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Romanian concept of creating data mining banks - GIS applications in the field of mining exploatations

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Currently, no industrial sector can see progress without a management system based increasingly more on the informatization of business and its management and coordination. As the leader of the world economy, mining industry cannot be an exception to this rule, in any part, from the exploration phase to the delivery of extracted materials to processing industries. Analyzing the informational levels that mining surveying offers, we can see that practically, starting from the support layer, which would be the general plan of the mine, for the underground, and the topographic site plan for the surface, all the information is geographically labeled, so that everything mentioned below corresponds to the same condition. The informatization ways are different, with some companies opting for mining software, others developing GIS platforms. Others, very rare, have combined the two methods and most have developed custom general software, tailored for the field. Analyzing these methods of informatization the question arises: is it possible to link all or most of these informatization methods in the mining activity, and if so, can we create a model, a modular concept, adaptable to any condition, any mode of operation, any raw material? Mining GIS is one of the newest applications of the Geographical Information System. Application of GIS in mining was delayed because of the success that software coordinating the mining activity, such as Vulcan and Surpac, has had in the management of this type of activity, but also because of successful implementation of Enterprise Resource Planning (ERP) systems. This paper analyses the opportunity and usefulness of building GIS systems in the case of mining exploitations, sketching its configuration, the composing informational levels, the methods of management, updating and access of this very up-to-the-minute information management technique in a unitary system and present the conjuncture in which a GIS type informational system is desired to be implemented, the difficulties, the strengths and weaknesses. This paper aims at setting up a concept for creating adaptable and modular mining databases which would represent another step in the direction of the new conceptual guidelines on mine management. Thus, the final idea of the paper subject was outlined, combining the two applications: GIS and mining software by configuring a mining database including software either designed specifically for mining, or with possible applications in the field, with databases, the field operating with an infinity of data, from geological to economic, financial or human resources, all being run on a GIS platform.

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