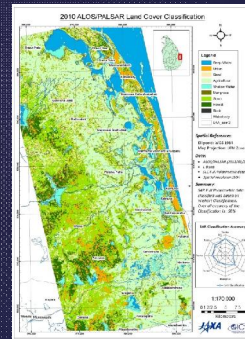
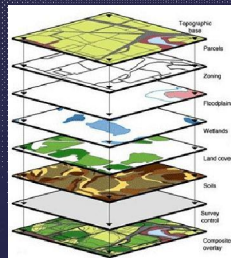


Introduction to WEB-GIS

Chathura H Wickramasinghe

Geographic Information Systems

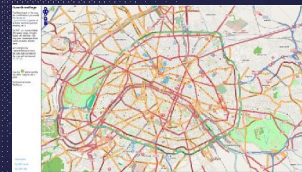
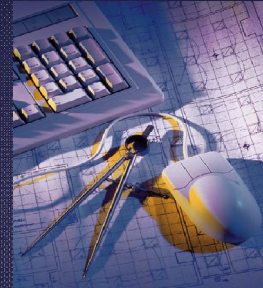
- ▮ “Mapping” is inventory and presentation of spatial data.
- ▮ GIS means “Geographical Information System”
 - Its called that because there is information behind the map.



Importance of Geographic Data

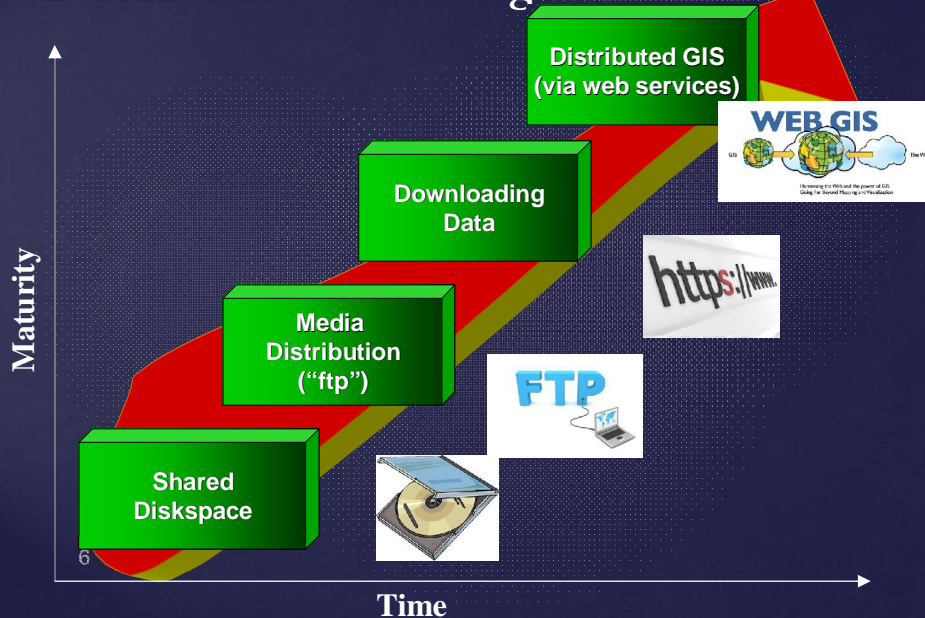
- ∩ **GIS is different than most applications**
- ∩ **Word processing, Spreadsheets... are entirely dependent on input of YOUR data**
- ∩ **GIS users nearly always require reference map data (e.g., streets, boundaries) that are maintained by others**
- ∩ **As GIS users, we rely heavily on “external” data sources**

Data has to be shared



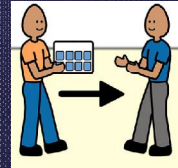
GIC/AIT chat. 5...

Evolution of Data Sharing



Issues with typical/traditional Data Sharing Methods

- ▮ Getting all the data
- ▮ Vintage
- ▮ Format
- ▮ Coordinate System/Projection
- ▮ Media Compatibility
- ▮ File Size
- ▮ Bandwidth
- ▮ Metadata Distribution

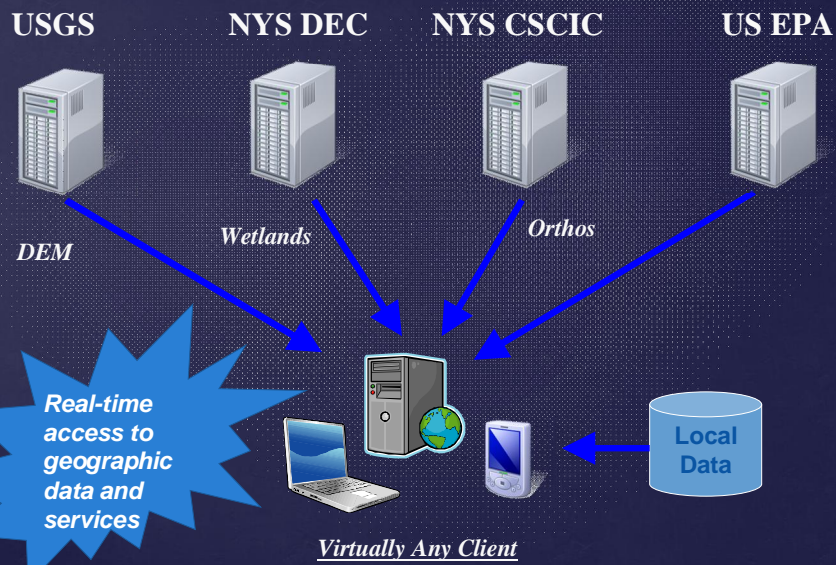


Typically requires data manipulation prior to use (reformatting, reprojecting, clipping, etc.)



