LSGI 5311
GIS ENGINEERING

In-depth Study of GeoInfo Map

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Contents

1. GeoInfo Map analysis

1.1 Interface and layout analysis of GeoInfo Map

1.1.1 Overall layout

Area 1: Logo and basic information.

Area 2: The map is loaded in this area. This area occupies a large area of this web page and is the main part of the page. Geographic information will be displayed in this area.

Area 2.1: These buttons are used to display different map types.

Area 2.2: This area is about basic map functions, which is described in detail in 1.2.1.

Area 2.3: There are convenient button for drawing tools.

Area 3: Function area. You can choose different tools by clicking the button on the top of this area. The corresponding function will be displayed in this bar.

Area 4: Relevant links.

All in all, the interface of this website is concise and clean, with clear functional partitions, strong readability and ease of use.

1.1.2 Website style of GeoInfo Map

The entire website is dominated by fresh green colors that are in line with the theme of geography. The interface is fresh and natural.

The top background of the interface is a combination of green tone Hong Kong city sketches and mosaic-style green patches which has Hong Kong characteristics.

The functional area is dominated by green and white. Function buttons have a three-dimensional effect by using gradient color. Webpage fonts are formal and official.

1.2 Function and service analysis of GeoInfo Map
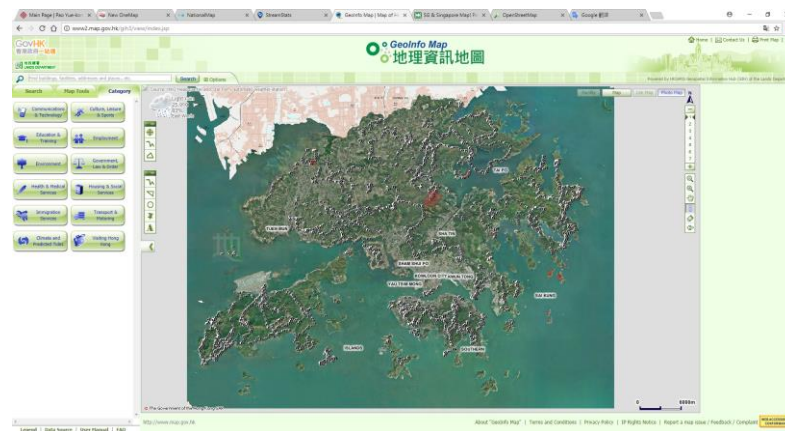
1.2.1 Basic map functions

Display different base maps: Detailed map, Lite map and Photo Map.

Display maps at different scales: Level 1-7. (1 for full extent, 4 for place, 7 for street)

The basic operation of browsing the map； zoom in, zoom out and pan.

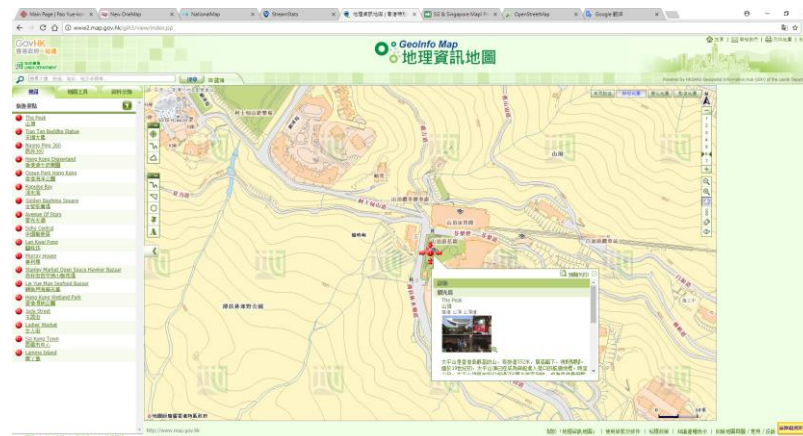Others: Identify, clear all, back to previous map location.

The above functions are displayed in the function bar on the right side of the map.

