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

National Geographical Names Data Base

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National Geographical Names Data Base

Abstract

Collection, registration, and transcription of all Geographical features existing in Iran are among the most significant objectives of the Iranian Expert Committee on Nomination and Standardization of Geographical Names. Creation of a database wherein feature names of different locations in the country along with their pronunciation and other location characteristics can be searched is an important necessity for organizations in Iran. It also facilitates communication, trade, planning, map and atlas preparation, etc. To achieve the above objectives, the Expert Committee on Nomination and Standardization of Geographical Names established the Working Group for Geographical Names Data Base and Website. After the working group had been formed and its members defined, the main structure of the Database was approved through expert meetings and practical work was initiated.

In general, development of the Iranian Geographical Names Data Base has the following steps:

- Establishment of a proper structure for the Geographical Names Data Base.
- Software development for the Database.
- Data entry

Among the mentioned stages, the first two have been finished and the third stage is presently in progress, i.e. data entry. During data entry, all data related to geographical names prominent at 1:25000 scale will be entered.

Such information includes:

Feature name, feature attributes, coordinates, country divisions, feature location on base maps, GNDB code, NTDB code, specific feature code, name of data collector, name of data controller, name in English, elevation.

Till now, about 30000 geographical names and their related attributes have been entered and different query capabilities exist.

Introduction:

Establishment of the Geographical Names Data Base and Website Working Group is of major significance to the Expert Committee on Nomination and Standardization of Geographical Names in achieving objectives. Collecting geographical names and other related characteristics, such as attributes, transcriptions, coordinates, feature location in country divisions and on base maps and etc., along with recording any changes are the most important activities which can help avoid dispersion of geographical names, and finally standardize them. In fact, at present, there are many different sources for Iranian geographical names. This causes dispersion. The only way to coordinate different organizations and bodies related to geographical names and to centralize all related activities, is development of a comprehensive database for geographical names. In this respect, after formation of the

Geographical Names Data Base and Website Working Group, many expert meetings were held to define the structure and format of the database. Similar sources were considered and finally the general structure of the database was approved. The necessary software for the database was developed by an expert group and a pilot project defined. In the first part of this pilot project data related to geographical names of Kashan were entered. After removing any identified bugs in the system, data entry began. At present, a group at NCC are processing and entering the data. An obvious characteristic of this database is the possibility of conducting different searches. Searching by feature name, its attributes, coordinates, feature code and country division can be conducted and related information found in this way.

Specifications of the Geographical Names Data Base of IRAN (GNDB)

The main factors considered in design of the database can be stated as follows:

Classification of basic data and features, prevention of name dispersion, entirety of information, information security, accessibility of the data, data sources, and data control.

Classification of Basic Data and Features:

In general, the data available in the database are divided into two groups: basic data and feature data.

A. Basic data:
Basic data includes names, maps, tables of GNDB features and political boundaries of country divisions.

B. Feature data:
These data are divided into layers A, B, C, D, E and F (public places, water features, country divisions, vegetation, hypsogr aphy, transportation).

Preventing Dispersion of Names

In this database, emphasis is on recording feature names independent from the feature itself. This has several aspects. First, similar names with similar transcriptions used for different features thr oughout the country, will be entered only once, but with the possibility to be used many times. This also prevents dispersion of names. Second, the name of a feature may change through time, therefore the previous name will be maintained in the database and a new name will be givento the feature.

Data Entirety

One of the emphasized issues in this database is to maintain the entirety of data. This has given the database's structure complexity, therefore its design and implementation needed thousands of hours of expert work along with discussion and coordination with experts. The result has been high database reliability concerning information authenticity, coherence and strong relations between the data tables.

Data Security

Considering the important role of the Iranian Geonames database, data security is one of the most important issues that has been considered in its design. The important issues which have been considered in the design of this database are as follows:

a) Controlled data entry.
b) Different levels of activity, defined as working groups.
c) Each operator is identified and authorized with an ID and password.
d) The database manager will define user specifications and membership in working groups.
e) Each working group has a higher expert in charge, who is assigned by the head in his own specific feature class.

Data Retrieval

A. The program has been designed in a way that only the finally approved data can be displayed.
B. Search facilities: people can search based on names, political boundaries, feature attributes and geographical coordinates.
C. Data Output: different outputs of the program are also available in the form of table reports in Access software.

Data Sources and Data Control

A. Data have been collected from different sources.
B. The most important reference is maps at the scale of 1:25000.
C. To accelerate data entry, the Automatic Group Entrance method has been used. For this reason, many controls which are normally considered when entering the data have not been considered here. These data must be reconfirmed after operator work and edit.

Structure and Base of the Database

A. The most important sections of the database:
The most important sections of the database are management, basic data, and feature classifications.
B. Management section
C. Basic data section: this section includes data of names, political boundaries, maps, and GNDB and NTDB Tables.
D. Feature classification section: (figure displayed)
E. Organization chart needed to work with database. (figure displayed)
F. Base and search engine of the database: This database has been implemented based on MS SQL Server. For management purposes and maintenance and also to provide data backups on a daily or automatic basis, programming has been considered.

Finally, it is worth mentioning that up to about 30000 Iranian geographical names have been entered in the database. Considering the scale of data (1:25000 scale), there are about 300000 geographical names at this scale which should be entered. The data progress has been shown in the attached progress map. At present, the Geographical Names Data Base and Website Working Group is making efforts to complete the search section for names on the website as soon as possible. By completion of this section, indeed, data search for 300000 geographical names will be possible in different ways.

Development Process of the Iranian Geographical Name DataBase 2005

CASPIAN SEA

PERSIAN GULF

OMAN SEA

Legend

Extracted Geographical Names and related attributes from NTDB Shape files

Imported extracted data to Geographical Name Database

Entered data from other sources and finalized Database