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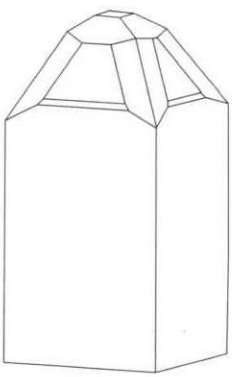
Extended Abstracts



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A NEW MINERALOGICAL ARCHIVATION METHOD

INTRODUCTION

The main goal of the new mineralogical archivation method is to compile the digital archive of the Koch Sándor Mineral Collection, which is located at the Department of Mineralogy, Geochemistry and Petrology, University of Szeged. The archive would be managed by an up-to-date software, handling 2D and 3D photographs and databases on the characteristics of minerals. As an early outcome of the project we have already set up a software, which goes well beyond the execution of ordinary database commands, and ensures the technical background for various educational, demonstrational and promotional projects (Pál-Molnár, Kóbor 2000; Pál-Molnár, Jánosi 2005, 2006).

METHODS

Preliminary work has started with the planning of the general setup of the system. As a first step a Systematic Mineralogy Database was constructed on the basis of the mineral-database of the IMA (International Mineralogical Association). According to IMA standards, our database (mindat.org, webmineral.com) contains the name, taxonomy, formula, elementary composition, physical characteristics, and photographs of the minerals. Further sub-databases were also added to the software in order to enhance the primary, systematic framework. These are: the digital Koch Sándor Mineral Database, the archive of Hungarian mineralogical publications, and the most important places of occurrences within the Carpathian Basin, supplemented with maps. The basis of the software, i.e. the Systematic Mineralogy Database, also provides a didactic guideline for the user to digest the presented knowledge. The digital Koch Sándor Mineral Database includes images of all the 6000 minerals of the collection, and 3D rotating images of some of the most outstanding pieces, which are exhibited at the department in glass-cases. With a simple search one can gather those publications of the previous decades, which write about, or mention the chosen mineral. Further important information can be gained/ gathered by checking the places of occurrence and accessibility on maps covering the

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whole Carpathian Basin. Besides all these, the software can also provide a historical review on the life and work of famous scientists dealing with mineral collection.

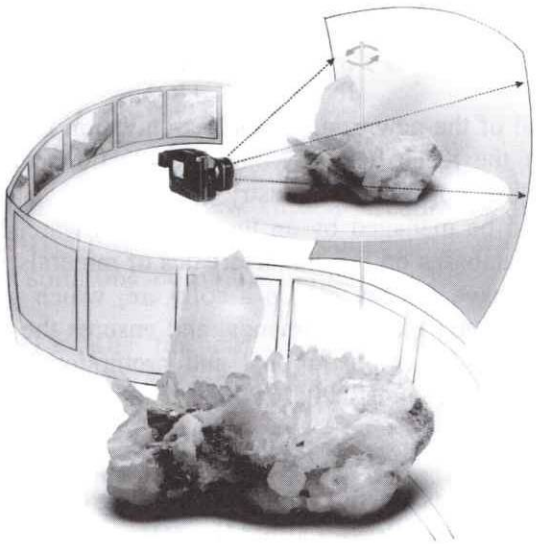

Fig. 1. Photographs were taken in the Koch Sándor Mineralogical Collection in front of a homogeneous background at the light of four 100 W lamps with adjustable filters. From the high resolution raw images each mineral was cropped and shaded aesthetically. No adjustments were made concerning the shape and colour of the minerals. 3D images are the results of special panoramic photographs. Minerals were put on a turntable and photographs with a nearly 30% overlap were taken of the rotating objects, pictures were then mosaicked and transformed into a cylindrical projection. The image created this way can be rotated, which provides a spectacular, realistic 3D view of the mineral.

CONCLUSIONS

In all we have produced software called Lapidator which is ready to be applied by people of any age, both with a professional or non-professional background and either for research or simply for studying the wonders of minerals.

REFERENCES

PÁL-MOLNÁR E., KÓBOR B., 2000: University of Szeged, the "Sándor Koch" Mineral Collection". Acta Mineral. Petrogr. Suppl. Szeged, 41: 84.

PÁL-MOLNÁR E., JÁNOSI T., 2005: A Szegedi Tudományegyetem Ásványtani, Geokémiai és Kőzettani Tanszék "Koch Sándor ásványgyűjteményének" digitális feldolgozása. VII. Székelyföldi Geológus Találkozó, Csíkszereda, 47-48.