1.2.2 Search

You can search by enter any place on the search bar.

Besides, you can search by different topics，Living/Nature/Quick Location etc. Taking living as an example, it is subdivided into tourist attractions, cultural relics, and libraries. Clicking on the search results, the corresponding location and the pictures and text descriptions of the corresponding locations will be displayed on the map.
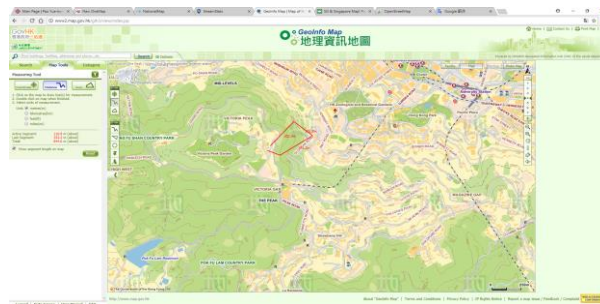
1.2.3 Map Tools

1.2.3.1 Measuring Tool

Coordinate

Click on the map to show the coordinates.

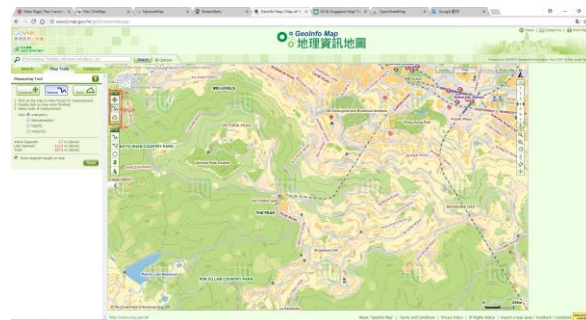**Distance**

There are three basic functions:

- Click on the map to draw line(s) for measurement.
- Double click on map when finished.
- Select units of measurement.
- Show segment length on map.
- The length of active segment, last segment and total can be displayed.

Area

- Ploygon: Click on the map to add vertices of the polygon for measurement.
- Circle: In circle mode, specify the radius on map to form a circle for measurement.

Shortcuts for these three features are on the left side of the map.

1.2.3.2 Save/share map view

Save Map View as URL. But this function is provided for non-commercial and personal enjoyment only.

1.2.3.3 Drawing Tool

Select a drawing tool. Follow the instructions to set drawing properties and add elements on the map.

Line

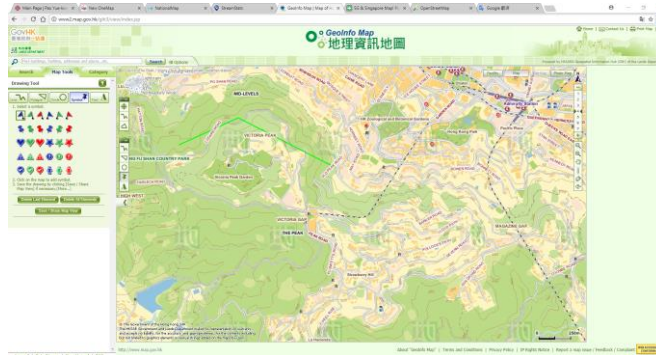Some optional elements can be chosen for the line, like color, thickness and arrow.

Polygon

You can draw the polygon on map with different color and thickness.

Circle

It is similar with Polygon.

Symbol

You can select a symbol and click the map to add symbol. Some symbols are provided.

Text

You can choose the text color and size and click on map to add text.

After drawing, you can delete last element or all elements, besides, and save the drawing.

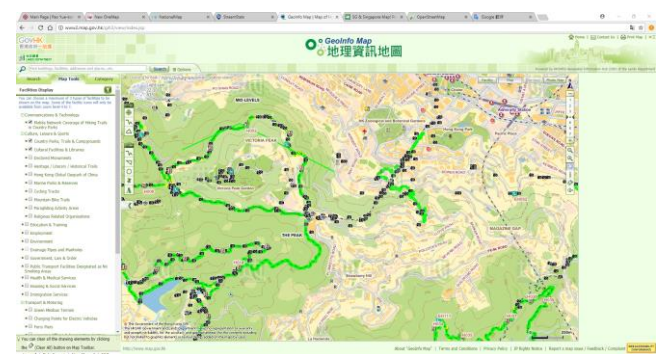Convenient tools for these three functions is on the left side of the map.

