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Հայկական ինտերնետ  
կառավարման համաժողով  
Armenian Internet  
Governance Forum

*«Ինտերնետը կառավարումը կայուն և  
ներառական զարգացման համար»  
"Internet governance for sustainable  
and inclusive development"*

Հոկտեմբեր  
Երևան

Մեդիա գործընկեր՝



DIGITAL.REPORT

2

October  
Yerevan



IGC | INTERNET GOVERNANCE  
COUNCIL OF THE  
REPUBLIC OF ARMENIA



MINISTRY OF TRANSPORT, COMMUNICATION  
AND INFORMATION TECHNOLOGIES  
OF THE REPUBLIC OF ARMENIA

Armenian  
Internet Governance Forum

**ArmIGF 2017**

Meeting Report

October 2017

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## What is IGC?

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The Internet Governance Council of the Republic of Armenia (IGC) is founded by the Government of the Republic of Armenia in order to develop proposals and suggestions as well as contribute to the solutions for Internet governance related issues in the Republic of Armenia. The official website is <http://igc.am/>.

IGC is a Multi-stakeholder advisory body including members from Government, Civil Society, Private Sector, Technical Community and Academia. The Chair of IGC is the Deputy Minister of Transport, Communication and Information Technologies and the Secretariat is the Internet Society of Armenia.

Aimed at solving the Internet governance issues the IGC has the following functions:

- 1) Organizing discussions on global Internet Governance Forum (IGF) issues, Internet Governance principles, challenges arising as a result of Internet development. Development of approaches based on the discussions, their inclusion in the project proposals for the Government of the Republic of Armenia, come forward with draft legislative proposals and other legal acts.
- 2) Cooperation with the Secretariat of the global IGF, provision of current approaches of the IGC, organizing of discussions adapting these approaches and proposals on changing or developing new legal acts.
- 3) Organizing public hearings, regarding the approaches of Internet governance proposed by international or intergovernmental bodies in order to form approaches of the Republic of Armenia on their basis and presenting them in corresponding international or regional bodies where the IGC also participates.

- 4) Providing suggestions and comments of the IGC to the Ministry of Foreign Affairs of the Republic of Armenia on issues considered in other international or regional organizations.
- 5) Facilitating the participation of IGC representatives in the Internet Governance Forum, providing the guidelines of the official approach of the IGC.
- 6) Facilitating the exchange of best practices among academic, scientific and technical centers and implementation of this experience.
- 7) Providing consultations to all Departments of the Government of the Republic of Armenia on issues of current and coming worldwide development of Internet.
- 8) Provision of public information to the Armenian Internet community on emerging issues related to the Internet development.
- 9) Promoting the development of human capacity to manage the Internet usage with the involvement of the potential of local experts.

## What is ArmIGF?

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The Armenian Internet Governance Forum (ArmIGF) is a national IGF initiative organized by the Multi Stakeholder Internet Governance Council of the Republic of Armenia with the support of the Ministry of Transport, Communication and Information Technologies of the Republic of Armenia and the Internet Society of Armenia.

The main objectives of the forum are:

- to provide an open and transparent platform for all stakeholder groups
- to bring up and discuss the Internet governance related issues
- to give the floor to the wide community
- to deliver the messages to the policy makers

The members of the ArmIGF Organizational Committee are:

| <b>N</b> | <b>Name, Title</b>   | <b>Stakeholder Group</b> |
|----------|--|--------------------------|
| 1.       | Gagik Grigoryan<br>First Deputy Minister of Transport,<br>Communication and Information<br>Technologies of RA  | Government               |
| 2.       | Boris Demirkhanyan<br>Deputy Minister of Transport,<br>Communication and Information<br>Technologies of RA,<br>IGC Chair, ArmIGF OrgCommittee Co-Chair | Government               |
| 3.       | Igor Mkrtumyan<br>Internet Society of Armenia President,<br>ArmIGF OrgCommittee Co-Chair   | Civil Society            |
| 4.       | Grigori Saghyan<br>Internet Society of Armenia Vice President,<br>IGC Secretary  | Civil Society            |
| 5.       | Lianna Galstyan<br>Internet Society of Armenia Board Member,<br>IGC PR Officer   | Civil Society            |
| 6.       | Vladimir Sahakyan<br>Director of IIAP National Academy of<br>Sciences of RA  | Academia                 |
| 7.       | Vahan Hovsepyan<br>ARMIX Foundation Director   | Technical<br>Community   |
| 8.       | Tigran Harutyunyan<br>Noyan Tapan News Agency  | Mass Media               |
| 9.       | Samvel Martirosyan<br>iDitord  | New Media<br>Expert      |

## ArmiIGF 2017 Sponsors

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## ArmIGF 2017 Program

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ArmIGF 2017 was held on October 2, 2017 in Yerevan, Armenia. The forum was aimed to provide an open platform for discussions where IT professionals and the community could reveal the emerging issues and outline their possible solutions.