GIC/AIT chat. 7...

Distributed GIS Model



Mashup

- An application that combines data from multiple sources
- Referred to as “content aggregation”
- Combines similar types of data (e.g., maps,) from different systems/services
- Term originated from music industry when a new song was made from several existing tracks



9

Distributed GIS Advantages

- **Format is irrelevant**
- **Guarantees latest data**
- **No media involved**
- **Size is irrelevant (only requested data needed)**
- **Software independent**



GIC/AIT chatl...10

Distributed GIS Advantages

▮ **Device independent (PC, phone)**

▮ **Saves Time!**

▮ **Data security**

- Only view data
- Download data
- Data upload and editing



11

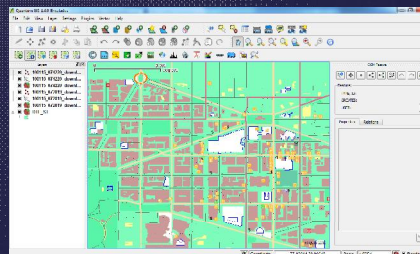
Distributed GIS Advantages

▮ Desktop software's also support WMS

- QGIS
- ArcGIS

○ Advantages

- Carryout advance GIS operations on the data.
- Use as source data for GIS analysis.
- Easy to search and access data.



Distributed GIS Disadvantages

- ⌘ **Dependent on server availability**
- ⌘ **Dependent on internet availability**
- ⌘ **Users need to be aware of web service**



GIC/AIT chat! 13

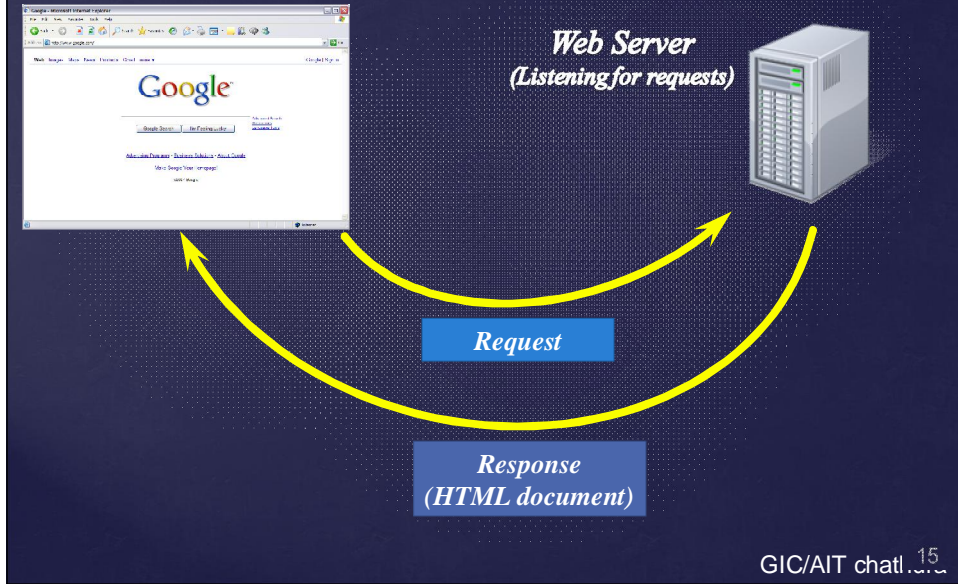
Service Oriented Architecture

- ⌘ Architecture that is based on integrating “loosely coupled”, interoperable services
- ⌘ Loosely coupled means NOT physically bound or compiled like an EXE or DLL
- ⌘ These services can be invoked and consumed remotely over a network
- ⌘ Data and messages are exchanged between clients and services

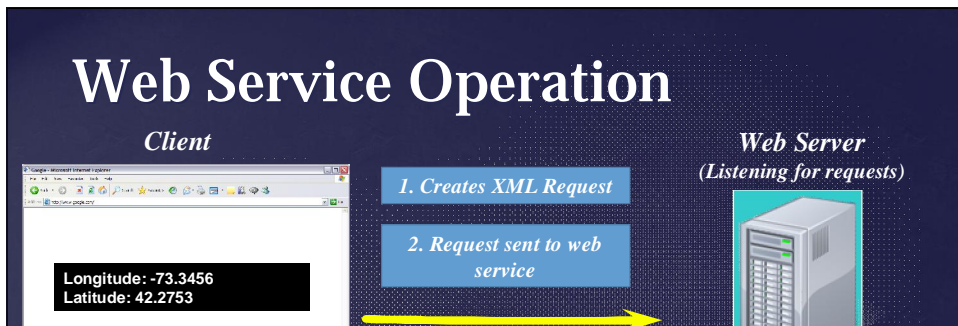


GIC/AIT chat! 14

Basic Web Page Operation



Web Service Operation



预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_6849

