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KEY AND IDENTIFIERS IN ACCESS CONTROL SYSTEMS

The subject of this article was the main and auxiliary means and devices, which allowed first to differentiate access to information and objects, and subsequently to automate such access. Contact, non-contact and combined smart cards that operate at 125 kHz or 13.56 MHz (in near-field communication systems) are considered. Standards are described in specifications ISO 18902, ISO 7816, ISO 14443 variants A and B (less frequently ISO/IEC 15693), EMV (Europay, MasterCard, Visa), IPS/JEDEC J-STD-020C, ECMA.

Typical use of smart cards (tags) is discussed:

- access control and time management at enterprises;
- paid access to car parks, lifts, attractions, etc;
- payments for the use of public transport;
- replacement or addition of bank and discount cards with magnetic stripe;
- keyless access to vehicles.

There are three main card standards: Mifare, EM Marine and HID. The media standard is defined by the chip. The tag allows data encryption and provides up to 100,000 overwrite cycles.

Design and element base of maps are considered. Attention paid to the volume of tags memory and the use of new technologies. Ways of protection against unauthorized interference such as traditional technologies of data encryption AES (Advanced Encryption Standard), SHA (Secure Hash Algorithm), and American FIPS (Federal Information Processing Standards) are considered.

The article focuses on the use of biometric module AT77SM0101BCBO2VKE manufacturing Atmel in particular for foreign passports. Design and peculiarities of operation of readers, as well as the use of common tags for anti-theft systems of cars are considered.

Possessing the basic functionality of systems and components of remote access control can be useful to practitioners in implementing law enforcement practices.

Keywords: access identifiers, smart cards, reader.

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