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Subject:

National Information system for Soil Monitoring

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Key words:

Soil monitoring, grid based monitoring network, monitoring point, passport of the monitoring point, soil profile, soil horizon, intervention values, precaution values , maximal admissible values, background values, measured values, average values, parameter, National Information System for processing of Data of Soil Monitoring Grid, Executive Environmental agency, Delphi, Oracle, ADO, data base.

Annotation:

The first Bulgarian soil monitoring system dates back from 1992. However, this system does not meet today's objectives and requirements. Since the Republic of Bulgaria is a member of the European Union, the latest developments concerning the soil monitoring policy are a constraint for the monitoring system of Bulgaria. This necessitated the development of National Information system for Soil Monitoring.

The present graduation paper contains the following:

- A review of the existing decisions for storing, processing, extraction and analysis of the data;
- A review of the contemporary requirements for a monitoring of the soil grid based monitoring network;
- A development of National Information system for Soil Monitoring in conformity with the requirements of Executive Environmental agency:
 - Design of the data base schema;
 - Implementation of interface for data actualization;

- Implementation of interface for inquiry data visualization.
- Description of the process of the design, implementation and testing of the National Information system for Soil Monitoring, as well as presentation of the possible directions for its development – the technologies and technical tools used are described; also the structure of the data base schema; the data itself; the methods, used for its validation, actualization and visualization; the user manual and use – case and class diagrams of the application are included.