The theme of the forum was "**Internet Governance for Sustainable and Inclusive development**". The event was fully scheduled with reports and panel sessions.

|       |  |
|-------|--|
| 08:30 | <b>Registration</b>  |
| 09:30 | <b>Official Opening</b>                                      |
| 10:00 | <b>Session 1: Information Security</b>                       |
| 11:00 | <b>Root Zone KSK Rollover update</b><br>Presentation         |
| 11:30 | <b>Coffee break</b>  |
| 12:00 | <b>Session 2: IPTV, Impact of Internet on TV &amp; Radio</b> |
| 13:00 | <b>Lunch break</b>   |
| 14:00 | <b>Session 3: Libraries in Digital Age</b>                   |
| 15:00 | <b>Rights of people with disabilities</b><br>Presentation    |
| 15:30 | <b>Cloud Technologies</b><br>Presentation                    |
| 16:00 | <b>Coffee break</b>  |
| 16:30 | <b>Open Government Partnership (OGP)</b><br>Presentation     |
| 17:00 | <b>Workshop: Personal Data Protection</b>                    |
| 18:00 | <b>Final Remarks and Closing</b>                             |

### Vahan Martirosyan

#### Minister of Transport, Communication and Information Technologies of Armenia



Mr. Vahan Martirosyan, made the opening speech at the third Armenian Internet Governance Forum. He highly appreciated the importance of the work of the forum as a platform for an exchange of experience and ideas, for establishing and strengthening

business contacts, along with being a means to present current achievements in Internet governance ecosystem.

Mr. Martirosyan noted that the Information Technology sector remains one of the highest priorities for the development of Armenia's economy. The Government of the Republic of Armenia, adhering to its policy, makes great efforts for the development and advancement of the sector. Already in the first half of 2017, Armenia has registered a 35% growth in the economy.

Mr. Martirosyan mentioned that today the Internet is an essential part of our lives and without the involvement of different layers of the society, it is impossible to implement its governance.

The Minister highlighted the significance of the forum to provide a platform for open discussions and he expressed confidence that the topics included in the agenda: information security, the impact of Internet on radio and television, digitalization of libraries, cloud computing, etc., would provide an opportunity to find solutions to the emerging challenges as a result of rapid development of the Internet.

Mr. Martirosyan concluded his greeting speech by wishing a fruitful work to the forum.

## **Chengetai Masango**

### **UN IGF Secretariat, Programme and Technology Manager**

The Internet Governance Forum was created 11 years ago by the United Nations with the purpose of maximizing the opportunity for open and inclusive dialogue on Internet Governance related issues among all stakeholders, contributing to the capacity building for Internet governance. To coordinate these activities a secretariat has been formed. The IGF Secretariat Programme and Technology Manager Mr. Chengetai Masango delivered a welcome speech remotely.



Mr. Masango welcomed and congratulated the participants and organizers on the third Armenian Internet Governance Forum.

He noted that today the Internet is integral to our lives, as we are relying more and more on it in

order to work, communicate, and learn. At the same time, we live in the world where on one side those that are connected are facing different limitations in enjoying their online freedoms and rights; while on another side, half of the population remains unconnected or under-connected.

In addition, the complexity of the Internet as the global network, requires vast expertise and knowledge to address these problems. It requires consulting the academics, Government officials, NGO representatives, engineers, businesses from all countries and regions. All this makes the Internet Governance Forum more than ever, relevant and needed.

When the community asked the United Nations Secretary-General to convene the IGF in 2006, it was precisely for the reasons of necessity for all stakeholders to establish a process where the communities will develop the agenda of relevant Internet governance pertaining issues, and have

meaningful discussions. This bottom up and multistakeholder operating principles of the IGF, remained until this present moment, the most effective way for identifying issues and recommendations for improvements.

Mr. Masango mentioned that for the third consecutive year Armenia has been one of the key partners to the IGF, in



showcasing excellent implementation of the IGF process on a national level, as well as by regularly bringing inputs to the IGF's substantive program; liaising and exchanging practices with other national and regional IGFs through the NRIs network; significantly contributing to important regional processes established on the South Eastern European level through SEEDIG and on European level through EuroDIG.

