

## SOME ISSUES OF ARMENIA'S INFORMATION SECURITY

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The article touches upon some issues of information security this country may face in connection with the growing influence of the latest technologies. In particular the article presents the present situation of the field of Armenia's information technologies in comparison with other states.

Another branch of information security tackled in the article relates to the aggressive acts of hostile states and social groups which use the latest technologies for propaganda against Armenia and Armenians. Armenia and Armenians have found themselves confronted with a serious information war waged by neighboring states. In the article information issues are considered from the standpoint of the state and state bodies, the society and various social networks.

### *Introduction*

In the context of unprecedented global rise in the influence of information technologies, the security of this field is turns into a major problem of survival for certain countries. The dependence of a state on information technologies (IT) is rising year by year, at that, the problems relating to the field get more globalized, the borders are washed away. Accordingly, it is essential for Armenia to be very attentive to information security.

Let's mention the following fields offering real challenges to Armenia's information security.

1. The possibility for a state to be presented in information networks and support non-governmental institutions in this respect, the ability to confront hostile propaganda and promote a positive image.
2. The ability of the state to counter the aggressive policy of other states and network groups in connection with its information sovereignty.
3. The potential of implementing information technologies both domestically and externally.

All these fields are interconnected and suggest both centralized approach of the state and involvement of various network groups capable of carrying out autonomous policy in the information field.

### ***1. State-level information security***

Armenia's telecommunication systems are mainly controlled by other states, whose actions may be destructive.

Thus, in 2003 "ArmenTel" was accused of tapping all the telephone conversations in the territory of Armenia. During one of the confrontations between the government and the Greek company OTE (at that period holding 90% of the shares of "ArmenTel") an expert from «WFI-consulting», invited as the Republic of Armenia's witness, announced that the digital stations of "ArmenTel" recorded all the telephone conversations and preserved the latter for several months. In doing so the Greek company tapped and recorded not only all the telephone conversations of mobile and fixed network but also all the transactions of credit cards conducted through ATMs and POS-terminals. At that time the Executive Director of "ArmenTel," Georgios Vasilakis, announced to the journalists that some records were really made but only in full compliance with international norms. According to him, it was done for "the appropriate agencies to carry out certain work" [1]. Later on the company announced that recording of telephone conversations was necessary for the company's billing system.

As a matter of fact, all the telephone conversations of the Armenian citizens (including state officials) and financial transactions were controlled by a company representing another country. However, the scandal was hushed up despite ArmenTel's testimony and the outrages facts.

At the end of 2006 "ArmenTel" was sold to the Russian "Vympelcom" Company. On March 24, 2007 the Armenian Government made a decision to sell 10% of its share of "ArmenTel" to "Vympelcom" [2]. Thus the government put the whole fixed telephone network and part of the mobile network under the control of a foreign company. The other part of the mobile network owned by K-Telecom Company, a subsidiary of "Karabakh Telecom," is also backed by foreign (Lebanese) capital.

Another problem over the past years has been the monopoly of ArmenTel on international Internet network. On the one hand it is not ruled out that, as in the case of the telephone network, the Greek company had access to the Internet flow out of Armenia and, of course, to the e-mail issuing from the country. On the other hand, under conditions of monopoly, ArmenTel has not developed Internet communication, as a result, Armenia depends on the only fiber-optic

cable passing through the territory of Georgia and a weak reserve satellite channel. Hence, any damage of the cable have caused complete Internet disconnection from the outside world, which is completely inadmissible nowadays.

Besides, as a result of poor Internet connectivity, many Armenian web pages hosted in Armenian servers have access problems in other countries. Here the only encouraging fact is gradual deprival of ArmenTel of monopoly rights: this process will be completed by November 2007.

As a matter of fact, the state does not control communication in Armenia; at the same time, the past experience shows that there are serious security problems which are not solved, moreover, the latter are hushed up since there is no official confirmation that phone call tapping does not take place currently under different pretexts.

