

## **GEOTECHNICAL DATABASE SYSTEM OF THE BELGRADE - BAR RAILWAY**

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The most important railway line in Yugoslavia connects capital Belgrade and Bar Port at Adriatic seashore. In order to improve control and management of this magisterial railway technical and economical system, Yugoslav Railway Organization has defined development strategy which may be denoted as S+3E: maximum Safety with acceptable Energy consumption, Economical effects and Environmental protection. Relevant constraints has been recognized as equally important set T+F+O of limits relating to full implementation of Technical, Financial and Organizational measures to achieve the best (optimal) performance of the system under imposed restrictions.

A part of defined strategy was to develop database system to cover all important descriptive and numerical data for geological and hydrogeological processes and phenomena within the corridor of railway line. They are extremely varying along nearly 600 km route where particularly dangerous hazard and prolonged hard effects on stability of railroad body and traffic timing exist. Due to hard geo-technical conditions and multitude of landslides and rockslides, occasional difficulties to build bridges and tunnels, high level of seismicity, etc. full application of systems approach and consistent step-by-step procedure is adopted in structuring and interrelating numerous segments of the geological database.

This paper presents concepts and elements of applied methodology and in brief description of logical database model followed by overview of hardware and software infrastructure.