1.2.3.4 Plugins/Add-on

After installing the plug-ins/add-on, you can perform location search using the GeoInfo Map search engine added on your browser's toolbar, or drag-and-drop keywords from other web pages to GeoInfo Map to start searching.

Facilities Display

You can choose a maximum of 3 types of facilities to be shown on the map. Some of the facility icons will only be available from zoom level 4 to 7.

When you choose a category of facilities, the sites will be shown on the map.

Data Download

You can download data according to different categories.

1.2.4 Catogory

Display locations on the map according to different needs and categories. It is a powerful tool to search for places in Hong Kong under certain conditions.
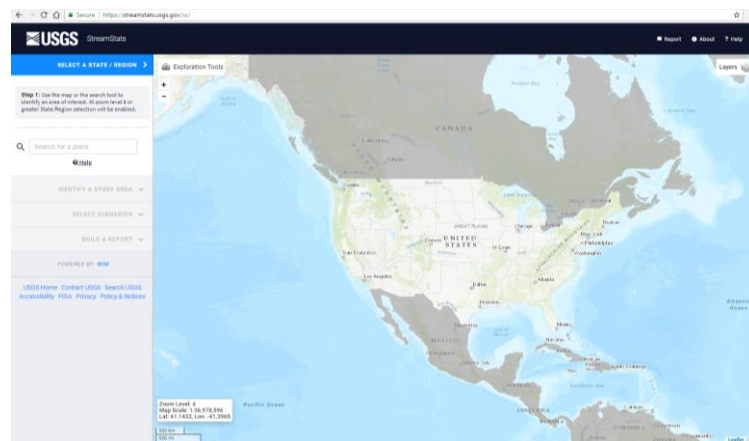
2. GeoInfo maps of other countries

2.1 Official maps

2.1.1 America

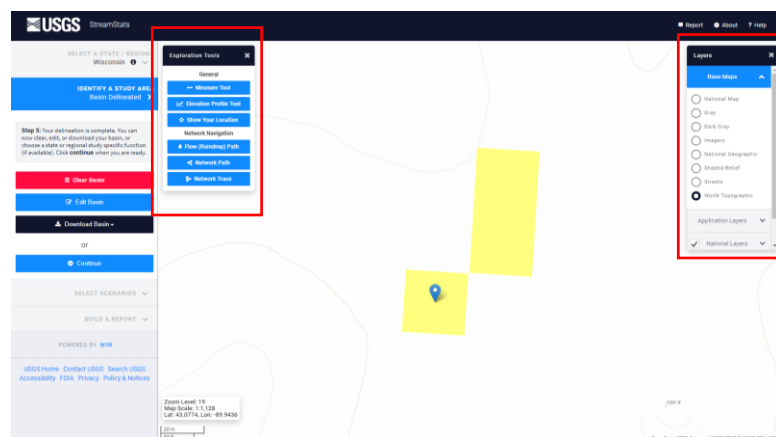Website URL: https://streamstats.usgs.gov/ss/
Website name: StreamStats v4.2.0
Overall layout:

This is similar to the layout of Hong Kong. It has both logo and basic information on the top of it. The functional area is on the left. The map occupies most of the area of the site and is located in the middle and right.

