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INTERNATIONAL LEGISLATION ON PERSONAL DATA PROTECTION

Basic regulations of legislative acts in the personal data protection field of the European Union, USA and CIS are considered. Threats to personal databases are classified, basic advantages and disadvantages of current requirements to personal data protection ensuring are analyzed.

Keywords: *personal data, confidential data protection, data storage facilities.*

1. Problem definition

Nowadays practically every person has valuable electronic information: personal data, business documents, files with logins and passwords to different online-services, business correspondence. Such information needs secure protection: from unauthorized access and distribution, accidental deleting or modifying. All developed countries of Europe and post-Soviet space are worried with the problem of information security and personal data protection of their own citizens. According to the Law of Ukraine "On personal data protection" in clause 2 "personal data implies facts or collection of facts of an individual person which is identified or can be concretely identified", and in clause 6 it is defined "Primary sources of facts of individual person are: documents given in his name; documents signed by him; facts that the person gives of himself" [3]. It is caused due to informatization and numeralization of information that obtained wide distribution in all fields of human activity including storage of personal and operational data.

This paper's purpose is analysis of legislative acts in the personal data protection field of countries of Europe, USA and CIS, basic threats of personal data confidentiality definition and offering of possible ways to counteract them.

2. Basic threats of personal data confidentiality analysis

Necessity of providing personal data security these days is objective reality. Theft of personal data can cause an appreciable pecuniary loss to the rightholder if it concerns credit cards or information of savings in bank. Violators that possess sufficient technical knowledge steal details of bank cards or imitate sites of financial institutions to force an user to expose his personal information. In truth it is frequently difficult to determine the source of personal data (PD) leakage due to the high informatization of modern society, basic ways of intrusion and theft are shown in the fig. 1.

Personal data theft can cause an appreciable pecuniary loss to the rightholder if it concerns credit cards or

information of savings in bank. Violators that possess sufficient technical knowledge steal details of bank cards (skimming) or imitate sites of financial institutions to force a user to expose his personal information (phishing). In practice when consequences of information leakage have been discovered it happens difficult to determine the source of this leakage due to the high informatization of modern society.

Security threats of PD when their processing in information system of PD (ISPD) imply set of conditions and factors creating risk of unauthorized, including accidental, personal data access by which the results can be deletion, modifying, blocking, copying, distribution of personal data, and also other unauthorized actions while their processing in information system of personal data. Classification of personal data security threats is shown in the fig. 2 [1 – 5].

Due to the extensive Internet development attacks are mostly performed using vulnerabilities of network interaction protocols, basic kinds of attacks are shown in the fig. 3.

The performed analysis has shown that the increased possibilities of personal data collection and processing, e-commerce facilities and social networks development necessitate adopting personal data protection measures. Personal data theft can cause an appreciable pecuniary loss to the rightholder if it concerns credit cards, bank accounts or information of savings in banks.

3. Analysis of basic legislative acts in the personal data protection field of countries of the European Union, USA and CIS

Adopting of laws on personal data protection is grounded by statistical data of personal data theft. For example: in 2010 the number of victims of personal data theft exceeded 8.1 million people only in USA [5; 6]. Government on the legislative level demands from organizations and individuals that process personal data to provide their protection. USA was the first county adopted the law on personal data protection in 1974 – "Privacy Act".

