

## **Project of the Establishment of the Croatian Railways Infrastructure; GIS – PISIP HŽ**

**Josip Lisjak, Vlado Cetl, Hrvoje Matijević**

Sveučilište u Zagrebu, Geodetski fakultet, Kačićeva 26, Zagreb, Croatia

**Contact e-mail:** josip@itd-gaudeamus.hr

### **Abstract:**

The Law on State Survey and Real Estate Cadastre (NN 16/2007 and 124/10) defines subjects of NSDI to be among others public systems fully or predominantly owned by the Republic of Croatia, one of which is Croatian Railways Infrastructure Ltd., for Management, Maintenance and Building of Railway Infrastructure. Because legal regulations define obligation of NSDI subjects to contribute to establishment of NSDI in Croatia, there was a need to prepare and adjust spatial data that Croatian Railways Ltd. (HŽ) are responsible for, to comply with relevant standards and norms (INSPIRE, OGC). Furthermore, current state of spatial data organization in HŽ demanded in depth analysis and implementation of spatial information system to improve spatial data management for needs of regular business processes. Data are collected, analyzed, and conceptually, logically, and physically modeled and implemented for test railway section Dugo Selo – Vrbovec, for both purposes – publishing with Croatian NSDI as well as extended data model for internal use. Web application for exploring, viewing and querying of data is also created. The foundation for applying and implementing the same model on entire railway infrastructure network in Croatia was created, also guidance for inclusion of spatial data managed by HŽ in Croatian NSDI in compliance with INSPIRE implementation rules.

**Keywords:** railway infrastructure, transport, NSDI, INSPIRE, GIS, Croatian Railways