There are also problems with the software used by state institutions. Thus, on January 30, 2007 a cooperation agreement was signed between the Armenian government and Microsoft Corporation in Edinburgh (Scotland) according to which the company would carry out a number of investment, educational and innovative programs. On April 10 the RA Minister of trade and economic development Karen Chshmaritian said that the introduction of the Microsoft culture would have a significant importance and prospective impact on the economic life of this country [3]. The Armenian government is even supporting the localization process of Windows *XP* operation system (translation into Armenian). At present the localization of *Office 2007* for *Windows Vista* is still in progress [4]. Such cooperation may also be considered mutually beneficial, but at the same time one should take into consideration the following reality.

The company does not conceal its expansionistic intentions. According to the business management and strategy director of Microsoft, Paul Muckleston, the Corporation is planning to expand its activity in Armenia. Paul Muckleston said that by 2010 the corporation will train for about 1000 university graduates with the Microsoft certificates. "This objective of the Corporation is conditioned by the growing demand for personnel in Armenian businesses and state machinery," said Paul Muckleston [5]. In this way the company aims at making the Armenian sphere of information technologies dependant on its software products.

In purely economic terms, heavy expenses on the purchase and introduction of expensive software from Microsoft Company are quite a suspicious beginning. Even in the rich Europe such a policy is considered to be economically ungrounded.

However, there are many problems connected with information security issues. It is known that Microsoft products are vulnerable to the attacks of hostile

users both inside and outside the country. Thus, in the annual rating of “20 targets of attacks in the Internet” made by the Institute of SANS and the US National Infrastructure Protection Center (NIPC), Microsoft software remains the leader, year by year taking the upper positions among the most vulnerable systems [6].

However, special attention should be paid to the information circulating in the press that Microsoft cooperates with the US special services, in particular, with the National Security Agency (NSA) responsible for information intelligence. The Company has time and again been denounced for having secret layers enabling the American special services to get unapproved access to the computers using the Windows operation system. Moreover, the NSA has officially announced that it contributed to the security of the new *Microsoft Windows Vista* operation system [7]. As Microsoft does not disclose its software codes, the danger of Armenia’s dependence on a foreign country is quite serious.

In this connection, we should mention that the replacement of close code software by the *OpenSource* one is underway in Europe: the systems of *Linux* or *OpenOffice* package are suchlike operation systems and can replace Microsoft Office. Thus, on November 16, 2007 the European Commission appeared with a recommendation to the UN member states to turn to *OpenSource* software. According to the research data carried out under the aegis of the European Commission, today the *OpenSource* software at the head of *Linux* operation systems has reached to the extent of reliance making its mass installation possible [8].

The decision to turn to *OpenSource* software has been made in certain UN countries over the past years. According to the information provided by the European Commission, by 2010 32% of all the services in the sphere of information technology in the UN countries will be transferred on the basis of *OpenSource* software.

## ***2. Armenia’s preparedness for modern realities***

According to the *Global Information Technology Report* annual data of World Economic Forum for 2006-2007, Armenia takes the 96<sup>th</sup> place in terms of advancement of its technologies among the 122 countries surveyed. While making this rating the development of the IT market, the extent of its influence and penetration into the other fields were taken into account (for example, in the sphere of education) as well as successful policy of the authorities directed at the introduction of information technologies [9]. Turkey was the 52<sup>nd</sup>, Azerbaijan the 71<sup>st</sup> and Georgia the 93<sup>rd</sup>. Let’s mention that in comparison with the last year Armenia has got down by 10 points, which has come to prove that the Republic

does not catch up with the world development.

After having abolished ArmenTel's monopoly on mobile communication, Armenia made a serious breakthrough in the development of this domain. Today the number of mobile communication users reaches one million subscribers, and as this takes place, VivaCell controls about 60% of the market [10]. Although at present information technologies in this country develop rapidly, the companies are in need of skilful staff and often have to help the higher educational institutions to train specialists, just like it is done by *Synopsys* and *Lycos* [11].

