

# **DISSEMINATION OF GEOSPATIAL DATA TO USERS**

**FIFTH KNSDI WORKSHOP**

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# Agenda

- Introduction
- Objectives
- Milestones
- Conceptual framework
- Web Service Model
- KNSDI Architecture
- Components of KNSDI
- Data Dissemination
- Data Access and Security
- Metadata
- Gateway and Search Interfaces
- Clearinghouse
- Web Mapping
- Networks
- Nodes

# Introduction

- The draft policy formed and mandated Dissemination Working Group
- To work in actualization
  - Website for NSDI
  - Clearing house
  - Metadata.

# Objectives

- **Overall objective:**
  - to establish web mechanism for data discovery, evaluation and use
- **Specific objectives are:**
  - Design and Organization of KNSDI Metadata
  - Development of KNSDI Search and Access Protocols
  - Establishment of KNSDI Network (bandwidth and architecture):
    - Establishment of KNSDI Nodes by NSDI stakeholders .

# Milestones

- Three successful meetings were held at DRSRS .
- Formulation of terms of Reference
- Formation of working sub groups
- Draft Finding report

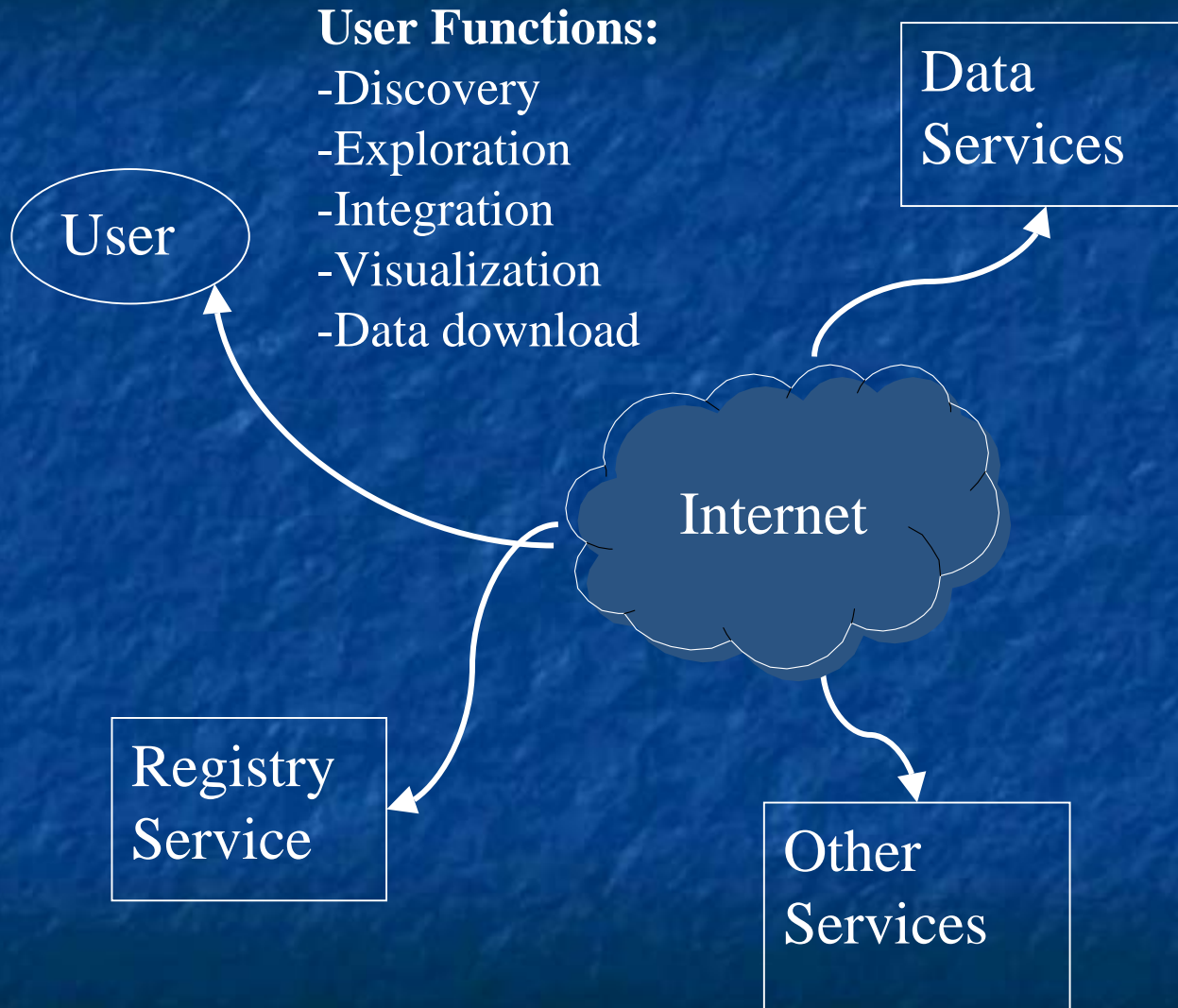
# Terms of Reference

- **Description of the architecture for the clearinghouse/catalogue service**
- **Definitions of the requirements of the clearinghouse**
- **Define Implementation of the data dissemination**

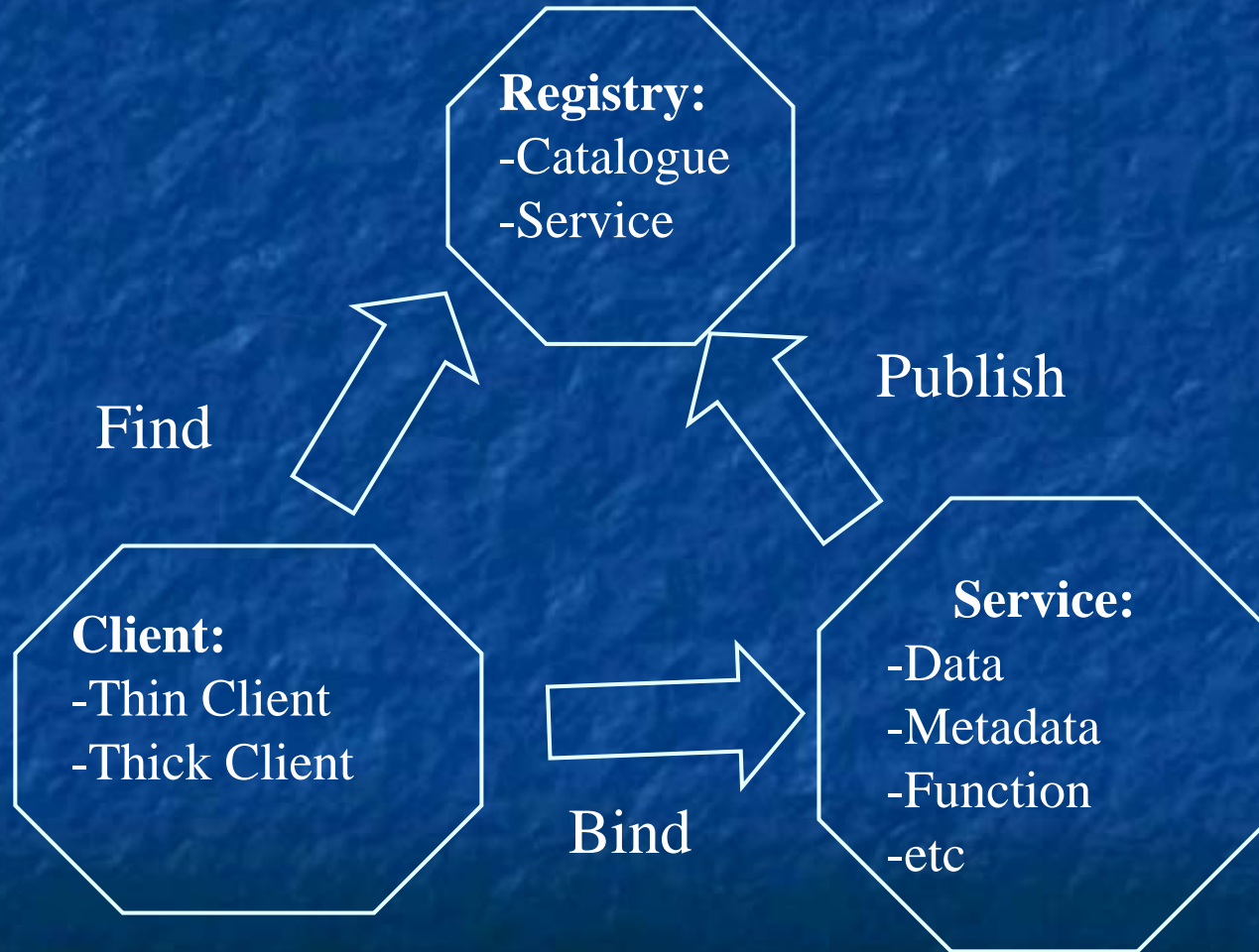
# Working Sub-groups

- **Metadata subgroup**
- **SAP& N (Search and Access Protocols & Networks) subgroup**
- **KNSDI Nodes subgroup**

