

# The Concept of Building of an Expert-Diagnostic Complex for the Analysis of Information Systems

**V. V. Betanov**, *Dr. Sci. (Engineering), Prof., betanov\_vv@spacecorp.ru*  
*Joint Stock Company "Russian Space Systems", Moscow, Russian Federation*

**V. K. Larin**, *Cand. Sci. (Engineering), contact@spacecorp.ru*  
*Joint Stock Company "Russian Space Systems", Moscow, Russian Federation*

**Abstract.** The article considers the concept of an expert-diagnostic complex (EDC) for analyzing the operation of information systems (IS). A current state of the problem regarding the development of an expert-diagnostic system (EDS) for the analysis and failure recovery in the work of each unit of IS is studied. The study included the development of an appropriate knowledge database and other parts of EDS, such as a database, operation area, and solver. All these led to significant material and technical costs, complicating the issue of the correspondent software performance. The proposed integration of single-profile EDS in EDC including the monitoring of failure addressing using diagnostic labels will greatly simplify the user's work without large expenditures on product creation. The EDC design differs from that of EDS by the presence of several knowledge databases and an add-in in the form of the interface for convenience of the user. The article presents the technology of EDC building including several single-profile knowledge databases. An example of the building of EDC is given.

**Keywords:** subject area, concept, expert-diagnostic complex, diagnostic labels