Chapter 14
ID CARDS AND PASSPORTS

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Abstract In this chapter we discuss eID cards and e-Passports. A number of countries have introduced eID cards and some other countries are planning the introduction. The reasons generally, are requirements for a more secure identification and additional functions like eGovernment. The US requirements for the VISA Waiver countries to issue biometric enabled Passports by October 2006. The European Commission set the implementation time-frame so that all Member States had to implement the facial image requirements by 2006. This requirements led to worldwide introductions of e-Passports.

Key words: ID Cards, eID, e-Passport, Chip, ICAO, Security, Basic Access Control (BAC), Extended Access Control (EAC)

14.1 Introduction

Security is a top priority in an age in which people fear terrorism and crime, fraud threatens national economies, while data and intellectual theft endanger the success of companies.

Subsequently, governments are driven by their citizens’ security demands. The increase of daily air traffic and the technological armament of impostors, lead to new secure means of identification: eID smart cards and e-Passports.

The introduction of eIDs and e-Passports is discussed not only in Europe but also worldwide.

Personal identity documents confirm the identity of individual citizens, thus proving their legitimate residency within their homeland. Government offices, credit institutes and businesses ask for ID cards or Passports as a means of unequivocally identifying...
identifying the holder. Identification on the internet, e.g. for business and government transactions, requires a valid means of identification which can be provided by e-ID documents. In addition, opening a bank account, conducting valid business transactions and drawing government benefits can become impossible without a trusted means of identification. Therefore, it is in the best interests of any government for its citizens’ personal identification documents to be made as difficult as possible to counterfeit or misuse.

Modern national ID cards comply with the ISO/IEC 7816 - series standards and other international norms for signatures and certificates.

14.2 ID Cards

In this chapter we only discuss cards which serve optically and digitally as an ID card. What all these cards have in common is that they are issued by a governmental institution or agency for citizens of their country. In some countries this institution is the Ministry of Interior, in other countries the police or local government offices.

National ID cards, eID, or Smart ID: Every country has it’s own term for this kind of smart card.

14.2.1 Requirements and Constituents of Modern National ID Cards

Unlike SIM cards and banking cards, where the relevance of the digital function is dominant, all the features of the whole ID document are important as these documents also serve as visual identification. An accepted expression is that an ID document must be designed in a way that a policeman on a foggy night is able to recognise a person via the document and easily verify the genuineness of the document.

14.2.1.1 Card Body Material and Design

ID cards and Passports can be subjected to many kinds of stress, which is why they need to be as durable as possible in order to resist tampering, chemicals, varying temperatures, environmental conditions, and UV radiation. In addition, the images and text must not fade with age (required lifespan is up to 10 years). As a result, card manufacturers had to develop materials for the card body, ensuring the highest level of counterfeit resistance and durability. Specially developed foils for ID card production are only available for accredited security printers and card manufacturers (ID cards are almost invariably laminated multilayer cards).