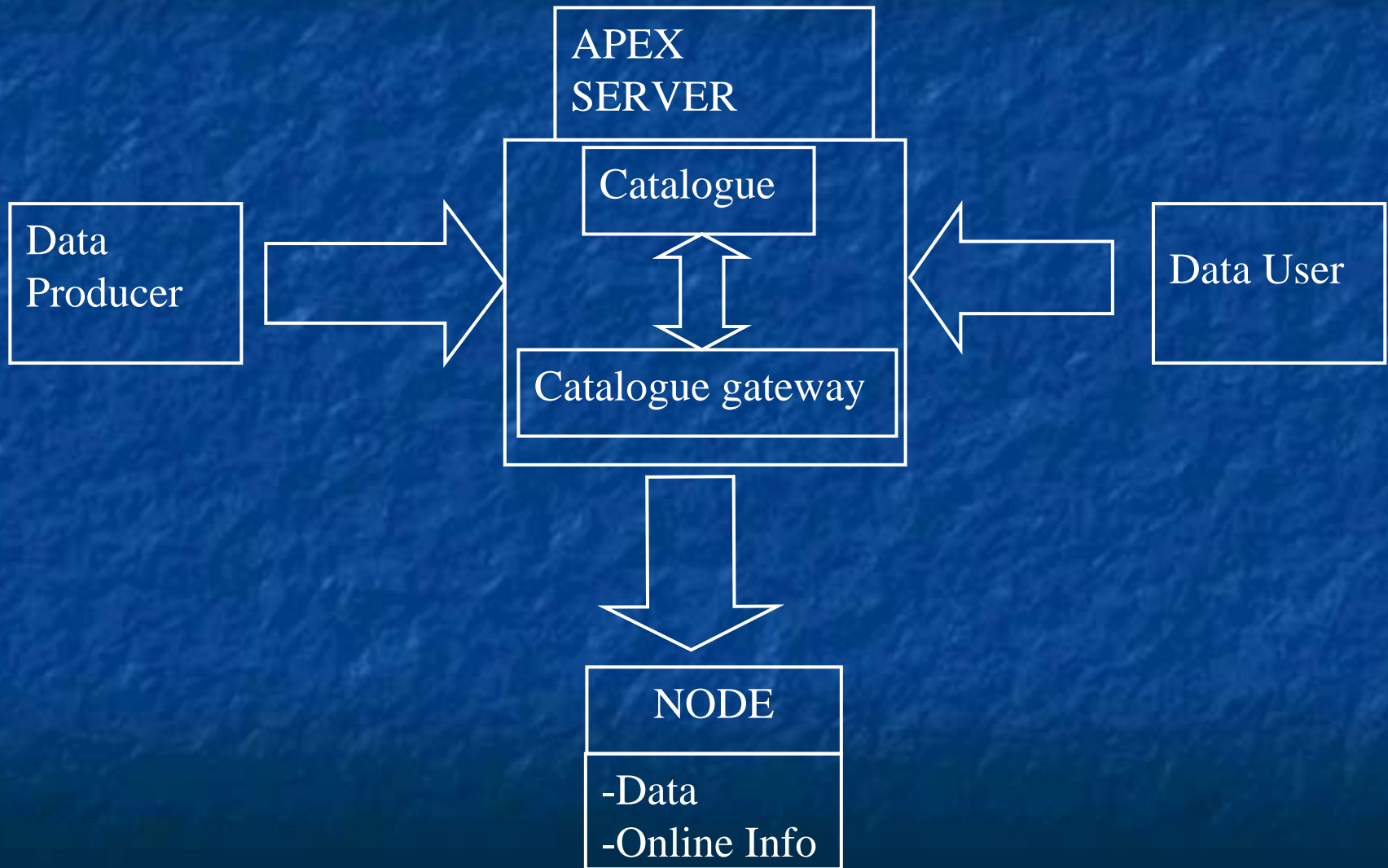
# Conceptual Framework



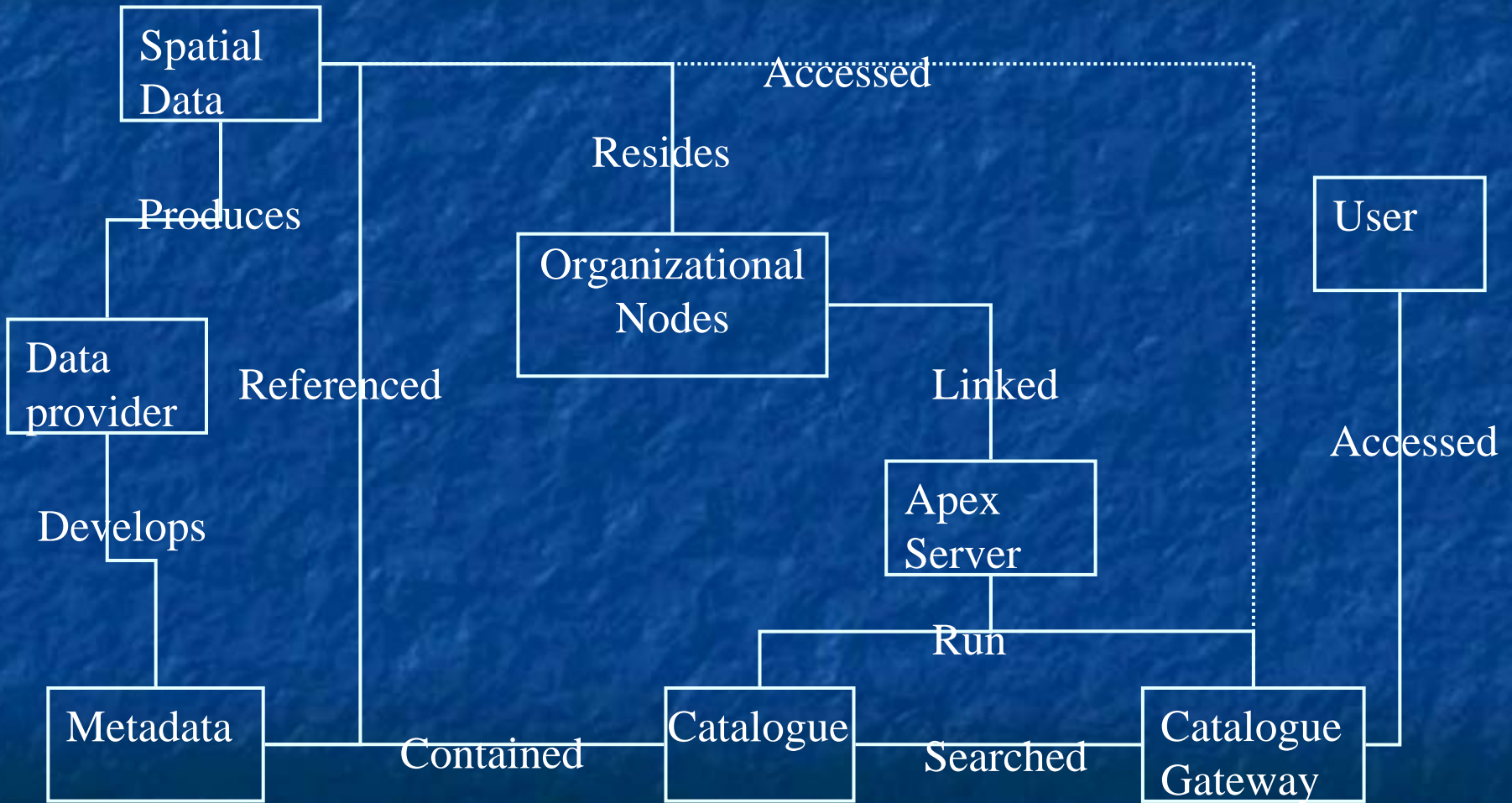
# Web Services Model



# KNSDI Architecture



# KNSDI Components



# Data Dissemination

- Data Access and Security
- Metadata
- Gateway and Search Interfaces
- Clearinghouse
- Web Mapping
- Networks
- Nodes

# Data Access and Security

- Restricted access to some resources.
- User registration.
- Authentication dialogue using password technology
- Use security software

# Metadata

- Development of metadata and files.
- Accepted standards ISO TC 211/OpenGIS
- exchanged in XML files
- Include major elements .
- Single metadata catalogue .
- Generated by data providers- managed by catalogue manager.
- Quality control
- Available software
  - ArcCatalogue, ISO Metadata Editor (IME)

