

**Twenty-eight session
28 April – 2 May 2014**

Item 9 of the Provisional Agenda

**Activities relating to the Working Group on
Toponymic Data Files and Gazetteers**

**Utilization and Provision of Geographical Name Information
on the Basic Map of Japan***

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Summary

The Geospatial Information Authority of Japan (GSI) is digitizing various types of geographical information about the country. Three types of digital geographical information (map information, orthophotos, and geographical name information) are arranged as the *Digital Japan Basic Map*.

Geographical name information includes names of populated area, names of natural features, etc., and contains positional information. Consequently, it is the key for searching for positions in the “GSI Maps” on the GSI’s web site.

Utilization and Provision of Geographical Name Information on the Basic Map of Japan

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It should be noted that map information² and orthophotos³ are used not only as background map data for the *GSI Maps*, but are also provided to the public as *Digital Map (Basic Geospatial Information)* and *Digital Topographic Map 25000*, and are used in district maps of local governments, base maps for GIS, etc.

1. The *GSI Maps* Web Service

GSI Maps is a GSI web service that provides maps to the general public free of charge (in Japanese. There are also English version maps available for some scales). Here, the user can browse map information, thematic information, and aerial photos. It is also possible to search for geographical (place) names, and among other features, cartographic functions (creating point, line, and annotation data) are also available.

¹ <http://portal.cyberjapan.jp/>

² This is data on items such as roads and buildings that form the reference information of position on a digital map (items of fundamental geospatial data), as well as items that show land conditions such as vegetation, cliffs, large rocks, man-made structures, place names, and so on. The *Digital Japan Basic Map (map information)* covers the entire country of Japan in vector format. It contains not only data that has accuracy of the 1:25,000 level, but also includes data of even higher accuracy (around 1:2,500) for urban areas. It is being considered as a new basic map that replaces conventional 1:25,000 printed maps.

³ Aerial photographs taken with airborne cameras are in perspective projection in which the bundle of light rays is concentrated in the center of the lens. Differences in distance between the center of the lens and the objects being photographed generate distortion in the images. Orthophotos use elevation data to eliminate this distortion. Images are converted so that they appear to be seen from directly overhead without any skewing, and position information is provided with them. The GSI is taking aerial photographs and preparing orthophotos in order to provide for appropriate management, preservation and use of land in Japan.

1.1 Background maps

With *GSI Maps*, the user can select and display map information, orthophotos, etc. of the *Digital Japan Basic Map*.

Furthermore, the users can display their own geographic information on the *GSI Maps* if the overlaid data are in a prescribed format. The information can also be collected and viewed on one screen, even if the people providing the information are in different locations.

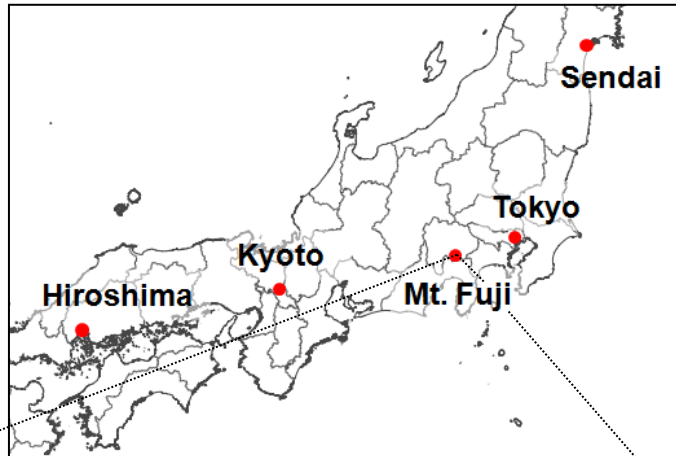
1.2 Searches of geographical names, etc.

GSI Maps enable searches of geographical names, etc, such as addresses and names of places and public facilities in Japan. When a search is made of a geographical name by entering the name of the place, the search results will be displayed (Figure 1). When the name of the place the user wants to examine is selected, its location is displayed on the map screen (Figure 1f). Right-clicking an arbitrary location on the map will display their address, latitude, longitude, elevation, and other information (Figure 1g).

In addition, with detailed settings the user can select the prefecture, municipality, object of search (place name, public facility, etc.) to make the search more efficient.

