SUMMARY

The doctoral dissertation entitled „The concept of development of the Command Support System HMS C3IS JASMINE of the land forces in allied and coalition operations", as intended by the author, concerned the identification of the scope and directions of necessary improvements resulting from the need for cooperation in NATO federated mission networks, and then presenting an effective concept for the development of a national command support system for the Land Forces, in order to increase the level of effectiveness of the Polish Armed Forces' cooperation in the area of allied and coalition activities.

This paper carried out an in-depth analysis of the extensive documentation of the NATO Federated Mission Networking concept, including its level of maturity and the status of its current implementation. The Command Support System HMS C3IS JASMINE was also extensively presented, in terms of the functionalities offered and the process of its development, testing and implementation. Improvements were also proposed regarding: directions of development of operational and technical functionalities and the process of their effective implementation.

According to the subject and purpose of the research, the main research problem of the dissertation is defined by the following question: *What changes should be introduced in command support system HMS C3IS JASMINE of the land forces and its production process in order to ensure efficient operation in a coalition environment within NATO FMN mission network?*

The main reasons that prompted the author to write this doctoral dissertation were, on the one hand, the professional experience of the author as an architect, co-creator and decisionmaker setting the directions of development of this military software, and on the other hand, the desire to improve the effectiveness of cooperation of national forces within the NATO alliance mission structures, through introduction of improvements both in the area of provided functionalities and the process of their implementation and verification.

The dissertation, putting aside the introduction and ending, consists of four substantive chapters:

The first chapter discusses in detail the research problems, the purpose of the dissertation, working hypotheses and the research area along with the research

methods and techniques used to verify the validity of the assumptions made. The required research sample was also defined and its characteristics were made.

The second chapter presents the concept of NATO FMN federated mission networks, the idea and purpose of their creation, the general vision and related concepts, plans for its implementation, technical specification of subsequent iterations, methods of verification and certification of national solutions and the current status of its development and implementation.

The third chapter presents the Command Support System HMS C3IS JASMINE of the land forces, the history of its creation and implementation in the Polish Armed Forces, functionalities supporting individual phases of the command process cycle, the capabilities of the client application and the interoperability of command posts. In addition, the process and methodologies of production and verification of this specialized software were presented, including participation in annual, international NATO interoperability exercises.

The fourth chapter was the main, empirical part of the work, which included the analysis of research results, taking into account experts' opinions and own observations. On their basis, the author proposed a concept for the development of HMS C3IS JASMINE of land forces in allied and coalition activities, thanks to which the level of defence and security of our state, and as a result, of the entire Alliance, will increase.

The doctoral dissertation is a review of knowledge in the field of the discussed subject and is a comprehensive collection of exhaustive content relating to the concept of NATO FMN and HMS C3IS JASMINE of the land forces. A thorough analysis of the literature on the subject and empirical research conducted by the author made it possible to create a work of a compact, innovative character, exhausting the main research issue.