At the end of his speech, Mr. Masango emphasized the importance and high global relevance of the topics included in the agenda of the forum. He was confident that the work of the forum would serve its ultimate goal and would contribute to the Internet governance for a sustainable and inclusive development.

## Alexandra Kulikova

### ICANN, Head of Global Stakeholder Engagement for Eastern Europe and Central Asia



Internet governance is based on multistakeholder model. One of those stakeholders is ICANN, whose main function is to keep the Internet secure, stable and interoperable. Through its coordination role of the Internet's naming system, it has an important impact on the expansion and evolution of the Internet.

The welcome speech was made by Ms. Alexandra Kulikova, the Head of Global Stakeholder Engagement for Eastern Europe & Central Asia at ICANN.

Ms. Kulikova warmly welcomed the participants and guests of the forum. She mentioned the important role of Internet technologies in Armenia and highlighted the special role that Internet Society of Armenia plays in international processes and within ICANN's activities. She was confident that it would be even more strengthened and expanded in the future.

Ms. Kulikova also mentioned that the agenda of the forum was very relevant and timely and that Internet governance forums had their positive implications. As an example, she emphasized the launch of the first Armenian School of Internet Governance (ArmSIG) in summer 2017, with the support of ICANN.

Ms. Kulikova highly appreciated the activities of the school as an important tool for raising awareness on the Internet governance ecosystem. She hoped that this forum would also have its positive outcome.

On behalf of ICANN, Ms. Kulikova wished a successful forum.

## Ceren Ünal

### Internet Society, European Chapter Development Manager

In her speech, Ms. Ünal welcomed participants and guests of the Internet Governance Forum and thanked for the invitation. She noted that the Internet Society of Armenia is one of the so-called "star" chapters of the global Internet Society, being very active in different Internet governance fora.

She noted that recently, the Internet Society has celebrated its 25th anniversary worldwide supporting open and secure Internet that contributes to the development of economic, social and other aspects of society in general. Ms. Ünal reported about a survey conducted by the Internet Society in 2016 aimed at defining what people think of the future of the Internet. Ms. Ünal mentioned her vision of it; the multi-stakeholder collaboration. She noted that today the civil society is often given more importance and priority, but it cannot operate alone; it should be supported by different stakeholders at different levels.

She talked about online ethics, behavioral norms and their importance that need to be introduced to people. She also mentioned the importance of cybersecurity and necessity to act collaboratively as it is the imperative of the day.

At the end of her speech Ms. Ünal wished success to the forum.



## Maxim Burtikov

### RIPE NCC External Relations Officer

The Regional Internet Registry for Europe, the Middle East and parts of Central Asia, allocating and registering blocks of IP numbers to Internet service providers and other organizations, RIPE NCC supports the Internet community and plays a big role in the Internet governance ecosystem.



In his welcoming speech Mr. Burtikov thanked for the invitation and mentioned that soon there would be a meeting in Minsk, Belarus within the framework of the ENOG project, which was successfully hosted in Armenia last year. He highlighted the contribution of Armenian colleagues in that process.

Mr. Burtikov noted that the RIPE NCC integration in Armenia continued and received a new course thanks to its staff member based in Armenia.

He emphasized the importance of community, group activities in any work. Mr. Burtikov noted that RIPE NCC was ready to assist the Internet Society of Armenia in regards to the national Internet governance. He noted that RIPE NCC supported similar meetings all over the world, the importance of which was revealed once again during the organization of the Armenian IGF. He noted that they are ready to support these meetings, conferences, trainings for the Armenian community and Armenian specialists in the future.

Mr. Burtikov concluded his speech by mentioning that there are many plans and expectations for future cooperation with Armenia.

## Session 1: Information Security

### Participants:

- **Vahe Saratikyan**, National Security Council
- **Vahagn Harutyunyan**, Police of the Republic of Armenia
- **Alexandra Kulikova**, ICANN
- **Samvel Martirosyan**, Information Security Expert
- **Ruben Muradyan**, Pan Armenian Media Group

### Moderator:

- **Grigori Saghyan**, Internet Society NGO

During the session Mr. Saratikyan informed that the National Security Council Working Group developed the concept of cybersecurity of the Republic of Armenia, which is currently in the stage of approval.

**The definitions used in cybersecurity concept of the Republic of Armenia enable to**



**distinguish information security (covering content) and cybersecurity.**

***The Critical infrastructure is within the responsibility framework of the body, responsible for cybersecurity.***



Once the Cybersecurity Concept is adopted, it will be possible to adopt specific legal acts, currently so demanded.