But there are some differences with Hong Kong. First, there is a blank space on the right side of the Hong Kong website, but in the United States website, the map occupies the central and right areas and there is no black space. Second, when you just opened this site, the entire interface is very simple and there is not even much information on it. But when you click the Layers (in the upper right corner) or Exploration Tools (in the upper left corner), more detailed features will be extended.
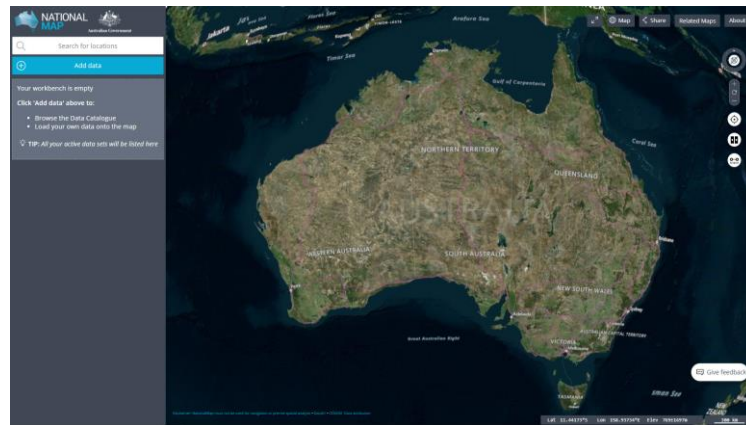
Style: The color is simple and neat which is mainly black and white, while the functional area has some blue and red. The design of the interface is planar.

2.1.2 Australia

Website URL: https://nationalmap.gov.au/
Website name: NATIONAL MAP
Overall layout:

Compared with the websites of the United States and Hong Kong, the Australian website does not have the top area, but puts the logo and functions both on the left side. The entire picture has only one demarcation boundary, dividing the picture into functional areas on the left and maps that occupy most of the area.
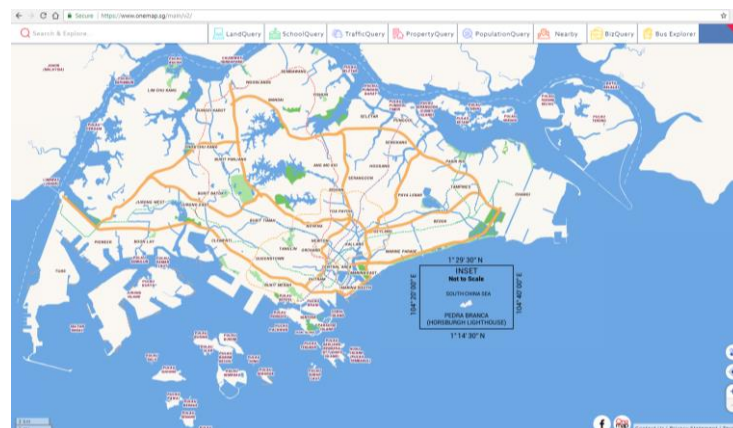
Style: The website is gray with a little blue, left and right divided, formal and serious, but also very convenient to use.

2.1.3 Singapore

Website URL: https://www.onemap.sg/main/v2/
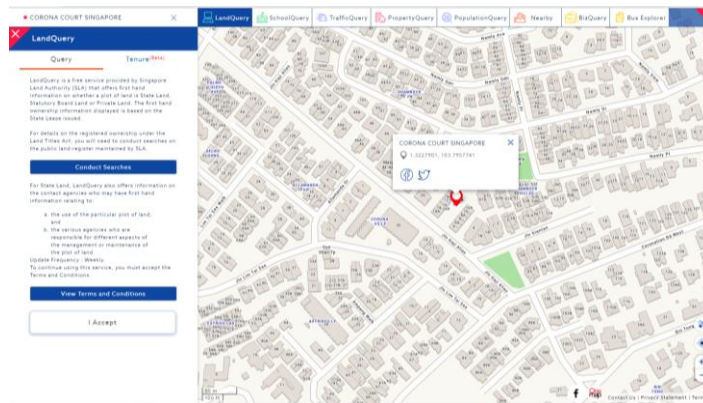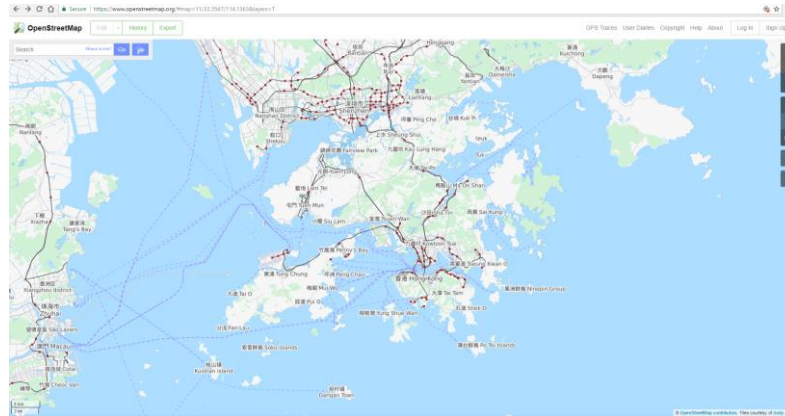Website name: New OneMap
Overall layout:

When you open this page, the map occupies the entire screen. Only the area with a
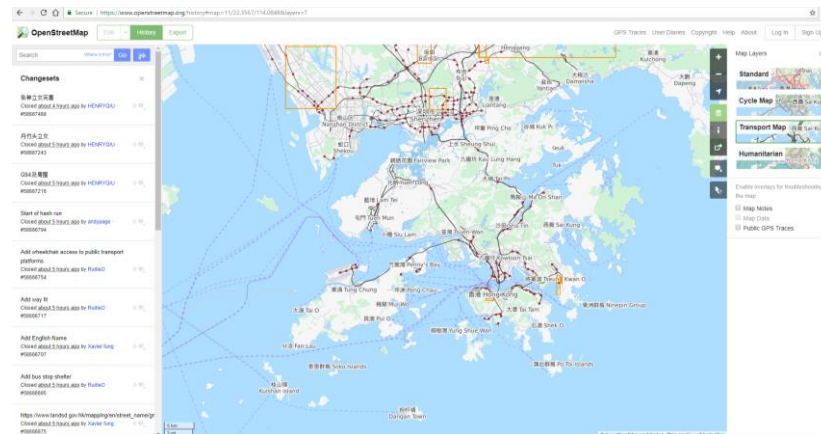
very small area at the top has various functions. When you click on a feature, the corresponding information will be displayed in a dynamically appearing area from the left.

When you click the red button on the upper right corner, more options will be displayed.

Style: This webpage is dominated by white and blue, and it takes the concept of minimalism to the extreme.

2.2 Non-official maps

2.2.1 OpenStreetMap

Website URL: https://www.openstreetmap.org/
Website name: OpenStreetMap
Overall layout:

The entire screen is occupied by the map, with only some function buttons on the top and right sides. This webpage has a strong visual impact.

After clicking the button, a floating window will appear to show the corresponding function. As shown below：

2.2.2 Streetdirectory

Website URL: http://www.streetdirectory.com/

Website name: Streetdirectory

Overall layout:

The map is located at the lower right of the center and the other part is mainly white. However, commercial websites have too many advertisements.

3. Comparison of GeoInfo Map HK with other countries

3.1 Common points

- There are some common basic functions：search /measure/ base map/share/go to your place/show level and coordinates.
- The map occupies the main area, which is in line with people's habits.
- The pages are relatively simple, the partition is obvious and easy to use.

3.2 Differences

- In GeoInfo Map HK, pages are displayed with blocks or blanks on the left and right sides. The map is located in the center and is strictly symmetrical along the midline. However, most other map sites are located on the right side of the page.
- It is a trend that maps occupy a larger area of the screen. In the U.S. and Australia web pages, the area outside the map is smaller than that in Hong Kong. In Singapore and OpenStreetMap, the map area is almost occupied the full screen.
- Other countries' web page is more concise. In addition to the United States still retains the top logo block, the other has removed the upper block.
- Almost all functions in GeoInfo Map are displayed on the screen, and floating windows/pop-up windows are less. In the United States, Singapore, Australia, and OpenStreetMap, web pages are relatively simple. Afterwards, new dialogs are displayed as needed or operations (such as click/stroke).。
- Only buttons of Hong Kong's web page use gradient colors, which gives a three-dimensional effect. However, the design of the web page is now more popular in the flat style, that is, a button uses only one color and looks more concise and smoother.

