

The thesis is concerned with a design of a CSP (Cryptographic Service Provider) module for the CryptoAPI (subsystem of the Microsoft Windows operating system) that can be used for a family of hardware tokens with the following characteristics:

- a) they meet the requirements on tokens arising from the PKCS#15 standard
- b) they communicate via the PCISD interface
- c) they conform to the ISO/IEC 7816-4, 8 and 9 standards

The thesis contains analysis of the demands on CSP and card applications which influence the interoperability of tokens, i.e. the ability of applications to work with tokens by different manufacturers without the need of rewriting the software.

The practical part of the thesis results in the implementation of a CSP prototype as a subset of the goal design of the solution.