During the discussions it was proposed to establish a separate structure for state administration and local self-governing bodies, which will have the direct opportunity to instruct on the implementation of necessary cybersecurity measures.



**For Critical Infrastructures it was proposed to apply coordination through regulation** that will encourage owners of those structures to implement the necessary measures for cybersecurity.



Referring to the concept of cyberspace, it was noted that besides the national organizations, the security of cyberspace is also ensured by the policy of ICANN, which provides the Domain Name System, a part of the cyberspace, of which Alexandra Kulikova, the Head of Global Stakeholder Engagement for

Eastern Europe & Central Asia at ICANN, made a brief presentation. In particular, she presented ICANN’s mission – ensuring the stable and secure operation of the Internet’s unique identifier systems:

- Coordinates the allocation and assignment of names in the root zone of the Domain Name System,
- Coordinates the development and implementation of policies concerning the registration of second-level domain names in generic top-level domains (gTLDs),
- Facilitates the coordination of the operation and evolution of the DNS root name server system,
- Coordinates the allocation and assignment at the top-most level of Internet Protocol numbers and Autonomous System numbers.



Ms. Kulikova also presented ICANN’s core values, including:

1. Preserving and enhancing stability, security, resiliency, and openness of the DNS and the Internet,
2. Employing open, transparent and bottom-up, multistakeholder policy development processes that are led by the private sector,
3. Operating with efficiency and excellence, in a fiscally responsible and accountable manner.



## Root Zone KSK Rollover update

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### Alexandra Kulikova

#### ICANN, Head of Global Stakeholder Engagement for Eastern Europe and Central Asia

Ms. Kulikova informed that ICANN is planning to change Root Zone Domain Name System Security Extensions (DNSSEC) Key Signing Key (KSK).

The KSK is the top-level key in the cryptographic hierarchy, the change of which means the creation of a new, public and private key pair, and the distribution of new public domain components to all DNS management systems, such as network administrators, Internet service providers, system integrators and others.



Keeping KSK in perfect condition is a must for the uninterrupted work of the entire Internet system.

The KSK modification project was developed by Root Zone management partners, including IANA, Verisign, and NTIA, as a Root Zone administrator.

Ms. Kulikova explained to the participants what DNSSEC is, the DNS security enhancement, that improves the DNS by digitally signing DNS data. It provides data origin authentication, data integrity, and proof of non-existence.

For each zone a public/private key pair is created, where the private key is kept secret, and the public key is published in the DNS. The zone data are signed within the zone's private key to produce digital signatures. After a resolver (DNS client) looks up data in a signed zone, that data can be validated with the zone's public key.

Ms. Kulikova presented that the full name for the root zone’s public key used as a trust anchor is the Root Zone Key-Signing Key (KSK). It should be noted that Root Zone KSK is the most important key in DNSSEC and that any software performing DNSSEC validation must have the Root Zone KSK configured as a trust anchor.



She also presented that ICANN has envisaged the change of the current root zone KSK, which was created in 2010, and a new KSK will be announced soon. This change is known as “Rolling the Key”. It is a carefully planned, multi-year process to ensure continued smooth operations of the global secured DNS.

Ms. Kulikova presented a detailed operational implementation plan and who will be impacted as well as what actions operators need to do.

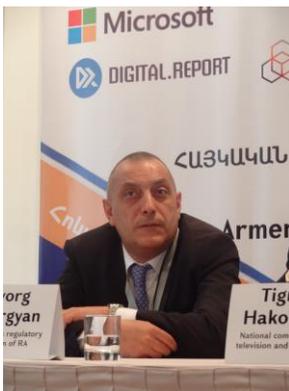
## Session 2: OTT, IPTV, Impact of Internet on TV & Radio

### Participants:

- **Gevorg Gevorgyan**, Public Services Regulatory Commission of RA
- **Tigran Hakobyan**, National Commission on Television and Radio of RA
- **Andrey Pyatakhin**, ArmenTel CJSC
- **Ruben Muradyan**, Pan Armenian Media Group
- **Artur Varderesyan**, Lawyer
- **Vigen Arushanyan**, Armenian Association of Cable Broadcasters
- **Vahan Hovsepyan**, RIPE NCC

### Moderator:

- **Mark Grigoryan**, Public Radio of Armenia



All the participants of the session pointed out that it would be appropriate to clarify the concepts by separating "terrestrial television (etheric)" from all other ways of providing content to users.

It was mentioned that terrestrial television has a number of filters that are missing in other TV content distribution systems. There is no effective tool, including media education, that will allow to filter out a non-over-ground content which has been qualified as a dangerous challenge.