In the field of secondary education the situation is quite unsatisfactory. Thus, as of 2005, there were on average only 10 computers per 864 pupils. In 1467 general education schools only 5531 computers were used and only 279 schools were connected to the Internet. There are 1787 computers in 259 Yerevan schools, of which 74 schools are connected to the Internet. In the regions of Armenia the most number of computers is in Shirak region, 723, only 38 out of 176 schools have Internet access. The least number of computers is in the region of Vayots-Dzor, and only the pupils of 8 schools out of 51 have Internet access [12].

Besides, school curricula and the skills of IT teachers do not conform to the present-day requirements.

On the whole, because of certain reasons, for example, levying of VAT at the border while importing IT equipment and the high cost of Internet connection, Armenia considerably lags behind the Western countries and the former Soviet Republics. Thus, according to the 2006 ITU report (International Telecommunication Union), the number of Internet users in Armenia accounts for about 5% of the population, whereas the average universal indicator is 18,4% [13]. In Azerbaijan this indicator is 8%, in Turkey, 21%. According to the data of *Internet World State*, in 2000-2007 the rise in the number of Internet users in Armenia was only 436.7%, in Georgia, 778% and in Azerbaijan, 5556.7% [14].

### ***3. Aggressive policy against Armenia and Armenians***

Another important problem connected with Armenia's informational security is the hostility against this country. During the last years aggressive states and groups have been actively using modern information technologies against Armenia and Armenians .

The Azeri and Turkish propaganda makes an active use of Internet resources to advance their interests and discredit Armenia and Armenians. In neighbor countries serious human and financial resources are spent to spread their propaganda, and in this connection the Armenian segment of the Internet can hardly compete in this field.

If the Armenian propaganda sites are mainly created by individuals or Armenian organizations in the Diaspora, in Azerbaijan and Turkey a systematic, state funded work is carried out. Thus, for example, during the last years the overtly state-backed *Day.az* information-analytical portal has been dynamically developing, which, however, is not advertised very much. The English and Russian language materials are published by the resources of the member of Milli Majlis Permanent Commission on international relations and inter-Parliamentary relations Anar Mamedkhanov. In so doing, *Day.az* portal, which broadcasts news in Russian and English, has a serious standing in the Internet. Suffice it to say that the Armenian press often uses this resource as a source of information, whereas this agency spares no effort in spreading misinformation.

According to different ratings, *Day.az* is visited by about 300 thousand users per month or more than 10,000 people per day. Its publication citing index in the Internet equals to 2100, which, according to the data introduced by *Yandex*, is the 41<sup>st</sup> indicator among all the Russian language information agencies and networks. For comparison let's mention the index of citing of one of the mostly visited Armenian portals, *PanArmenian.net*, 850, *Panorama.am*, 300 and *AI+* (*www.aiplus.am*), only 30. Such a high index of citing raises the position of *Day.az* in searching systems. Thus, as a result of a search in the *Yandex* system under the key words "Armenia news," *Day.az* comes in the third place (whereas in the first place is not a purely Armenian resource, i.e. the project of the Russian agency RIA Novosti, Novosti-Armenia).

The Internet is flooded with Turkish resources spreading propaganda against the recognition of the Armenian Genocide; information is spread in different languages. Thus, the site "Armenian question" (<http://www.ermenisorunu.gen.tr/>) presents a large number of materials from the Turkish standpoint in the Turkish, English, German and French languages. There are other sites presenting articles on the massacre of Turks and Azeris by Armenians, for example *Armenian Reality* in French and English (<http://www.armenianreality.com/>).

The official Yerevan's approach to counter propaganda was clearly presented by the RA Ex-Foreign Minister Vardan Oskanian. In his speech made on November 7, 2006 in the National Assembly Oskanian announced that because of the lack of resources the competition with Turkey and Azerbaijan in the propaganda of Armenia's own stance on such issues as Nagorno Karabakh or relations with Ankara have become more and more difficult over the past years. According to him, every year Azerbaijan and Turkey increase their resources for propaganda against Armenia. "With this purpose in their minds they apply to different firms,

on which millions of dollars are spent,” said the Minister, mentioning that Armenia can not allocate such resources at present, Vardan Oskanian stressed the necessity of involving foreign capital [15].