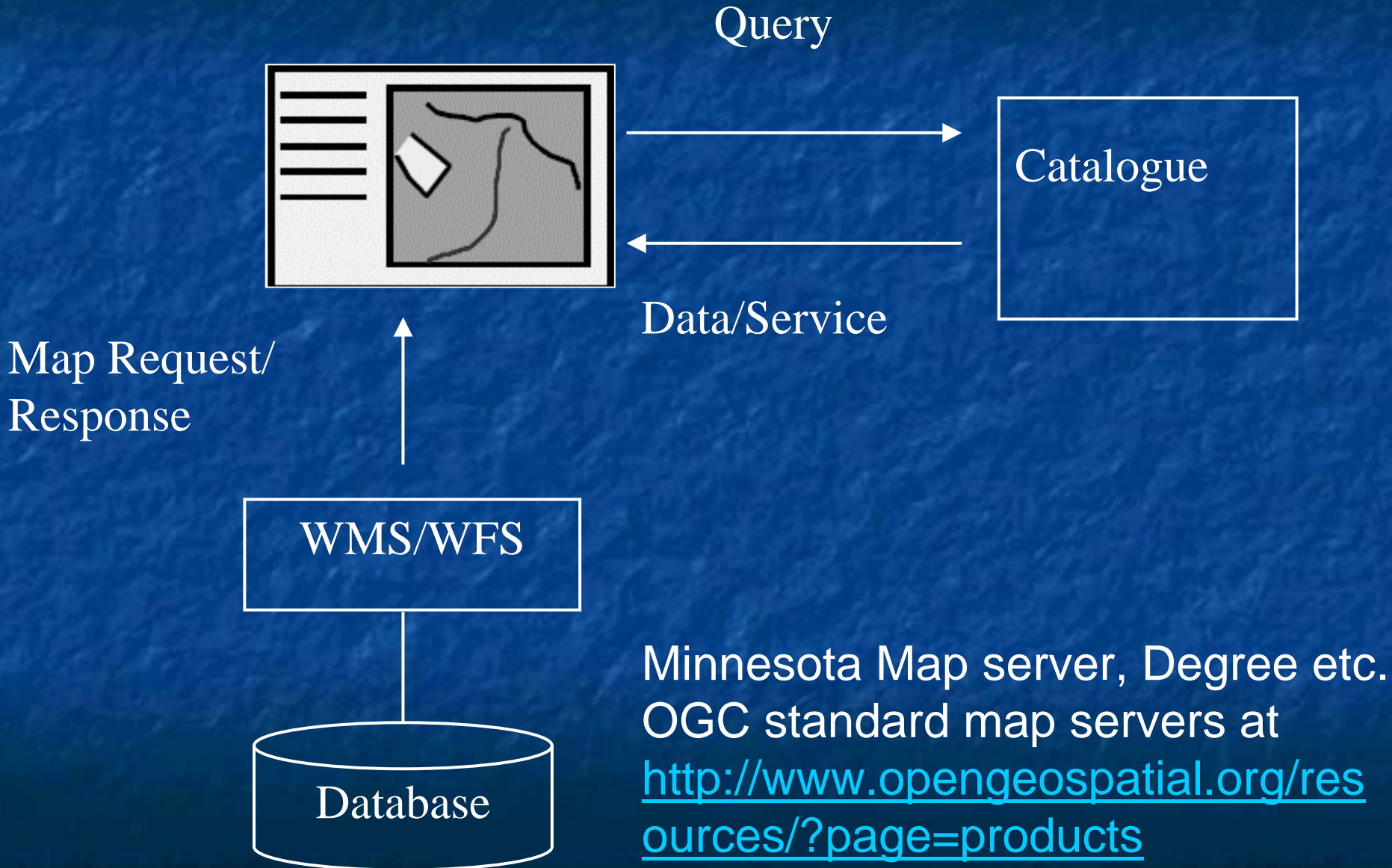
# Gateway and Search Interfaces

- Client-server (Search/Browse Interface)- Catalogue/Gateway Portal)
- Search and retrieval capability- ISO 23950
- Client interfaces- java programming
  - Gateway service –supports CORBA
  - Support data access clients
    - Thin client to desktop clients
  - Web mapping interactive portrayal service