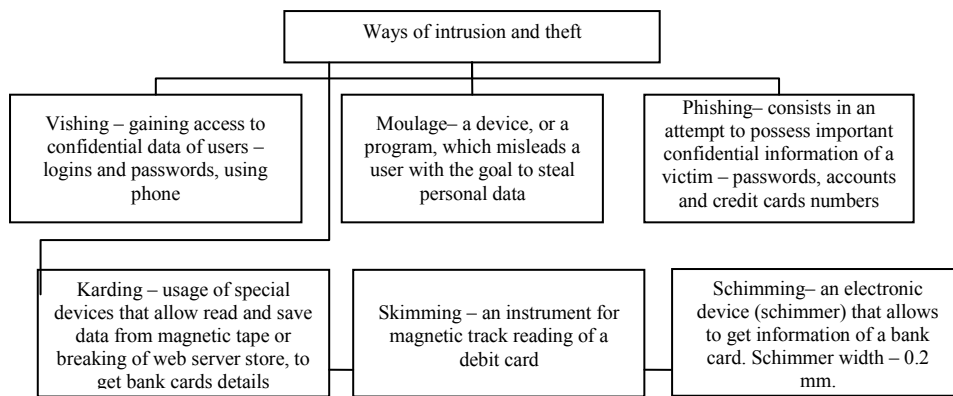


Fig. 1. Basic ways of intrusion and personal data theft

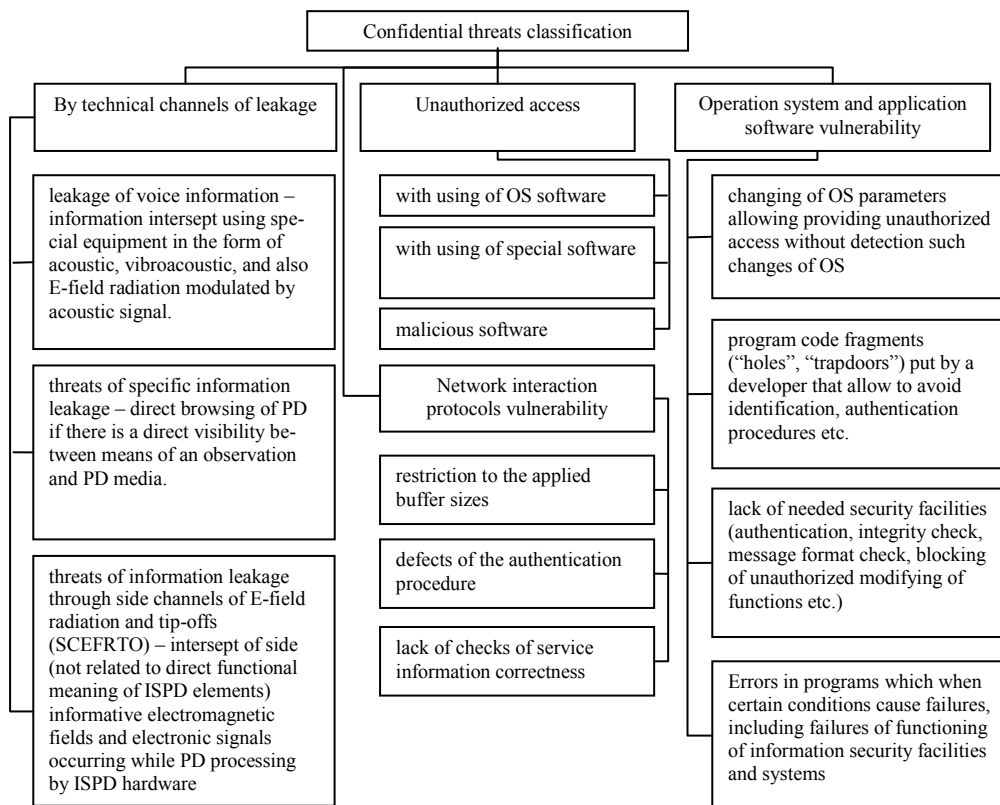


Fig. 2. Classification of personal data security threats

The law forbids divulgence of information from personal data bases (PDB) in the absence of written agreement of the subject of information, with the exception of twelve statutory exceptions. Patriot Act of USA – surety of information legal protection came into effect 26th of October, 2001. The law on information legal protection amends 15 regulations of other laws including federal laws [4 – 6].

The Law “On Personal Data Protection” was adopted in California in July, 2003. According to the law all organizations that provide commercial services are to inform their clients in the case of their personal data leakage, for example: full name, social insurance numbers or credit card numbers. The law helped to reveal the extent of data protection vulnerability and made other states to follow their example. The new law on

personal medical data protection of California – the first in USA, is considered by the rest of states.

Having followed the example of USA, countries of the European Union also set on development of set of laws on personal information protection. By the end of 70s personal data protection in the Soviet Union stood out into independent activity category. Principles of protection from illegal collection, processing, storage and distributing facts about individuals were stated by the committee of experts of the Soviet Union on personal data protection. These principles were given official confirmation in the first and the only one as of today international agreement – Convention “About protection (rights) of individuals while automated personal data processing” (known as Convention No. 108, according the order in the series of European contracts).