However, it is known for a fact that Armenia should carry out a well thought out policy the propaganda in the Internet, will not require very significant funding. Particularly, if the resources of the Diaspora and other voluntary groups working in this domain will be attracted. It follows from the above, that our state structures lack a really well-thought policy to be carried out in the Internet. As a result, such important sites for Armenia as the ones devoted to the problem of the Genocide (for example, the most serious one, the Russian language *Genocide.ru*) are developed and supported by private initiatives. (By the way, let us also mention that the Azeris even use the money of international organizations, which, should not have happened in principle and the official Yerevan should have followed and reacted to such inadmissible facts. Thus, for example, the Azeri “Internet library network” (<http://kitab.az/>), where a large number of extremely anti-Armenian materials are posted, is co-financed by IREX-IATP, which also works in Armenia).

Besides, on the main foreign policy issues the Armenian party lags behind in terms of the development of information resources. For example, the Azeris carry out an active policy in the Internet on the issue of Karabakh, sparing no expenses. The Armenian network resources almost do not pay attention to Nagorno Karabakh except for the issues connected with the negotiation process. Only recently a few local Karabakh resources have been trying to solve this problem: *KarabakhOpen* (<http://karabakhopen.com>) *Karabakh News* (<http://www.karabakh-news.com>) and *Karabakh Live* (<http://karabakhlive.com/>).

However, the Azeri party still holds its position because of the policy of Armenian resources. Thus, as a result of a search in the most famous Russian Yandex search system under the key word “*Karabakh*,” (as of April 2007) the materials of the Russian “Regnum” agency come in the first place. In the second place comes the Armenian site *Karabagh.am*, which has not been updated since 2002. *ArmenianHouse.org* popular Armenian library takes the 6<sup>th</sup> place. All the other search results bring Russian sources, and *Baku.ru* is in the 10<sup>th</sup> place.

While making a search in the largest searching system Google under the key word “*Karabakh*,” the webpage of Armenian open encyclopedia *Wikipedia* (which may be edited by any user and, in this connection, the content of this webpage changes from time to time) is the first to come. The second place is taken by *Karabakh.org*, created to interpret the Karabakh conflict from the Azeri

standpoint. And only the third place is taken by the NKR Foreign Ministry, which is far from being ideal. Then follow a number of analytical sites, created and controlled by the Azeris living in different countries, the very biased web page of the British TV channel BBC devoted to the Karabakh issue. And this sequence is closed by the NKR governmental site, taking only the 10<sup>th</sup> place.

Taking into consideration the fact that, according to the statistics, while using search systems most of the users do not go further than the first ten results, the Armenian party seriously lags behind the Azeri one in the sense of expressing its own opinion on the Karabakh issue. Thus, according to the research results of the Pennsylvanian University, 54% of users look at the first page of search results, 19%, at the first two pages, and less than 10 %, at the third one. About 55% of the users look only at the first page of search results and more than 80% do not even look at more than the first three references suggested by the machine [16].

As a result of such an approach to information security, Turkish, Azeri and other unfriendly suspicious materials have become information resources for the Armenian press. As the role of the Internet rises, the amount of misinformation introduced by hostile states also increases. The Armenian press lacks knowledge of the main laws of the Internet and possible “feeding” of misinformation Internet. There are no mechanisms to raise the competence of journalists and editors except for the measures taken by international organizations within the framework of different projects having no connection with Armenia’s information security.

Thus, on February 23 the Turkish network resource *Takvim.com.tr* spread information that 100 outstanding US businessmen, including Bill Gates and Warren Buffett had send a letter to George W. Bush with an appeal not to recognize the Armenian Genocide [17]. The article was presented only in Turkish. Later the *Turkish Daily News* reprinted the material in English. Soon the Azeri network mass media put the “news” into circulation, thereafter it was presented by the whole Armenian press without checking the sources. As a result the Armenian office of Microsoft Company had to make an official denial.

