

Section 03. Smart Solutions in IT

Anastasia Koltsova

S.A. Galushko, research supervisor

L.A. Zaika, language adviser

National Mining University, Dnipro, Ukraine

Data Protection

What is information? Information is a resource, regardless of its presentation perceived by the person and / or special devices as a reflection of the material world of the facts in communication process (GOST 7.0-99). There are 3 properties of information: integrity, availability and confidentiality. Let us examine these terms:

- Integrity is conditions under which the information is stored, transmitted, and can be used without any changes (objects having a permission).
- Availability is information property, where the user and / or process have the permission to use it in accordance with the security policy.
- Privacy is property, where user has permission and / or process has permission to use the information.

At the time of technological progress information is spreading rapidly around the world and as you can see from the definitions, the main task is the protection of certain information from outsiders.

Every corporation, agency and organization (national or not) have a list of information that needs to be hidden from authorized eyes. This is necessary because the information can be used for personal gain and can harm its owner or strangers. For example, the offender knowing the number of your bank card and password can remove all personal funds from a bank account or get credit.

There are several ways to protect information:

1. Obstruction is the way to shut out the physical path to access information (lattice, lock, alarm, etc.)
2. Access Control is protection of information through information technology (identification, electronic keys, registration, identification, etc.)
3. The encryption mechanism is information security through its coding.
4. Combating malware attacks is precautions using antivirus.
5. Regulation is adherence to the established rules of the information use.
6. Forcing is protection method in which the entire staff has to follow the security policy, methods of storing and transmitting information.
7. Motivation is policy enforcement personnel due to the prevailing moral and ethnic norms.

One of the most common methods of information protection is identification. Each object has its own identifier (login, number, bar code). Further, at least an important part of this process is authentication (checking the ID provided for compliance with the object ID). A process of providing information to the object (to which it has access) in accordance with the security policy is concluding one. Thus, you can protect your system (computer, social network, email, etc.) from outside.