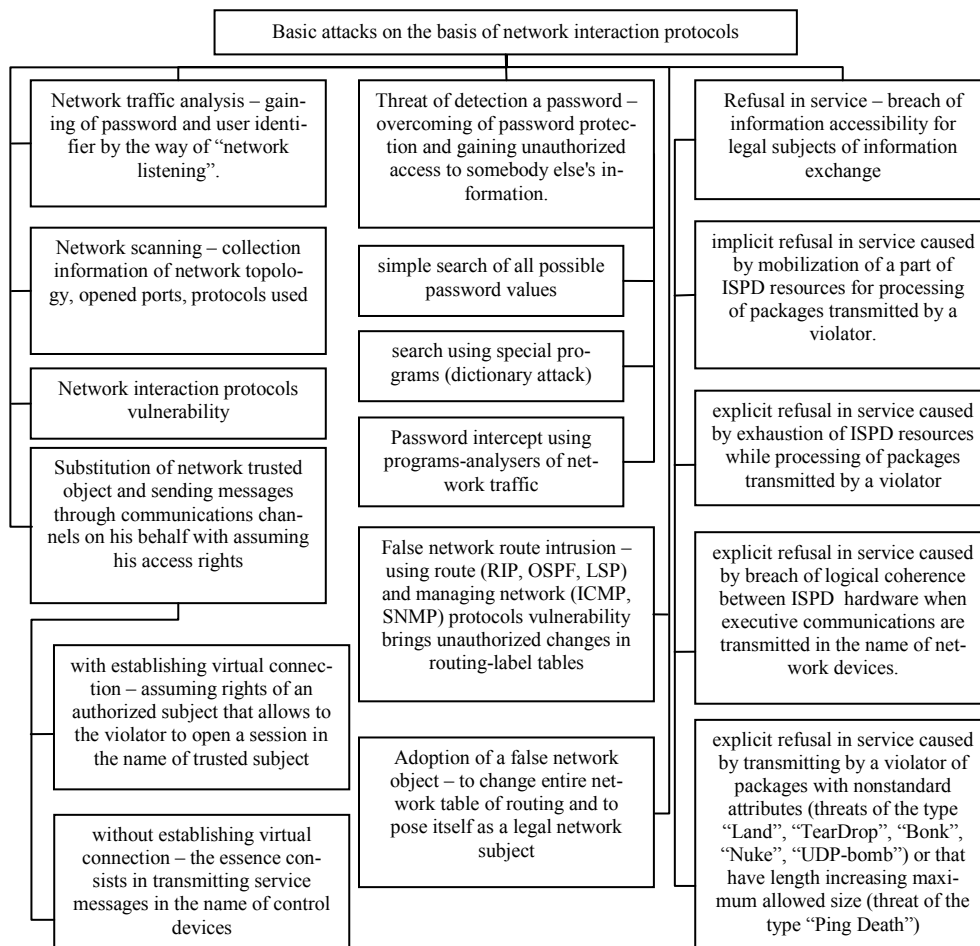


Fig. 3. Basic kinds of attacks with usage of network interaction protocols vulnerability

In 1995 European parliament and the Soviet of European Union based on regulations of Treaty establishing of the European Union adopted the Directive 95/46/EC of European parliament dated 24 October, 1995 “On protection of individuals when personal data processing and free float of this data”.

Basic legislative acts about personal data protection are shown in the figure 4.

The basic reason that provoked to adopt additional guidelines to the Convention 1981 was caused that personal data protection in the countries-participants had been performed at different levels. It was conditioned by lack of integrated level of regulatory regulation and by lack of correspondence of personal data protection level which was provided by national legislative, regulatory and administrative regulations.

In addition to this Directive there was adopted Directive 97/66/EC “On Processing of Personal Data and the Protection of Privacy in the Telecommunications Sector” on 15 December 1997. It supplements and concretizes operational data processing rules which are collected by operators during providing telecommunication services. Currently it mostly concerns telecommunication internetwork Internet.

Ukraine and Russia adopted laws on personal data protection relatively not long ago, thus legislative

framework of our countries regarding personal data protection just started to develop.

The first steps of Russia regarding personal data protection became laws “On Personal Data” and “On Information, Information Technologies and on Information Protection”. The federal law “On Information, Information Technologies and on Information Protection” (FZ No. 149 “On Information, Information Technologies and on Information Protection”) dated 27 July 2006 is the basic law in the information protection field.

The federal law “On Personal Data” (FZ No. 152 “On Personal Data”) dated 27 July 2006 consummated on January 26, 2007. The purpose of the law is protection of rights and freedoms of a human with regard to his data processing. Adopting the federal law became a trigger in creating of legal conditions for protection of rights of personal data subjects in Russia Federation.

The necessity of adopting of the Law in Ukraine has been long time growing. There might be millions of databases in which data of citizens is collected in the country. In many cases citizens are protected in no way. Currently, only one law on personal data protection has been adopted in Ukraine which adopting unfortunately was caused rather by the desire to enter the European Union than a desire to protect its citizens from unauthorized access to their personal data.