Only in the National security Strategy of the Republic of Armenia (on February 7, 2007 this document was signed by the RA President) the main provisions of state information security were stipulated. However, the information constituent was not well specified among the threats. Only, as an internal threat the unsatisfactory development of the infrastructure network, including communications were mentioned.

Among the important challenges faced by the Republic of Armenia, two issues are related to the information field:



- Integration in the international information field, professional formation of a clear perception of Armenia and Armenians in the international community, resistance to misinformation and negative propaganda,
- Ensuring balanced information (in terms of amount and quality) about Armenia in the Armenian language in the Internet embracing the issues of all the branches of Armenian studies and Armenians.

However, at present there are no real mechanisms to implement the above mentioned provisions.

Let us also mention that at the end of November a decision was made to create a temporary working group (including Armenia) on information policy and security under the Committee of Secretaries Security Councils at the Collective Security Treaty Organization (CSTO). It is supposed that the main task of the temporary working group is the preparation of practical proposals on the consolidation of joint measures against the challenges and threats in the information field and improvement of information exchange among the interested bodies of the SCTO member-states [18].

#### ***4. The problem of the Armenian language in informational field***

It remains to be seen why the National Security Strategy among the tasks of the state mentions the promotion of Armenia in the Internet only in the Armenian language? Nowadays, developed countries develop not only on the national segment of the Internet but also invest much to present their countries worldwide.

If the state really starts working on the development of the Armenian segment of the Internet, a number of technical problems will be necessary to solve in parallel. Thus, reading Armenian texts in the Internet, cataloging of the Armenian segment, search systems cause a lot of difficulties. Moreover, it is not quite clear whether the matter only concerns only Eastern Armenian or Western Armenian as well. If the state devotes more attention to the Eastern Armenian segment of the Internet, the number of interested users will not be large. Besides, the coverage of the problems relating to Armenians is also important for non-Armenians.

As a matter of fact some Armenians in the Diaspora do not know Armenian well enough. In Armenia too there are many Internet users who prefer Russian and English to Armenian. One may judge about this by the misbalance between personal Internet pages, blogs (Internet diaries), forums, where the Armenian is not the main language for many users, even the ones living in Armenia [19].

Besides, the usage of the Armenian language in the Internet and software is still a serious problem. Up till now the problem of the standard of the Armenian language has not been solved yet. For many users with limited knowledge of software it is still a problem to read Armenian sites, to write and read e-mails in Armenian, etc.

Although most of the new Armenian sites are written with the help of *Unicode*, whose recognition is simplified for the users of the new versions of the most widespread operational system in Armenia, *Windows*, numerous Internet resources remain on the basis of *ArmSCII* encoding, which for many users makes it impossible to read Armenian language web pages without extra efforts: certain knowledge in the field or extra software. Let us mention that such a encoding is also used in most of the official sites, such as the Governmental site (<http://www.gov.am/>), National Assembly site (<http://www.parliament.am/>), the site of the president (<http://www.president.am/>), whereas, the site of the Defense Ministry (<http://www.mil.am/>) is *Unicode* based, which proves that at present there is no state approach to the problem of unification in this sphere in Armenia.

Of no less importance is the lack of a national search system enabling the users to search the Armenian sites. The *Google* search system enables us to search the Internet in Armenian, however, it is not adapted to Armenian morphology and in this sense it is not of full value. Lack of standard encoding is also a problem for the ones working out such a program, as a certain part of Internet gets detached from the process of indexing.

It is true that there were a few projects of working out Armenian search systems, such as *BanBer* (which does not work at present) or *HiFind* (<http://www.hifind.am/>) but they can not solve the real problems caused by search systems. However, the lack of a complete solution to the problem makes site constructors give up the Armenian language. On the other hand, the Armenian resources are not included in real Internet processes as the users do not have direct access to them in search systems. And Internet-statistics shows that the users find the sites they need through search systems.

