



**Technical Sciences. Shkarupylo V.V., Blinov I.V.**  
**SCENARIOS, METHODS AND MEANS OF FORMAL VERIFICATION OF ARTIFACTS OF THE PROCESS OF DESIGNING CRITICAL PURPOSE SYSTEMS – Vinnytsia: GO "European Scientific Platform," 2021. – 104 p.**  
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A comparative analysis of the methods and means of formal verification used in the development process of critical systems, particularly at the design stage of the said process, was carried out. According to the analysis results, an integrated approach is proposed and outlined, consisting of monitoring the indicators of both functional and non-functional characteristics of these systems already at the stage of designing the development process. The proposed method of synthesis of formal specifications of functional characteristics of the developed system, based on the model of presentation of functional characteristics of the developed system in the formal specification, is presented. As the source data, the flowchart of the algorithm, the action chart, is considered. As scenarios of the subject area, implemented due to the functioning of the critical system, scenarios of the space industry, scenarios of the interaction of electricity market participants based on role models were worked out.

The monograph is intended for graduate students of technical fields, experts in audit and management in the electric power industry, scientists and specialists in the field of information exchange and functioning of electricity markets, developers whose activities are related to the design of software and algorithmic support of computer systems, in particular critical systems, embedded systems.