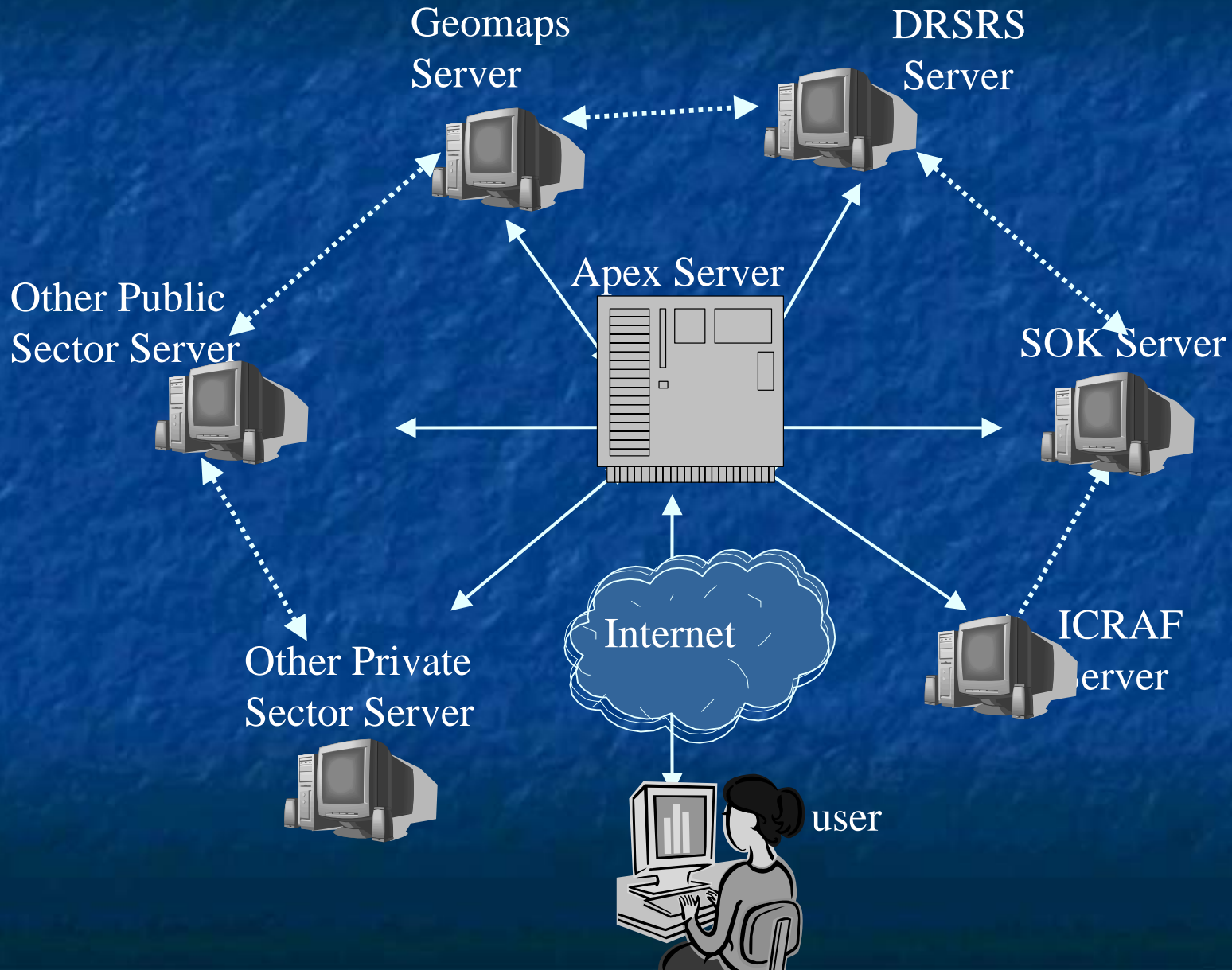
# Clearinghouse

- A single central metadata catalogue
- Catalogue administrator
- The KNSDI clearinghouse will provide:
  - Reference and/or access to data
  - Map graphics for data browsing
  - Catalog of web services and metadata.
  - Ability to publish and search collections of metadata, /services
  - Ordering mechanism
  - gazetteers
  - Other Services
- Search and access Protocols
- The catalogue server may be registered .

# Web Mapping



# Networks



# Nodes

- Dedicated node for organization.
- Model Core and non-Core data in ISO standards
- Data may be modeled using XML schemas and exchanged in GML
- Each organization will ensure:
  - Quality control .
  - security to data.
  - Minimal redundancy in data storage.
- Spatial data warehouse capable of :
  - Access and delivery of features, layers, etc.
  - Common data model
  - Application neutral
  - Multi-temporal support
  - Efficient access to data and storage

# Conclusions

- All information required to enable actualization geospatial data dissemination is available
- Technology is available or discoverable ,there is only need for clear structural definition of requirements

**THANK YOU**