to process and use a data set

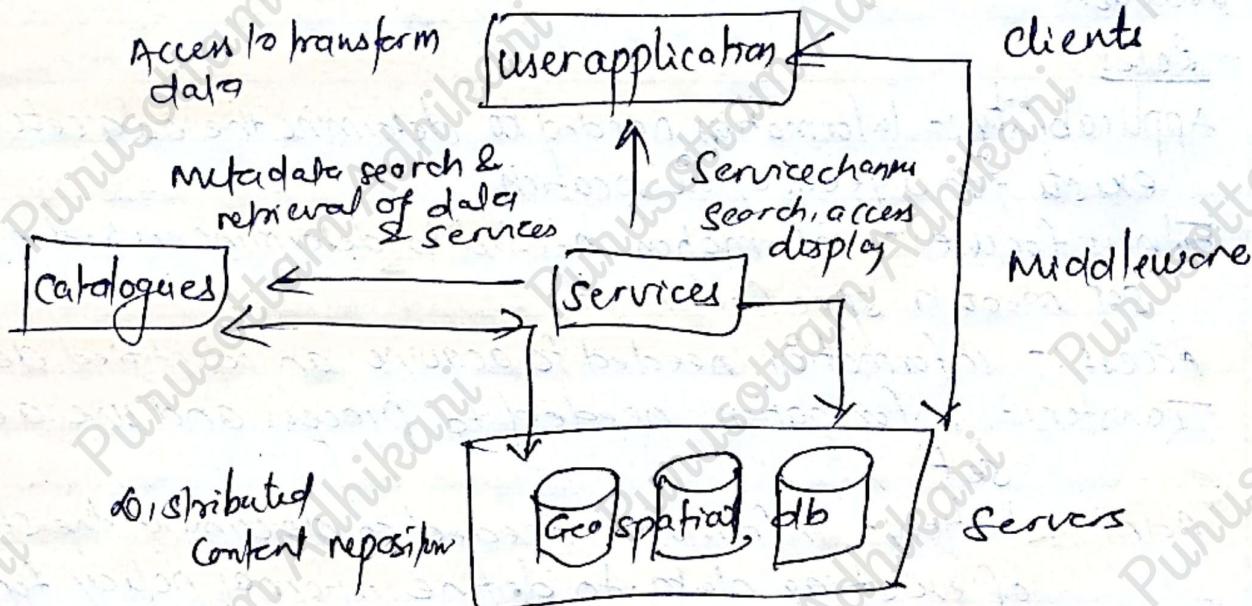
Administration :- information needed to document the status of existing data to define internal policy for update operations from different data sources.

4. Explain the system Architecture for SDF Interoperability.

For a domain, the system architecture view shows how multiple systems link and interoperate and may describe the internal construction and operation of particular systems within the architecture. For the individual system, the system architecture view includes the physical connection, location and identification of key nodes, circuits, n/w, warfighting platform etc and specifies system and component performance parameters.

The primary purpose of a system arch is to enable or

facilitate operational tasks and activities through application of physical resources. It maps system with associated platforms, functions and characteristics back to operational architecture.



System architectures are based upon and constrained by technical architectures.

5. Explaining the legal aspects of SDI

The main prerequisite for effective functioning of real estate market and as well for massive market with spatial data and information is harmonized legislation.

In Nepalese context, the existing Copyright Act 2002 provides the exclusive right to the creators on their creations.

copyright legal protection to the authors/creators of the work. Economic & Moral Rights of a creator/author shall be protected throughout the life and next fifty years after his death. Written agreement with the right owner is necessary for the purpose of production and reproduction of copyright material. Promote the use of original goods and make goods available at the reasonable prices. Use of proper business and negotiation skills with the complete and detail contracts for business transactions between right owner and users. It helps public to access to geo-information.

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