In Japan there are many web maps that are offered free of charge or for a fee. In *GSI Maps*, some of other web maps are linked to within the area that is displayed.

The GSI also provides software to convert addresses into geographical coordinates, and vice versa. It recommends that local public organizations use this software to show data on maps that had been managed only as addresses previously.



地理院地図 (電子国土Web) 中心緯度経度: 35.363716,138.731718

【防災関連】タブから西之島付近噴火の情報を提供中. [利用規約](#) | [ヘルプ](#) | [技術情報](#) | [お知らせ\(xwitter\)](#) | [お問い合わせ](#) | [地理院ホーム](#)

地図・空中写真 基準点: 測地観測 防災関連

他の機能 ファイル操作 地名等検索 ← a)

b) 地名 富士山 詳細設定 ← c)

d) 検索 クリア 協力 専本CSIS

e) 検索結果: 68件

- 富士山
- 山梨県鳴沢村
- 富士山
- 長野県上田市
- 富士山
- 長野県上田市
- 富士山
- 岐阜県美濃加茂市
- 富士山
- 静岡県静岡市清水区
- 富士山
- 静岡県富士宮市
- 富士山
- 静岡県富士宮市
- 富士山
- 静岡県裾野市
- 富士山
- 静岡県小山町
- 宇富士山

富士山

白山岳

金明水

須走口登山道

住所: 山梨県富士吉田市新屋
 緯度: 35度21分50.01秒
 経度: 138度43分57.35秒
 十進表記: 35.36389,138.732598
 標高: 3612.9m(5m(しーザ))
 2万5千分1地形図名: 富士山

緯度経度をクリップボードにコピー

他のWeb地図で見る: [ナビオン/ハイウェイNAVI](#)

磁北線の表示	磁北線の非表示
UTMポイントの表示	UTMポイントの非表示
UTMグリッドの表示	UTMグリッドの非表示
経緯度グリッドの表示 (1分30秒1.5秒)	経緯度グリッドの非表示

※注意 右クリックで得られる値等について

国土地理院 新版標準地図(25000) 凡例

Figure 1. Search of “Fuji San (Japanese name for Mount Fuji)”

- a) Search geographical names, etc.,
- b) textbox for entering place names,
- c) detailed settings,
- d) search button,
- e) search results,
- f) location of selected place name,
- g) information obtained at an arbitrarily selected position

2. The digital maps provided by the GSI

The GSI provides various types of data such as 1:25,000 – 1:200,000 map images, elevation (5 m, 10 m, 50 m, 250 m interval), land conditions, land-use, etc., as digital maps for a fee. Here we present data that include the latest place name information⁴.

2.1 Digital Map (Basic Geospatial Information)

Users who wish to acquire geographical name information may purchase *Digital Map (Basic Geospatial Information)* from the GSI (secondary mesh⁵ units). As of March 2014, *Digital Map (Basic Geospatial Information)* contain map information (administrative divisions, roads, buildings, man-made structures, water areas, land use, topography, annotation positions, etc.), geographical name information (populated area names (roughly 350,000 names), natural feature names (roughly 30,000 names), public facilities (roughly 100,000 entries), etc.), grid elevation data (5 m, 10 m, 50 m interval), and auxiliary information (thematic information). When information of *Digital Japan Basic Map* is updated, the information provided in *Digital Map (Basic Geospatial Information)* is also updated.

2.2 Digital Topographic Map 25000

As topographic maps that contain place name information, the GSI provides, for a fee, *Digital Topographic Map 25000* and 1:25,000 printed maps (secondary mesh units). The *Digital Topographic Map 25000* are 1:25,000 map images that the purchaser can buy after selecting the area and features to be expressed in the map. The maps are drawn in a form that is close to conventional 1:25,000 printed maps. In principle, they are drawn showing true positions, but roads and railroads are drawn with prescribed widths according to map-symbol rules. The latest map information of the *Digital Japan Basic Map* is used to create map images. When map information of the *Digital Japan Basic Map* is updated, the information provided in *Digital Topographic Map 25000* is also updated.

⁴ The Gazetteer of Japan is freely available at http://www.gsi.go.jp/ENGLISH/pape_e300284.html, which includes roughly 3,900 geographical names of features in Japan including municipalities, residential areas, natural features and undersea features.

⁵ Secondary meshes cover a roughly 100 km² area of 7'30" of longitude, 5' of latitude.