*At the same time, the terrestrial TV retreats. According to the National Commission on Television and Radio of the RA, **over the past seven years, the advertising on the terrestrial TV has dropped by 2.5 times, and the number of TV viewers decreases by 5-7% annually.***

There are similar trends in the world either.



In 2014, 50% of Africa's population preferred receiving news through the phone.

The TV is turned on for 4 hours, but this indicator has a tendency to decline.



In 2014 the news website at the PanArmenian Network had more observers than PanArmenian's terrestrial TV viewers. The same company reports 20-40 million views on YouTube, just as much as on the terrestrial television.



With such steps, the terrestrial TV field would come to an end. **In order to maintain its role, the operator will inevitably become a content creator**, as did Netflix.

The other urgent problem is copyright, **OTT service providers do not pay attention to copyright issues.**

In the case of the Internet, it is not possible to control the space for content distribution, as a result of which the business model of content distribution is undermined.

The state is deprived of taxes: electronic communications companies build infrastructure, while OTT uses this infrastructure for free of charge. It is necessary to find ways to regulate this issue by the government.

It can be considered positively that **OTT allows targeting the audience.** Instead of one viewer today, we get four: each member of a family can get the content that s/he is looking for and get the ad targeted to him/her.

The RA Law on Television and Radio does not distinguish between OTT and terrestrial TV, the content creator and the cable owner, but today they have been differentiated.



In the case of audience growth, there is a risk of network overload, and technical standards are not foreseen for the regulation. **The operator must independently provide its network bandwidth.** And in cases where there are limitations, the operator is obliged to inform its subscribers.

Restrictions, regulation were set for VoIP, but as a result the Armenian operators suffered, while Skype, Viber and similar services entered the Armenian market and took huge amounts of calls without paying any taxes. In the case of television, the same result is expected.

Recording that Armenia is less advanced than the developed countries for 4-8 years, **in the process of finding ways to solve this issue it is expedient to study and apply the existing worldwide solutions.**

## Session 3: Libraries in Digital Age

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### Participants:

- **Tigran Zargaryan**, National Library of Armenia
- **Anna Chulyan**, Yerevan Brusov State University of Languages and Social Sciences
- **Marat Yavrumyan**, “Yavruhrat” Publishing
- **Anahit Khechoyan**, Kotayk Regional Library

### Moderator:

- **Boris Demirkhanyan**, Ministry of Transport, Communication and IT



Session started with Anna Chulyan's speech. She talked about the current challenges of libraries, the most important of them being the issue of having or not having libraries; whether the libraries should work in traditional way or they need new changes.

According to Ms. Chulyan, **the stereotype that people do not attend libraries and do not read books does not match the reality.** As evidence, she noted that from September 2017, over 8000 physical books were served in the Library of the University after Bryusov to 3810 readers. Ms. Chulyan noted that at present, **it is necessary to provide free access to libraries, to introduce diversity, to create a pleasant atmosphere and an opportunity for consulting services.** All of this is exactly what the 21st century library concept is.

At the same time, **she offered to redesign the service approach in libraries by introducing a creative management model as well as to develop information and digital literacy.**

**She also emphasized the role of a librarian as a resource person and provider of all this.**

Ms. Chulyan noted that today electronic book publishing and creation of digital libraries in Armenia are not a very accessible process. Electronic book

publishing may also lead to conflict with the Law on Copyright. She hoped that, with new amendments to the law, that gap would become less visible and would enable universities to digitize the necessary books and make them available to students. She believed that **hybrid libraries are a great solution as they combine printed and digital libraries.**

Mr. Demirkhanyan added that the same problems with libraries exist in Germany as well. The libraries there are viewed as a source of accurate information.

Here's a question: is the Internet capable of replacing the idea of the library, and can the information taken from the Internet be accurate and correct?

In response, Anna Chulyan noted that when publishing any information or content in the website, the library checks it first and issues with great responsibility. She offered to make use of searches on the Internet, but in the right place, e.g. a University Library website is a more reliable source than information from Google's random-looking source.



Director of the National Library of Armenia Tigran Zargaryan noted that **national libraries have a very important function, they keep the nation's printed legacy, and digital libraries still have a number of unsolved problems.**

The life of the academic libraries is questionable, according to Mr. Zargaryan, because the scientific articles in Europe are no longer published and distant learning, being a competitive form of existing education, becomes popular and makes electronic publications and digital libraries more mandatory. 13 academic journals published in Armenia today have their e-versions. The paper versions are

also published, but most probably the paper versions of these magazines will disappear over time, with only electronic versions remaining.



