Geoportals
Introduction

The word “portal” derived from Latin “porta” indicates a doorway, a Web portal, or simply portal, is a Web site that functions as an entry point to the World Wide Web.

A portal provides search tools that help users find information on the Web, and it usually also provides categorized links to many online resources.

Web portals such as Google, Bing, and Yahoo help you navigate through a hierarchical directory of information and find relevant sites from billions of Web pages available on the Internet.
Introduction

An increased amount of geospatial data is being collected by virtue of more user-generated content on the Web, in addition to data from satellites, ground and ocean sensors, and GPS units.

**Geoportals**- Web sites where geospatial information can be discovered- make it easier for users to find, access, and use geospatial information.

- Emerged in mid-1990s
- Many countries have developed geoportals as an important part of their SDI (Spatial Data Infrastructure)
Gateways to Geospatial Information

Geoportals, as gateways to geospatial information, facilitate geospatial information sharing between providers, who own the information, and user, who need the information.

Geospatial information providers publish metadata, Web services and documents to geoportals.

Users can then download the online data, connect to and use Web services, or contact the content provider for offline data or documents.
Gateways to Geospatial Information

Geographic information is vital to making sound decisions at the local, regional, national and global levels.

While geospatial information has been collected by numerous organizations, many are not motivated to share their data with others. This creates isolated islands of information, which can make it difficult for organizations to discover and obtain the data they need.

This in turn, leads to underused data, duplicate data collecting, wasted funding, time delays and inadequate decision making.
Gateways to Geospatial Information

A spatial data infrastructure (SDI) is a data infrastructure implementing a framework of geographic data, metadata, users and tools that are interactively connected in order to use spatial data in an efficient and flexible way.

SDI is the technology, policies, standards, human resources, and related activities necessary to acquire, process, distribute, use, maintain, and preserve spatial data.

An SDI is a coordinated series of agreements on technology standards, institutional arrangements, and policies that enable the discovery and use of geospatial information by users and for purposes other than those it was created for.
Functions and Architectures

Geoportals provide an array of functionality to administrators, content providers (publishers), and users.

Geoportals should provide typical functionality suitable to each of the three above roles:

**Publishers** provide content to the geoportal. Geoportals typically offer publishers the following functionality:

- Creating Accounts
- Creating Metadata
- Publishing Metadata
- Securing Metadata
- Publishing Data
Functions and Architectures

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Geoportals should provide typical functionality suitable to each of the three above roles:

**Administrators** manage content in the geoportal. Geoportals typically offer administrators the following functionality:

- Managing Accounts
- Managing Metadata
- Managing Security
Functions and Architectures

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Geoportals should provide typical functionality suitable to each of the three above roles:

**Users** search for contents that meet their needs. Geoportals typically offer users the following functionality:

- **Searching Metadata**
- **Viewing Metadata**
- **Downloading Data**
- **Viewing map services and using Web services**
Geoportal functionality can be provided in a variety of ways:

- **Geoportal Web site**: Users visit the Geoportal Web site to specify search criteria and review the search results.

- **Web browser quick search box**: Users can register their geoportal as a search provider in Web browser, and then use the quick search box without launching the geoportal Web page.

- **Plug-ins and widgets**: Users can install geoportal plug-ins for ArcGIS Explorer and ArcGIS desktop.

- **Programming interfaces**: Users can access REST and SOAP interfaces which open an array of possibilities to integrate with other application environments. The REST interface can return search result in GeoRSS, KML, HTML etc.