The creation of an Armenian search system is of utmost importance and requires serious funding. However, taking into account the small size of the Armenian segment of Internet, it is difficult to suppose that any investments will be made by commercial organizations. In such a way, there are two more possible financing sources: international donors (like in case of *HiFind*, the creation of which was financed in 2004 by the Open Society Institute) or the state. However, the projects based on donor grants more often than not, as the experience has shown, prove not viable.

### 5. On the role of network communities

Today different social networks in the Internet become more and more spread and popular. The Internet forums, a kind of discussion clubs, have become quite popular over the last years. There are both public and specialized forums which gradually gain popularity. Besides, the forums are very active among the nations with large Diasporas (Russians, Jews, Armenians, Georgians, Azeris, etc).

Azeri and Turkish users make a good use of forums to discredit Armenians. In all the forums discussing important subjects Azeri and Turkish users are “present,” who spare no efforts to represent their standpoints to the representatives of other nations. Their activity is often coordinated in little groups. The representatives of these groups take part in almost all the resources where materials relating to Armenia, Karabakh and Azerbaijan are published. Their activity is often coordinated from outside. They carry out active work with the ones who hesitate and skillfully discredit Armenia and Karabakh. The main goals pursued by them are: to present their country’s position, to carry out propagandistic work, and to discredit the enemy.

Besides direct presentation of their ideas on the Armenian-Azeri and Armenian-Turkish conflicts, they also use dirty methods. Thus, on the forums adhering to fascist ideology Armenians are presented as Semites and Zionists. On Jewish forums an active propaganda is spread to portray that Armenians are the adherents of radical anti-Semitism. The subject of Armenian-Georgian conflict is also under active discussion, appearing under “foreign flag.” Taking into consideration the big number of users involved in Internet forums, one may suppose that the Azeri and Turkish propaganda has considerably succeeded in shaping anti-Armenian moods [20].

Today, forums already yield to the activity of blogs or Internet diaries. During the last two years an unprecedented rise in the number of Internet blogs in the Internet has been noticed. According to the information released by *Technorati*, gathering information in the sphere, in the beginning of 2007 there were 70 million blogs in the Internet. About 120.000 new blogs a day or 1.4 blogs per second appear in the Internet [21].

This field is also used for anti-Armenian purposes. For example, there is an entirely anti-Armenian Azeri-Turkish blog (<http://azeri-turk.blogspot.com/>). Besides, the blogs are used by Russian nationalists to stir negative hysteria against Armenians. In this domain, especially active work is carried out by the representatives of the *Movement Against Illegal Immigration* (MAII). Thus, one of the members of this organization in his blog used some parts of the text taken from *OpenArmenia.com* forum on the reaction of Armenians to the assassination of

Vigen Abrahamyan in Moscow by fascists, to negatively portray the Armenian Diaspora in Russia [22, 23]. Later on, his message, “Panic in aviary ” was widely advertised (more than 60 active references) stirring anti-Armenian wave in network communities [24].

Internet misinformation or propaganda materials are spread not only through news but also through network communities. After misinformation is spread by Azeri or Turkish mass media, the work is undertaken by the information front specialists. A huge number of Azeri users begin spreading these materials through various forums, blogs and other network communities. Such a move sharply enlarges the audience of the information spread, at the same time raising the popularity of Azeri mass media mentioned as a link.

Besides, Turkish and Azeri users now have begun actively using a new popular tendency in the Internet – spreading of video-materials through such resources as YouTube ([www.youtube.com](http://www.youtube.com)). In the Internet a large number of clips, for example, about the events in Khojalu, are posted. Taking into consideration that cruelty in the Internet is quite popular, such materials have a tendency of spreading rapidly.

### ***6. Attacks on the Armenian segment of Internet***

Hacker attacks on the Armenians resources (not only the ones of Armenia, but also the ones supported by the Diaspora) by the Azeris and Turks have become more frequent in the last years, as a result of which the work of sites either was temporarily stopped or the information provided in them was changed in their favor.