4. Reference significance for the final project

4.1 Advantages and disadvantages of GeoInfo Map HK

4.1.1 Advantages

- Green is a good fit for the theme of geographic information maps. Besides, it uses mosaic backgrounds and sketches of Hong Kong architecture. It is very local and highly recognizable.
- Fully functional and easy to use. The operation interface is very friendly. For

example, the Measure tool has a shortcut on the left side of the map, which is very convenient.

- The map is symmetrical along the middle line and is very much characterized by ancient oriental tradition and culture.
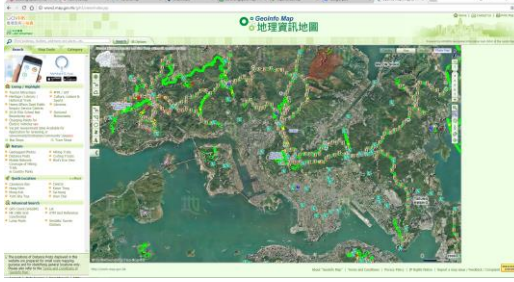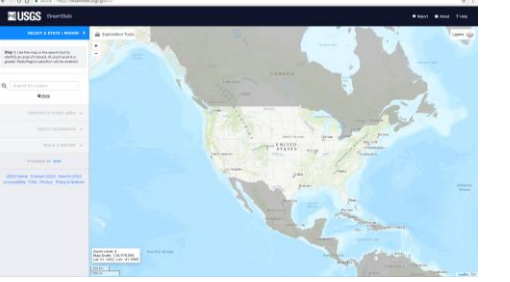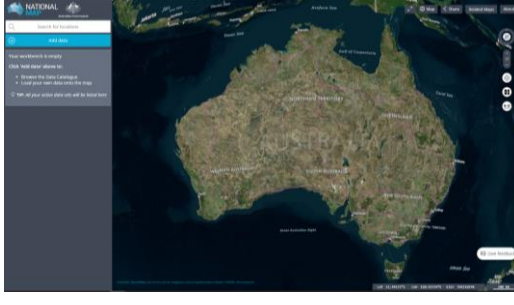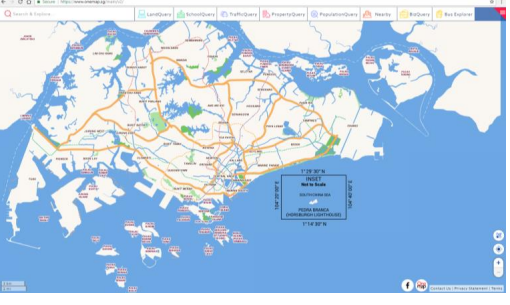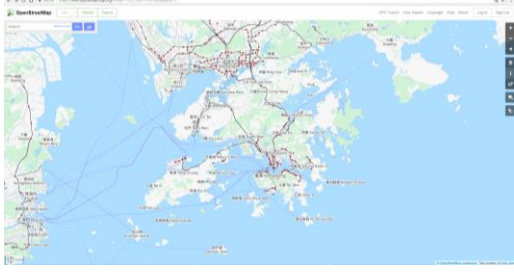
4.1.2 Disadvantages

- The style of the website is outdated and not fashionable enough. Nowadays, web design tends to be flattened, simple and interactive.
- There are not many interactive operations, and the interface has less interaction with the user, such as floating windows/pop-up windows.

4.2 The design of final project

See this section for details on the final written report 1.Web Design.

Attachments: Comparison of the main interface of all webpages

HK	America

Australia	Singapore

OpenStreetMap	Streetdirectory