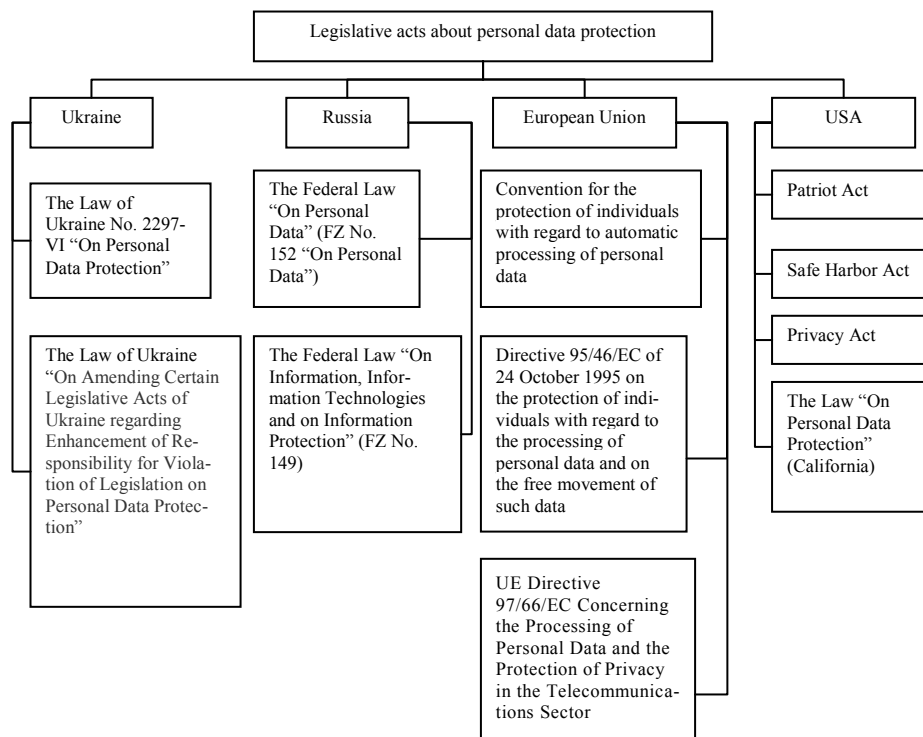


Fig. 4. Laws on personal data protection

The Law of Ukraine No. 2297-VI "On Personal Data Protection" was signed by the president of Ukraine on July 1, 2010. It regulates relations related to personal data protection with regard to its processing. The law consists of basic regulations which in many aspects are similar to the European Soviet Convention. *The Law of Ukraine "On Amending Certain Legislative Acts of Ukraine regarding Enhancement of Responsibility for Violation of Legislation on Personal Data Protection"* establishes administrative and toughened criminal responsibility for violation of legislation on confidential information protection.

Thus the performed analysis of legislative acts on personal data protection testifies of the high significance and necessity of solving the given problem not only for average citizens but also for the state in whole. Legislative acts to a large extent are similar and pursue the only purpose – to provide maximum protection and juridical supporting of citizens in solving confidential data protection problems. Especially it became actual in current conditions of abrupt increase of computational powers, appearance and growth of cyber-terrorism, appearance of new threats to personal data of local and global networks users. From our point of view the most complete and structured document in the personal data protection field is Directive 95/46/EC. It describes in detail the state obligations on personal data protection in legislative field, rights and obligations databases owners, and also personal data subject rights. But apart from that there is a number of exceptions where the state has a right for personal data processing and divulgation (or vice versa – non-disclosure).

Exactly on the basis of the Directive 95/46/EC laws on personal data protection were created in all countries of Europe, and also, practically entirely, this directive was taken as the basis of Federal Law of Russia FZ No. 152 "On personal data" and of course it was the basis of adopting in Ukraine the law No. 2297-VI "On personal data protection". All legislative acts in an equal degree oblige to inform personal data subjects of their data processing, and also to protect them up to the mark to prevent this data distribution by unauthorized way. Thus the performed analysis has shown that laws on personal data establish general approach to PD protection providing, rights and obligations of subjects that possess them, and also obligatory registration and protection of personal databases in the special state register. Comparison of legislative acts of different countries is shown in the table 1.

Performed investigations have shown that there are differences in personal data protection providing in legislative acts of Russia and countries of the European Union/USA.

Now then in legislative acts of Russia:

- requirements are defined by regulators (for processing with automation facilities);
- the lack of binding to the personal data nature, processing technologies, adequacy of expenses.

