
Abstract

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Health Care (HC) Cards – A part of worldwide trend towards secure, chip based identification

The need for higher security in general and that of personal IDs in particular creates growing demand for a new generation of secure, chip based ID cards: the so called smart card. Both online as well as offline identification is possible with decentralized stored personal data, such as private data, biometric reference data or even a digital signature. The electronic design of the card supports a quick check of authenticity of the ID, thus it can be used for access control in various locations. Thanks to the smart chip inside these cards the risk of manipulation is greatly reduced.

Health systems being based on HIC (Health Insurance Card) which themselves are usually based on Secure Memory chips are in the market since long time, e.g. Germany and Belgium. Throughout the world, there is a trend to optimize health care systems by using PDC (Patient Data Card) and HPC (Health Professional Card) which have to use advanced semiconductor devices such as Secure Microcontrollers with or without additional Cryptography feature.

Besides increasing security smart card based HC cards are an excellent tool to generate value add to health professionals, patients, insurances, i.e. all parties being involved in the health system. Value add can be rationalization in process, improved services, shorter transaction, shorter waiting times.

Taiwan has started to rollout a new HC system for its 24 mio citizens being based on contactbased secure microcontrollers for the PDC and secure microcontrollers with crypto engine for the HPC. In Italy will be a controller based PDC / HPC rollout for Lombardia soon. The very well running HC/Social Security scheme with Smart cards in Andalusia is supposed to be rolled out to the whole country of Spain. Sesame Vitale, France, is on the way to introduce the second generation of their HC cards system. So, Germany being one of the first European states having introduces HIC and being one of the world wide leading technology countries should rollout the second generation HC system.

The trend towards chip based Health Care systems is a challenge for industry, for health providers, for the administration and for the government. A comprehensive set of specific know-how is required and has to be provided from each of these parties. Putting it together to a value net Germany will be able to define, implement and run an up-to-date HC system which provides more security, more service and better costs to all involved.