

METATER – data management issues of meta data services in Hungary

Zsolt Sikolya – Gábor Kleinheincz

Prime Minister's Office, Inter-ministerial Committee for IT
H-1055 Budapest, Kossuth sq. 2-4.
sikolya@itb.hu

Abstract. Day by day a tremendous amounts of data are generated in the public administration. For the sake of economical operation it is essential that this data resource be managed in the same manner as all other resources. This is particularly true for spatial information data, as their production is significantly more expensive than that of any other data types. One of the efficient tools of data management is the use of metadata services. With the aid of the metadata services it is possible to find out whether is it possible to access specific data, with certain characteristics, and if so, what is their location. These kinds of services help to achieve a wide range use of the data, and to avoid parallel data collection. The efficiency of the service depends on the number of users, thus it is important to enable as many users as possible to have access to it. Therefore the ideal medium of the metadata service is the World Wide Web.

1. History

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Having recognised all these, the Prime Minister's Office (PMO) with the support of the Inter-ministerial Committee for IT decided to implement an Internet-based spatial information metadata service pilot project (METATÉR), which conforms to the international standardisation efforts. The primary goal of the service is the rational management of the valuable spatial information data resources, and the support of a wide range of access to the data. In a feasibility study the GeoX Ltd. developed the methodological, standardisation, controlling and system-technical basis, and the Scriptum Inc. won the tender for the implementation.

2. Metadata Standard

The authors of the feasibility study elaborated the structure of the metadatabase. They set as a goal the conformity with existing systems or with systems under preparation. To this end they studied the FGDC of the US, the most successful spatial information metadata service operating so far, as well as the European CEN / TC 287 prEN 287009 pre-standard, the standardisation works in ISO TC 211, and many European, operating systems and systems in preparation phase including the Hungarian one. The data structure, named

HUNCORE1.0, can serve as a basis for the development of a Hungarian spatial information metadata standard. For this purpose an extensive co-operation is beginning to take shape among the national specialists of this subject area.

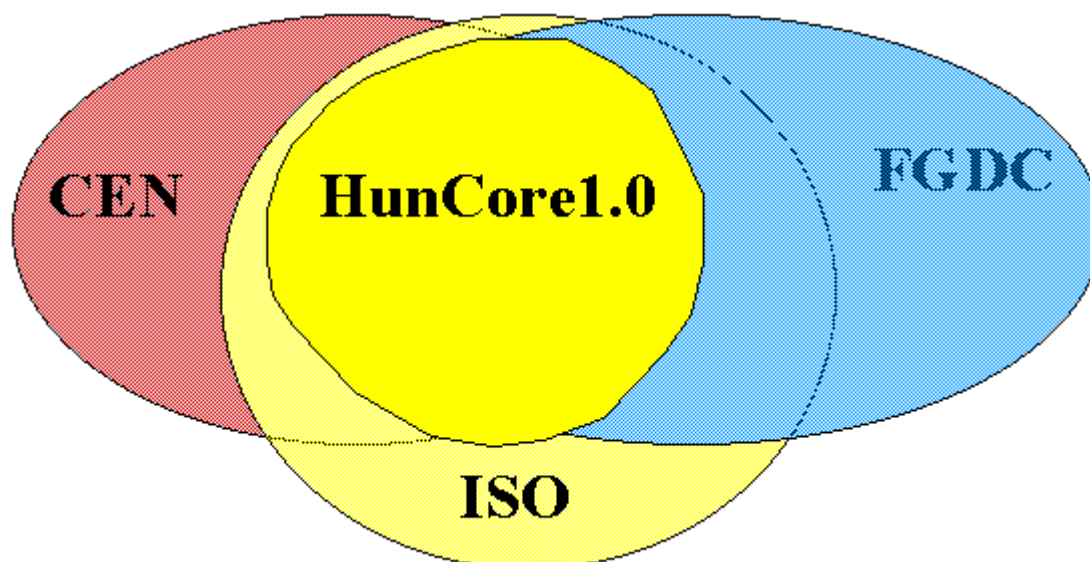


Figure 1

3. The basis of the system

The system is built upon a distributed model, where each data host is responsible both for its own database, and for the database maintenance. The large data hosts operate their own metadata server, the smaller data hosts can carry out remote management of their data stored in a (any) server. The user can access the system through a single point – gateway – and can build up his queries through a browser on either the character-based or map-based interface. The search will run through the whole distributed metadatabase.

A significant element of the system is the concept store is, which can be edited remotely by authorised editors. The role of the concept store is to ensure that the uploading and querying is carried out in the same conceptual system ensuring that the user gets responses to his queries. Both of the gateway and the concept store are administered from a central location, and the operators are responsible for the administration of their servers. The system elements are interconnected by the Internet.