In legislative acts of the European Union/USA:- PD nature, violator opportunities, processing technologies, cost adequacy of the protection system to the loss caused are taken into account;

- flexible approach to the creating of personal databases protection systems.

Table 1

Comparison of legislative acts of different countries

Legislative acts features	Countries			
	USA	European Union	Ukraine	Russia
Registration database in the state register by owners	+	+	+	+
Special committee of supervision	+	+	+	+
Work group on protection of individuals with regard to their personal data processing	-	+	-	-
Register of operations on personal data processing	+	+	-	-
Providing proper level of protection by the PD owners	+	+	+	+
Necessity of an agreement to process PD from the data subject	+	+	+	+
Giving data to strangers	+	-	+	-
Giving to the data subject a notice of his data processing	+	+	+	+
Concession of information with regard to the PD owner to the PD subject	+	+	+	+
The data subject has a right to get facts of which information about him is stored in the database	+	+	+	+
Information stored in the database has not to be redundant and have to conform to the personal data goals declared earlier	+	+	+	+
Publicity of operations on data processing and its storage	+	+	-	-
Transmitting data to third countries (upon approval of the PD subject)	+	+	+	+
Features of personal data processing in state or municipal information systems of personal data	-	-	+	+
Paying for access to PD (except access of the PD subject to his own data)	-	-	+	-
Possibility of refusal to access to data to the data subject	-	-	-	+

Now, currently, practically all states have adopted laws on personal data protection. The most developed ones in this direction are USA and the European Union that have a range of laws allowing protection of those citizens PD up to the mark and regulation of problems of personal data in international relationships. Legislative bases of countries of post-Soviet space are practically absent except Russia.

Conclusions

The problem of personal data protection stands very critically. Thus all states develop, update and supplement their laws on personal data protection. Together with the laws new facilities of personal data protection are appeared. Requirements to the new and safe security facilities are constantly growing, but together with them market of suggestions also grows. At this point of time leading states in the legislative and organizational personal data protection field are countries of the European Union and USA, though in the hardware protection field Russia and Ukraine are sufficiently powerful competitors.

Perspective direction of further investigations is estimation of possibility of personal (confidential) data protection by proposed software (hardware-software) facilities of protection.

List of references

1. Baranov A.A. *Human rights and the protection of personal data* / A.A. Baranov, V.M. Bryzhko, J.K. Bazanov. – URL: library.khpg.org/files/docs/Kn_L_.pdf.
2. *Conflict of legislation on personal data of USA and the European Union*. – URL: <http://www.pdp.net.ua/stolknovenie-zakonodatelstv-o-personalnykh-dannykh-ssha-i-evropejskogosouza> http://www.pravo.vuzlib.net/book_z137_page_28.html.
3. Directive 95/46/EC of European parliament and Soviet dated 24 October 1995 “On protection of individuals when personal data processing and free float of this data”. – URL: 32.rsoc.ru/docs/32/Direktiva_95_46_ES_24.10.1995.doc.
4. *InfoWatch CryptoStorage Enterprise*. – URL: http://www.infowatch.ru/products/cryptostorage_enterprise.
5. The federal law “On Personal Data” (FZ No. 152 “On Personal Data”). – URL: <http://www.kadrovik.ru/docs/fz27.07.06n152-fz.htm>.
6. The Law of Ukraine No. 2297-VI “On Personal Data Protection”. – URL: http://www.nibu.factor.ua/info/Zak_basa/Pers_dannie/Zak_2297.

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МЕЖДУНАРОДНОЕ ЗАКОНОДАТЕЛЬСТВО В СФЕРЕ ЗАЩИТЫ ПЕРСОНАЛЬНЫХ ДАННЫХ

С.П. Евсеев

Рассматриваются основные положения международных законодательных актов в сфере защиты персональных данных стран Евросоюза, США и СНГ. Проводится классификация угроз на базы персональных данных, анализируются основные достоинства и недостатки современных требований к обеспечению защиты персональных данных.

Ключевые слова: персональные данные; защита конфиденциальных данных; средства хранения информации.

МІЖНАРОДНЕ ЗАКОНОДАВСТВО В СФЕРІ ЗАХИСТУ ПЕРСОНАЛЬНИХ ДАНИХ

С.П. Євсєєв

Розглядаються основні положення міжнародних законодавчих актів у сфері захисту персональних даних країн Євросоюзу, США й СНД. Приводиться класифікація загроз на бази персональних даних, аналізуються основні гідності й недоліки сучасних вимог до забезпечення захисту персональних даних.

Ключові слова: персональні дані; захист конфіденційних даних; засоби зберігання інформації.