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Information system of mineral deposits in Slovenia

K. Hribernik (1,,), D. Rokavec (2,,), J. Šinigioj (3,,), S. Šolar (4,,)

(1) (katarina.hribernik@geo-zs.si), (2) (duska.rokavec@geo-zs.si), (3) (jasna.sinigoj@geo-zs.si), (4) (slavko.solar@geo-zs.si), () Geological Survey of Slovenia

At the Geologic Survey of Slovenia the need for complex overview and control of the deposits of available non-metallic mineral raw materials and of their exploitations became urgent. In the framework of the Geologic Information System we established the Database of non-metallic mineral deposits comprising all important data of deposits and concessionars. Relational database is built with program package MS Access, but in year 2008 we plan to transfer it on SQL server. In the evidence there is 272 deposits and 200 concessionars.

The mineral resources information system of Slovenia, which was started back in 2002, consists of two integrated parts, mentioned relational database of mineral deposits, which relates information in tabular way so that rules of relational algebra can be applied, and geographic information system (GIS), which relates spatial information of deposits. .

The complex relationships between objects and the concepts of normalized data structures, lead to the practical informative and useful data model, transparent to the user and to better decision-making by allowing future scenarios to be developed and inspected.

Computerized storage, and display system is as already said, developed and managed under the support of Geological Survey of Slovenia, which conducts research on the occurrence, quality, quantity, and availability of mineral resources in order to help the Nation make informed decisions using earth-science information.

Information about deposit is stored in records in approximately hundred data fields. A numeric record number uniquely identifies each site. The data fields are grouped under principal categories. Each record comprise elementary data of deposit (name, type, location, prospect, rock), administrative data (concessionar, number of decree in official paper, object of decree, number of contract and its duration) and data of mineral resource produced amount and size of exploration area). The data can also be searched, sorted and printed using any of these fields. New records are being added annually, and existing records updated or upgraded.

Relational database is connected with scanned exploration/exploitation areas of deposits, defined on the base of digital ortofoto. Register of those areas is indispensable because of spatial planning and spatial municipal and regional strategy development.

Database is also part of internet application for quick search and review of data and part of web page of mineral resources of Slovenia. The technology chosen for internet application is ESRI's ArcIMS Internet Map Server. ArcIMS allows users to readily and easily display, analyze, and interpret spatial data from desktop using a Web browser connected to the Internet.

We believe that there is an opportunity for cooperation within this activity. We can offer a single location where users can come to browse relatively simply for geoscience-related digital data sets.