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Toponymic data files: Data elements required

**Chinese Standard for Data Classification and
Data Sheet Structure in Geographical Names Database**

Submitted by China**

Chinese Standard for Data Classification and Data Sheet Structure in

Geographical Names Database

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Summary

Basic Data Base of Geographical Names—Data Classification and Data Sheet Structure has been drawn during the course of building database of geographical names. The standard includes two parts. One is classification of geographical names, the other is data sheet structure in database. The standard will be tested and amended. It will become a trade standard in China.

The types of geographical names are various. Each type has absolute different attributes. In order to build the database of geographical names, the scientific standard on data classification and field structure of the geographical names are necessary. *Basic Data Base of Geographical Names—Data Classification and Data Sheet Structure* has been drawn during the course of building database of geographical names. The standard will be tested and amended. It will become a trade standard in China.

The standard includes two parts. One is classification of geographical names; the other is data sheet structure in database.

1. Classification

The data classification is based on the classification of toponymy and geography. At the same time, it meets the need of database. All geographical names are divided into four levels. The first level divides them into populated features and natural features. The populated features include 10 kinds' features of the second level. There are administrative region, region, mass organization, residential site, traffic, infrastructure for water conservancy, electric power and communications, monumentally, tour sites, buildings, company and others. The natural features include 4 kinds of the second level. There are sea area, land water system, land terrain and others. The populated features are divided into 33 kinds of the third level. The natural features are divided into 27 kinds of the third level. Some third levels are divided into some fourth levels. The classification system is called four-level system. The system includes all kinds of geographical names that are used daily. We have reserved some space for the other geographical names will come forth in future.
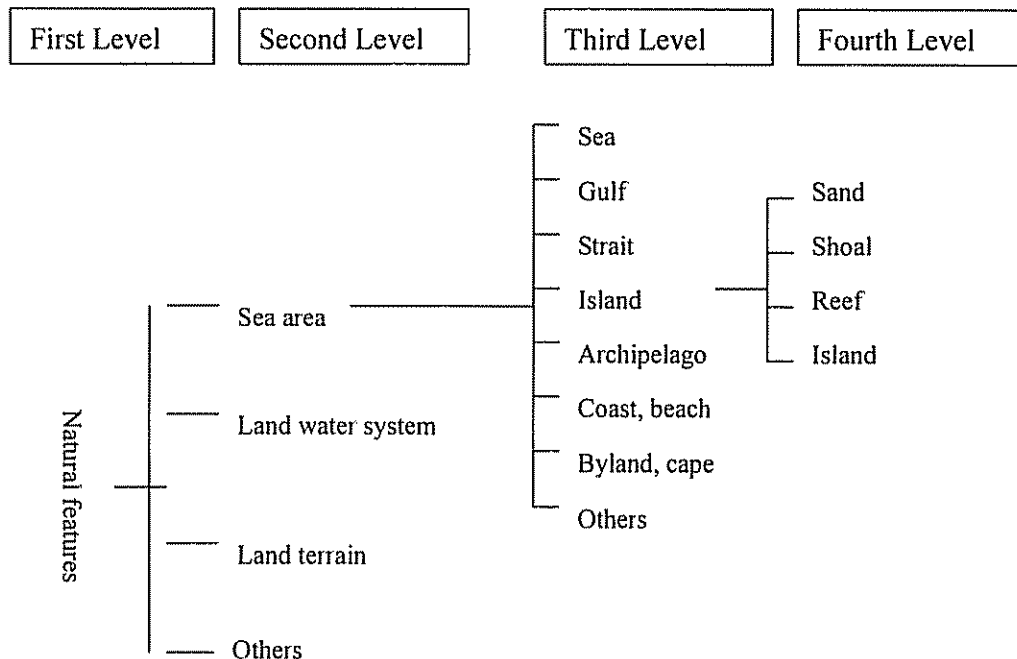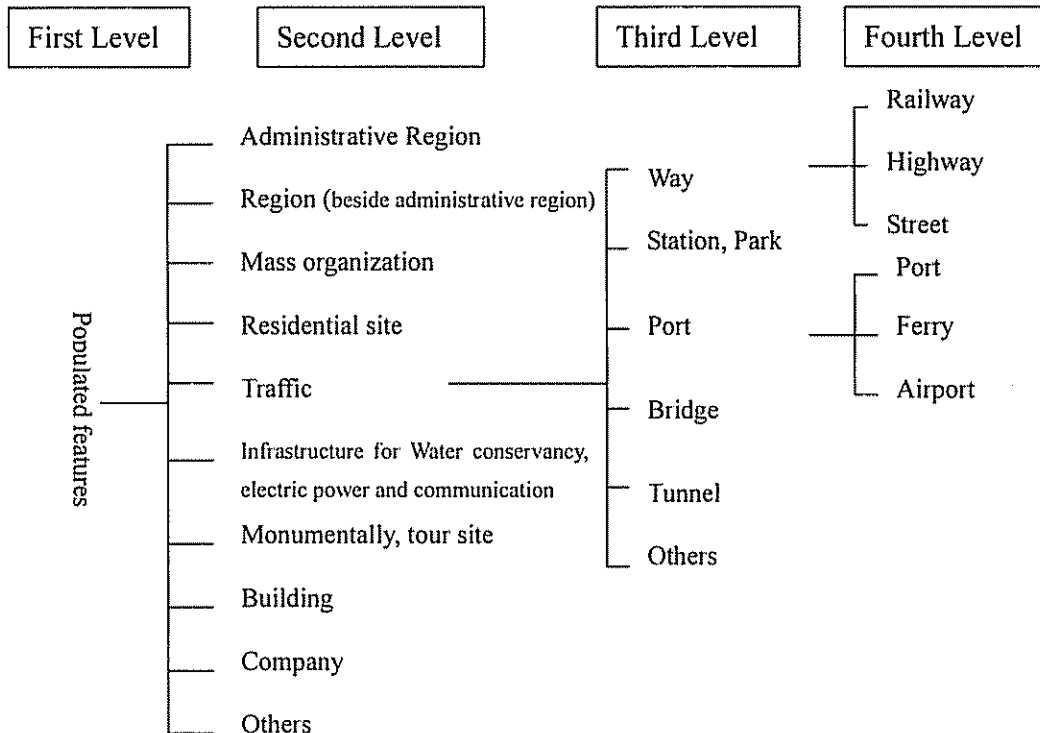
First Level	Second Level	Third Level	Fourth Level

