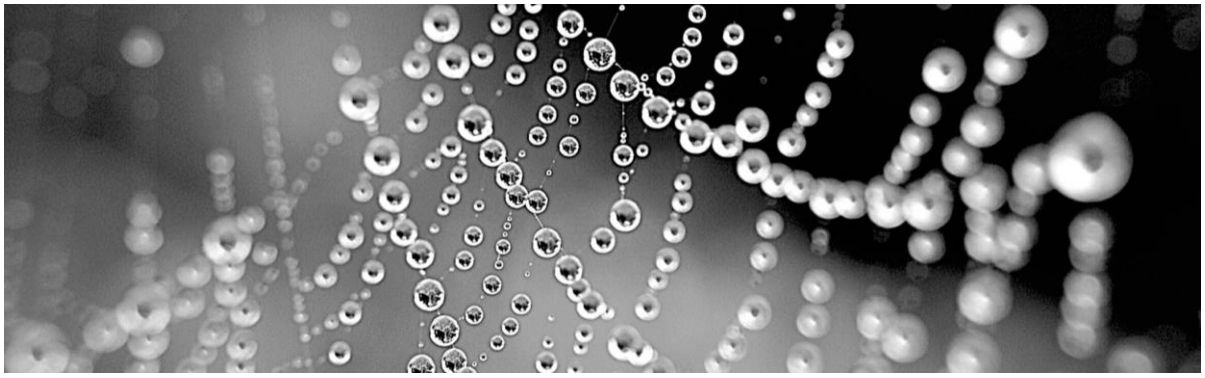
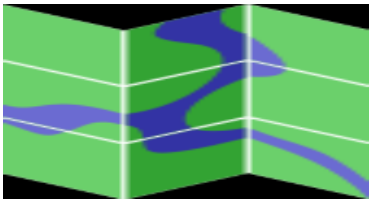


WEB GIS

GIS (Geographic Information System) is a computer information that collects, processes, stores, manages, analyzes, and outputs geospatial data and its attribute information. system. Web mapping, as the combination of the web and GIS (Geographic Information Systems), is a new and promising field. It has unlocked the power of GIS, and put online maps and geospatial data. Open-source WebGIS has many meanings and skills for GIS technology and data sharing.

Map Server



MapServer was originally an open source WebGIS software. MapServer is an open source WebGIS project developed in C language. It is a real-time map publishing system based on fat server / thin client mode. When the client sends data requests, the server processes the spatial data in real time and sends the generated data to the client.

MapServer supports a three-tier architecture:

- Application layer: client browser
- Middle tier: MapServer CGI module / scripting language + MapScript, Web server
- Storage tier: GIS spatial database

MapServer is a WebGIS platform developed based on the fat server/thin client mode to read geographic data. The GD library is used to render the JPeg/PNG/GIF format image and then sent back to the client browser. MapServer supports multiple platforms such as

Windows, UNIX, and Linux. Languages supported by MapScript include Python, PHP, Java, C#, and more.

LeafletJS

Leaflet is a modern, open-source JavaScript library developed for building mobile-friendly interactive maps. The Leaflet design adheres to the idea of simplicity, high performance and usability, and operates efficiently on all major desktop and mobile platforms. The advantages of HTML5 and CSS3 are exploited in modern browsers, while old browser access is also supported. Support for plugin extensions, a friendly, easy to use API documentation and a simple, readable source code.

OpenLayers

OpenLayers is a JavaScript package for developing WebGIS clients. Sources supported by OpenLayers include Google Maps, Yahoo, Map, Microsoft Virtual Earth, etc. Users can also use a simple image map as a background image to overlay other layers in OpenLayers. In this regard OpenLayers offers a lot of options.

In addition, OpenLayers' approach to accessing geospatial data is in line with industry standards. OpenLayers supports WMS (Web Mapping Service) and WFS (Web Feature) developed by the Open GIS Association Service service and other network service specifications, which can be done by remote service.

Cesium

CesiumJS is an open source JavaScript library for creating world-class 3D globes and maps with the best possible performance, precision, visual quality, and ease of use. Developers across industries, from aerospace to smart cities to drones, use CesiumJS to create interactive web apps for sharing dynamic geospatial data.

Built on open formats, CesiumJS is designed for robust interoperability and scaling for massive datasets.

- Stream in 3D Tiles and other standard formats from Cesium ion or another source
- Visualize and analyze on a high-precision WGS84 globe
- Share with users on desktop or mobile