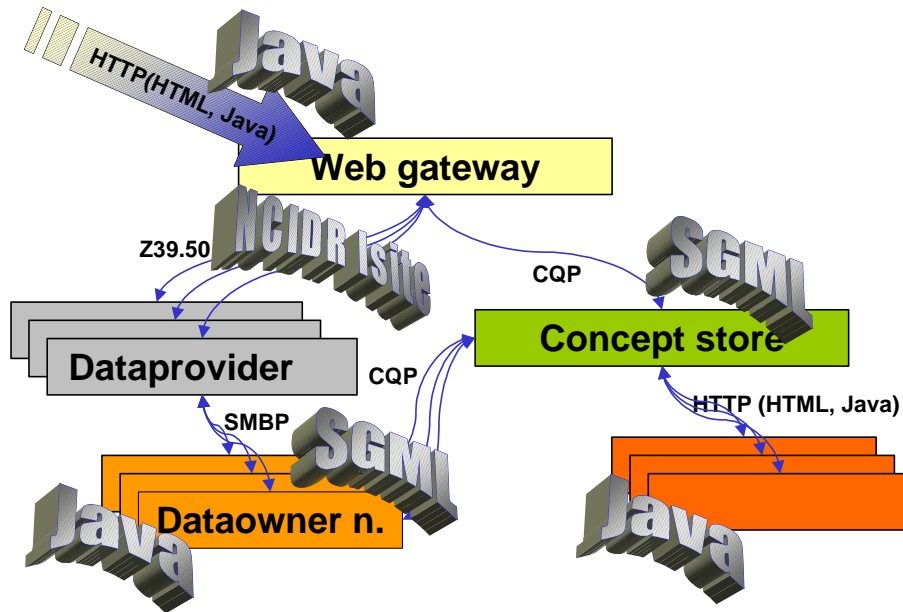


Figure 2

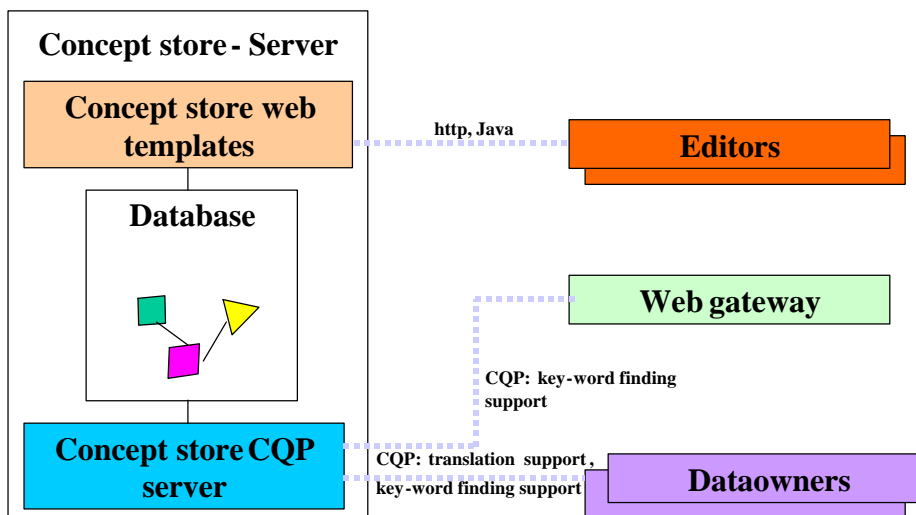


Figure 3

4. Future

The pilot system has been operational since the middle of this year. As a first step, three large data hosts set located and administered at the PMO. The experimental operation is planned to proceed until the end of this -up during this period. The software necessary for their site of the Inter-

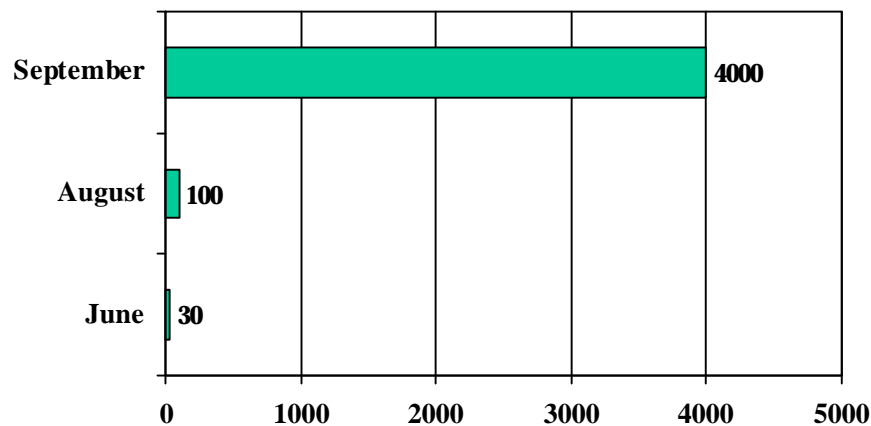


Figure 4
No. of metadata in METATER

While the popularity of the metadata service depends only on how many data providers recognise the significance of the METATÉR, and how many are connected with their own metadata records, consistent and well co-ordinated work can only be achieved with the uploading of the concept store. However the metadata service is not the only factor that renders the concept store's important.. As the co-ordinated work and the "single-window" service provided to the citizens demand the communication between existing, systems of the public administration now working separately, conceptual harmonisation is essential. The concept store can also play a significant role in clarifying conceptual systems of certain subject areas. Taking this into account, the Inter-ministerial Committee passed a decision this summer according to which the departments should make common efforts for uploading the concept store for more and more subject areas.

Through the Hungarian spatial information umbrella organisation HUNAGI, the designers of the METATÉR were invited to participate in the elaboration of the concept of the international spatial information metadata service project ESMI (European Spatial Metadata Infrastructure), supported by the EU. The consultations of the experts of the two system pointed out the similarities between the basic concepts and methods. Due to this fact and also the ESMI leaders support, there is a good hope that METATÉR could be among the first systems to connect to this Pan-European service system.