Populated features
- Administrative Region
- Region (beside administrative region)
- Mass organization
- Residential site
- Traffic
  - Way
    - Railway
    - Highway
    - Street
  - Station, Park
  - Port
    - Port
    - Ferry
    - Airport
  - Bridge
  - Tunnel
  - Others
- Infrastructure for Water conservancy, electric power and communication
- Monumentally, tour site
- Building
- Company
- Others

First Level	Second Level	Third Level	Fourth Level

Natural features
- Sea area
  - Sea
  - Gulf
  - Strait
  - Island
    - Sand
    - Shoal
    - Reef
    - Island
  - Archipelago
  - Coast, beach
  - Byland, cape
  - Others
- Land water system
- Land terrain
- Others

Chart 1: Data Classification of Geographical Names

2. Data Sheet Structure

According to the classification and the demand of database, we have defined the particular structure of data sheet to ensure the standardization and share of the data. So the geographical names information may be widely and rightly used.

By study the characters of geographical names, we find some information exist in all data. We call them the general attribute items. They are the basic information of the geographical names. The general attribute items include name, longitude, latitude and so on. The special attribute items are individual information, such as the length of rivers and the altitude of mountains. The special attribute items must meet the needs of geographical names information services and be shared. For example, the special attribute items of a river include 14 kinds' items such as the length, the drainage area, anabranches, hydrology stations etc. The number of the sheet is 60 in the standard. The complex data sheet includes 43 attribute items. Database will be built according to the standard.

List1: Data Sheet of River

Field Name	Type	Length
Length (km)	Single	
Drainage Area (km²)	Single	
Anabranch	Text	50
River Level	Text	20
River Type1	Text	20
River Type 2	Text	20
River Type 3	Text	20
Hydrology Station1	Text	20
Flux 1 (m³/s)	Single	
Hydrology Station 2	Text	20
Flux 2 (m³/s)	Single	
Hydrology Station 3	Text	20
Flux 3 (m³/s)	Single	
Region	Text	300

List2 : Data Sheet of Road

Field Name	Type	Length
Jumping-off point	Text	20
End-point	Text	20
Length (km)	Single	
Width (m)	Singe	
Character of Road Surface	Text	20
Level	Text	30
Important Object Along the Road	Text	
Starting Time of Construction	Text	30
Accomplishing Time of Construction	Text	30
Region	Text	300