

Summary

PhD Dissertation - Otti Csaba: Biometriaalapú beléptető rendszerek alkalmazhatósága tömegtartózkodású helyeken

The subject of my research was the classification, scaling, and defining user attitudes of personal identification access control systems based on biometric data. With the help of Hungarian and international literature, as well as with professional interviews, I identified those critical areas of biometric access control systems, where the success of the implementation is not trivial, these are the access control and time and attendance systems of mass-staying buildings. I also outlined the aspects that decision-makers must take into account from a business-security perspective to manage successful biometric implementation projects.

I introduced a well adaptable procedure for setting up a stochastic model of an access control system with Markov chain, and I also described a new method for analyzing it. Based on the results I concluded that the developed analytical procedure is suitable for quality assurance in the planning phase of the implementation of biometric access control systems, and the support of business decisions.

The third thesis is the most important part of the dissertation, containing qualitative research based on my professional experience, the results of which I also used for quantitative research in this section. First, with a focus group, I surveyed people's knowledge and attitudes about access control systems. Then, through online questionnaire research, I have proved that the operational uncertainty given by the device manufacturers, is basically several orders of magnitude lower than people's acceptance threshold, so it can be ignored in the design process. All elements of the access control process must be taken into account, and only generate a maximum of 3-5% of false rejection, therefore it is still useable for that function.