**"Digitalization is a mandatory requirement, nobody but us should do it, we are responsible for the Armenian language materials."** At present, the Armenian press is digitized (2 million 700 thousand digitized press pages), which is freely accessible in the form of pictures, as well as books of the 1960's of the previous century (over 8000).

Mr. Zargaryan mentioned **that the Pan-Armenian digital library is to be set up**, the work of which has already begun. It is also envisioned to digitize books and materials from major Armenian Studies Centers as the Mekhitarist Congregation, the Patriarchate of Constantinople, Antelias, and Jerusalem.



Mr. Zargaryan was of the opinion that **we should go to the digital library but at the same time, it is certain that the traditional libraries would remain for some time.**

Marat Yavrumyan mentioned in his speech that **the libraries should be more public and accessible, and digital libraries solve this issue.** At the same time there is a clash of interests between publishers and e-books markets. They are in competing and contradictory relations rather than being complementary.



Mr. Yavrumyan noted that he would like libraries to become Research Centers in 10 years with well-informed and competent employees in terms of information technology skills, who would have their input, recommendations and ideas.

**According to Mr. Yavrumyan, libraries should be profitable and make money by selling their technological capabilities and services so that they can survive.**

Tigran Zargaryan objected noting that **libraries did not profit for hundreds of years, their profits were to raise the quality of society, its wellbeing. This also violates the right of a person to receive free information prescribed by law.**



Director of the Kotayk Regional Library Anahit Khechoyan said that **the library should become a place where people need to gather and organize events.** According to her, the Kotayk regional library corresponds to these standards and has enough attendance.

In response to Mr. Demirkhanyan's question as to what the speakers think on the future of the libraries in 10 years, Marat Yavrumyan replied that the libraries might soon be able to become a place where people can go in the morning if they do not know what to do on that day.

Tigran Zargaryan mentioned that the picture will not be much changed in Armenia, since 10 years is not a big term. According to him, there would be both traditional libraries and digital libraries, with which the work would be continuous.

### Sipan Asatryan

#### National Leadership Institute, Information and Communication Coordinator

Sipan Asatryan, a philologist, a diasporan, a tiflochagologist, a spatial orientation instructor, conducted a lecture entitled "The Rights of Persons with Disabilities." Mr. Asatryan is also the host and editor-in-chief of Internet Radio "Menq". Sipan Asatryan touched upon the technological revolution of human history, as a result of which people with disabilities have the opportunity to participate in social life.



According to Mr. Asatryan, **the computer created as a result of 4 technological breakthroughs today offers wide-ranging opportunities for blind people.** Before that, individuals with disabilities have been referred to education after the Middle Ages, more specifically in the Enlightenment Movement. Mr. Asatryan talked about

the systems built for blind people, including the relief system created by Valentin Haüy, as well as the Louis Braille relief system. The letters created by Valentin Haüy did not differ from the Latin alphabet as they had a tangible surface, whereas the point system created by Louis Braille is so far indispensable and applicable. Thanks to Braille typography, blind and visually impaired people got the opportunity to benefit from their education.

The next important stage was the discovery of "talking" books that essentially was the prototype of electronic libraries. This enabled blind people to read books and use literature. Mr. Asatryan highlighted the great importance of audio books, as the books in Braille are expensive enough, while audio books are accessible to everyone. In the 1970s, a specially

adapted information machine was created, and the first computer program was called JAWS. Other computer programs were not available for the country during the USSR era. In 2002, as a result of collaboration with the Mergelyan Institute, a very successful "Arev" program in Armenian was created, but its development was interrupted due to the lack of funds. Currently, American JAWS and NVDA programs are utilized in Armenia.



The next important step was the creation of sound applications for telephones for blind people. After the release of the first iPhone by Apple, the Voice over program was launched, and then the Talk back program was created for the phones working on the Android system, which reproduce

every action into voice and is very useful and functional for blind and visually impaired people.

In his speech, Sipan Asatryan also touched upon the Internet Radio "Menq" (We), created by his authorship, as a result of the cooperation of the Internet Society and the Internet Society NGO in Armenia. In the Center for Blind and Visually Impaired People, a studio has been set up to broadcast radio programs. They mainly refer to the rights of persons with disabilities.

