The Construction of the Digital Gazetteer and the Topographical Maps Database based on Humanities GIS

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Abstract

Historical digital gazetteer is essential tool for humanities GIS data organization. Therefore, we developed the database for the index of Dainihon Chimeijisho (The Dictionary of Place Names in Greater Japan) edited by Togo Yoshida in 1900 (Meiji 30).

The Dainihon Chimeijisho provides the detail explanation of the historical investigation and change of place-names such as country names, county names, names of mountains, rivers, lakes and harbors. Its first edition was published in 1900. The index contains 53,956 place names in kanji and kana. The database for the Japanese Historical Gazetteer digitized by providing kanji and kana readings of place-names, Romanization of place-names, geographical relations of countries, counties, towns and villages, the relations with the current cities, towns, and villages, and latitude and longitude, based on the index of Dainihon Chimeijisho.

Also, we merged Shikinaisya (Shrines registered with Jinmyocho of Engishiki, 2,842 shrines) and Jiinn (Japanese Temple name, 78,588 temples) with Dainihon Chimeijisho.

Furthermore, we constructed the topographical maps database. The topographical maps are the first measured maps which cover the entire country. We scanned these maps, overlying the administrative borders, and processed the water areas (rivers and lakes, etc.) and roads, etc. as polygon and line data.

We also provided the place data (counties, towns, villages, aza, Shinto shrines, Buddhist temples, rivers, etc.) on these maps with their longitude of latitude. And then, we stored these place-name data (104,138 place-names) in the this digital gazetteer. And we made the visual data in the topographical maps database accessible and retrievable on the internet. They can be enlarged, reduced or transfered by Zoomify. We constructed the Japanese Historical Gazetteer using OpenText (DBMS), and record structure is adopted XML.

Finally, we developed the conversion system between the Japanese calendar, the Chinese calendar and the Christian era. Then, we introduce the conversion system of the calendar.