PÁL-MOLNÁR E., JÁNOSI T., 2006: The Lapidator Project, Department of Mineralogy, Geochemistry And Petrology, University of Szeged. Acta Mineral. Petrogr. Abstract Series Szeged, 5: 89.

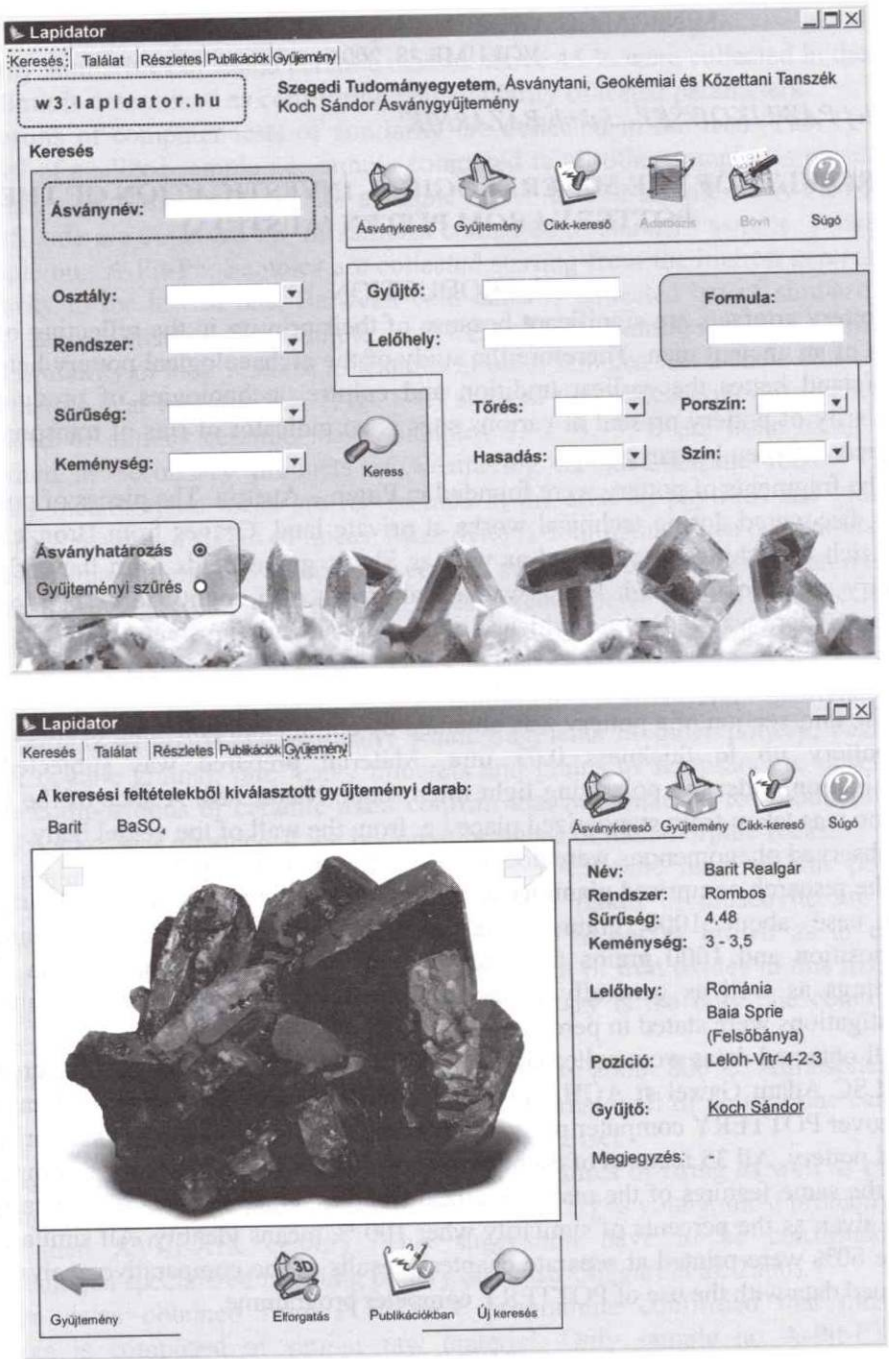

Fig. 2. Some picture about the screen of the software.