**"Menq" is a platform for public awareness, breaking the wrong stereotypes and perceptions of people with disabilities.**

Mr. Asatryan mentioned that it is very important what is the definition of disability given by the state, and it is accordingly perceived by society. Today, of the adopted disability models Armenia uses a medical model according to which a person with disabilities is qualified and perceived as a sick person. The weakness of a person is considered, e.g. the lack of vision, and then the individual is considered as a person who is unable to do anything. Whereas, **it should be considered not only the limitations of people with**



**disabilities, but also their strengths, to use their strength, to enable them to be educated, employed, and engaged in society.**

Of the existing models Mr. Asatryan considered the social model being perfect, which is already applied in a number of countries and he hoped that it will also be used in Armenia over the time. This model sees a person with disabilities as a consequence of socio-cultural values of society. It is called to create equal opportunities for all layers of the society, including those with disabilities.



There is also a political-legal model according to which persons with disabilities are viewed as a minority whose rights and freedoms are often limited or suffered.

He considered the charitable model unacceptable and unreasonable. According to this model, a person with disabilities is regarded as a victim who needs charity, which is a wrong approach according to the speaker.

Mr. Asatryan calls on people with disabilities to go to society, to break down the wrong stereotypes in society, to become the natural part of society, to raise awareness in the public instead of being careful. He tries to serve as a role model for other people with disabilities.

### Levon Hovhannisyan

#### Microsoft, Programming Consultant



**Cloud computing technologies provide centralized resources for everyone and allow creating an organization's infrastructure without their own servers.** These technologies were introduced on the basis of Microsoft's Azure cloud solutions. There are many huge data centers in the world today. These centers are armed with super-reliable and safe electrical power and security.

The demand for resources varies.

Depending on the business style of work, it can be a pay-per-view, fast-growing, unpredictable flight calculations, and predictable flights.

In ordinary server solutions, it would be necessary to create a center with the highest possible capabilities, with only 10% of the capabilities being used primarily. In case of cloud computing, this problem does not exist. **In case of cloud resources, only the necessary infrastructure service is rent, which can be accessed within minutes.** One only needs to take care of the operating system, hosting, website, data, and software. It is also possible to order a platform service, in which case only data and software should be maintained.

**The biggest problem with cloud computing is security and trust.** Trust refers to data security as they are provided to a third-party company in another country. The cloud-based



data centers are designed to meet the strictest requirements for which the centers are certified by the government. There are data that are of strategic importance to the country and therefore can not be put in the clouds.

There are hybrid solutions for such cases.



**There are also cognitive, intellectual services that require super-powerful computing resources.** Even the largest local institutions do not have such resources, but thanks to the cloud solution they are available to the ordinary researcher.

## Open Government Partnership (OGP)

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### Liana Doydoyan

#### Freedom of Information Center of Armenia, President

Ms. Doydoyan presented the "Open Government Partnership" project. It is an international initiative based in 2011 on the initiative of 8 countries (USA, Brazil, Indonesia, Mexico, Norway, Philippines, South Africa, the United Kingdom). Today, the project covers 75 member states, including Armenia, which joined in 2011.



The goal of the Open Government Partnership project is to form an open, transparent and accountable government. Any country that

joins the project is obliged to develop an action plan for the next two years to undertake commitments. The nature of the commitments should be to ensure the transparency of government activities, the participatory process of civil society, accountability and the implication of new technologies in that whole process. Transparency concerns primarily financial transparency and access to information. Public participation, in its turn, provides for the opening of citizens' involvement and decision-making in decision-making and governance, ensuring the protection of the fundamental rights of citizens.

Armenia has participated in the OGP project with three action plans: 2012-2014, 2014-2016 and 2016-2018. According to Ms. Doydoyan, the most effective of the three action plans was the second one, which was fully directed to open governance. She noted that all this information is open and available at <http://ogp.am/hy/>.



Ms. Doydoyan noted that though the Armenia's activities generally receive positive feedback, nevertheless their monitoring shows that commitments are still weak and less directed to open governance.

The Armenian Government has been paying 25000 Euros a year for membership in this project for 3 years now, which is also binding on commitments to be performed and not leave them as draft, which happens sometimes.

Currently, the third action plan is ongoing, within the framework of which the Government holds regular meetings in the regions to raise awareness about the program. Ms. Doydoyan noted that the civil society is rather passive, and donor organizations are not so active, unlike the neighboring Georgia, but still there is a positive trend.



She pointed out the creation of the <https://www.e-draft.am/> website as one of the second action plan commitments, where draft laws are presented and everyone can submit his/her proposal which is published and the Government makes comments.

Another initiative worthy to mention is Armenia's accession to the International Mining Company, which was welcomed by the Prime Minister of the United Kingdom at a London summit.



Ms. Doydoyan noted that there are many things to do, especially from the point of view of publicity, which is very important. She called on all civil society actors to be active and join the workgroup processes.