Internet attacks between the Armenians and Azeris have quite a long history. It is believed that one of the first and largest Internet wars was the clash of Armenian and Azeri hacker groups probably backed by state structures. In January 2000 the Azeri hacker groups *Green Revenge* and *Hijack Team 187* managed to take under their control for about 25 domains of the most outstanding Armenian portals: providers, mass media, sites on the Armenian Genocide: In response, in February the Armenian *Liazor Group* took almost all the Azeri segment of Internet under its control. Thus, in one authoritative Azeri site misinformation on Azerbaijan’s readiness to make concessions on the Karabakh conflict was spread at the same time referring to the state structures as a source. Misinformation was duplicated by the Armenian information agency “Snark,” after which it was spread all over the world resulting in deep resonance. The Armenians also took under their control the sites of Azerbaijanian embassies, representatives of international organizations, etc. As a result, the Ministry of National Security in Azerbaijan had to appear with an announcement that it was controlling Azeri

hackers, after which the Armenian party stopped “military operations” [25].

The number of attacks on Armenian resources during the next few years intensified, despite the fact that the clash of 2000 had the most global character. The next large exchange of attacks took place in the spring of 2005. By that time the Azeri part was the first to begin the attack on Armenian forums. A number of resources were destroyed, after that the events unfolded with a great speed. Tens of web-sites were destroyed on the both sides. The main victims of the attacks were the abandoned sites, as well as not professionally administrated Internet forums. However, the work of a number of outstanding resources of the Armenian network community (*Hayastan.com*, *Yerevan.ru*, *OpenArmenia.com*) was stopped for quite a long period. At the same time two important Armenian resources were attacked by the Turkish hackers: the largest data bases of historical data (*Genocide.ru*, *ArmenianHouse.org*) were put out of action. This period is better known for the union of Azeri and Turkish hacker groups.

The attacks on Armenian resources did not stop later on with the periodicity of once every half a year (not counting one-time attacks with longer periodicity). In 2006 a few attacks were made on the Armenian segment of the Internet. In March 2006 a number of sites were “hacked”, but the main target of the hackers was the site of the Eurovision participant Andre. After “hacking” the mentioned site (together with some other resources) they inserted the photos of Khojalu victims in it. The results of the Azeri hackers’ attacks were not removed for about two months, which has come to prove that network processes in Armenia are not followed properly, in spite of the fact that Andre’s performance was perceived to be a matter of image for the whole republic.

Even Hungarian Web-resources became the victims of cyber-war. After proclaiming the verdict of Ramil Safarov on April 13, 2006, the Azeri hackers hacked exactly 100 Hungarian sites to make their protest [26]. The Turkish groups also joined them hacking a few more Hungarian resources.

If in the past Internet forums or other sites of not commercial character were hacked, the owners of which have no means to give serious consideration to security issues, the hackers today target more serious resources. Thus, on February 26, 2007 at the first anniversary of the events in Khojalu, Azeri hackers hacked 15 Armenian resources, as well as the sites of De-Facto agency (<http://defacto.am/>) and the Ombudsmen of Armenia (<http://ombuds.am/>).

Thus, the issue of ensuring the security of the Armenian segment of Internet becomes essentially important, as mainly the resources representing Armenia in the network face the attacks. However, at present the issue of the security of Armenian resources is beyond the attention of governmental structures.

### *Conclusion*

Thus, today Armenia faces a number of problems connected with different issues of information security. The state has just begun realizing the possible dangers. At the same time, global technical development requires quick and dynamic responses to the modern problems. International community's experience of development over the last years has come to prove that this country is continuously lagging behind global processes with its rate of growth in the information field. It is lagging behind not only highly developed but also medium developed countries.

In the present state of affairs Armenia should either have a clear-cut and effective program of solving problems connected with the issues of information security or will be left more and more behind from rapidly developing global realities. In that case not only the problems connected with economic and social developments but also the ones of national security will appear under threat.

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