## Workshop: Personal Data Protection

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**Ceren Ünal**

**Internet Society, European Chapter Development Manager**

**Gevorg Hayrapetyan**

**Personal Data Protection Agency, Head of Administrative Proceedings' Department**



The workshop on personal data protection was conducted jointly by Gevorg Hayrapetyan, Head of the Department of Administrative Proceedings of the RA Agency for Personal Data Protection, and Ceren Ünal, Internet Society European Chapter Development Manager. The workshop was devoted to the

interpretation and clarification of the RA Law "On Personal Data Protection", which was implemented by Mr. Hayrapetyan. On the other hand, Ms. Ünal presented the "General Data Protection Regulation" (GDPR) prepared by the European Union and discussed changes to be made in the Law of Armenia.

According to Ms. Ünal, GDPR is one of the hottest and the most discussed topics in Europe today. It is expected to come into force in May 2018. The importance of the new law is conditioned by the fact that it is applied not only for EU state members, but also on a global basis, and will refer to all those who will be involved, work or deal with EU citizens. Ms. Ünal also touched upon the importance of protecting personal data in the case of Internet of Things (IoT) and the relevance of the new law from this perspective. She indicated a few cases of personal data leakage as a result



of the use of devices connected to the Internet. She also talked about the behavior of people in social networks as well as about the important role of people's records, shared publications and pictures from the personal data



protection perspective, which often imply not only the author but the third person's personal data.

**With the new regulation it will no longer be possible without the consent or awareness of a third party to process one's personal data. Ms. Ünal urges to take with proper**

**responsibility on any posted information in the Internet.**

Mr. Hayrapetyan touched upon the RA Law "On Personal Data Protection", clarified the significance and meaning of such concepts as personal data, biometric personal data, special category personal data, publicly available personal data, personal data



processing. He talked about several examples of personal data processing, as well as state-run personal data processing, which is being implemented

within the law. He also touched upon the concept of "The Right to be Forgotten", which implies that **everyone has the right to demand from the search systems to remove the obsolete personal information as it may have any impact on his/her future life.** The participants of the workshop asked a few

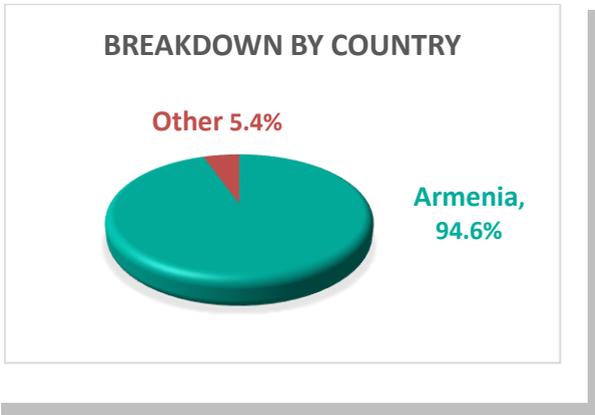


questions about the above mentioned topics to the speakers, who emphasized about the responsibility for the dissemination of information on social networks, the rights of people disseminating information. They also clarified the cases of personal data publication by the Central Electoral Commission of Armenia, as well as of several recently known cases of personal data processing in the Internet.

## Participation

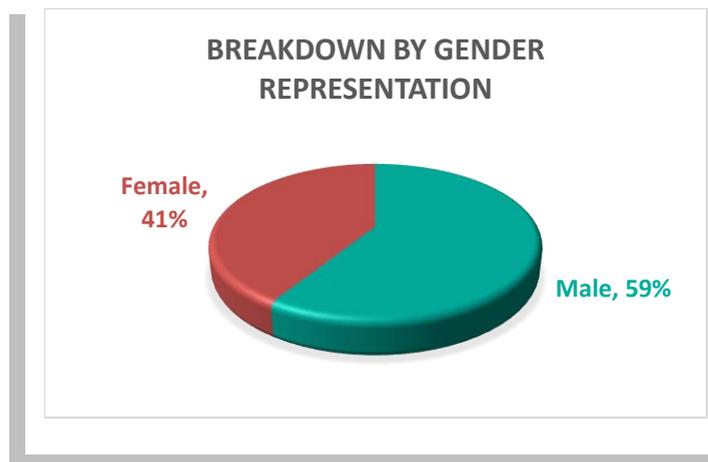
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ArmlGF 2017 was attended by around 130 participants, coming from the Netherlands, Switzerland (remote), Russia and Georgia. 94.6% of all participants from from Armenia.

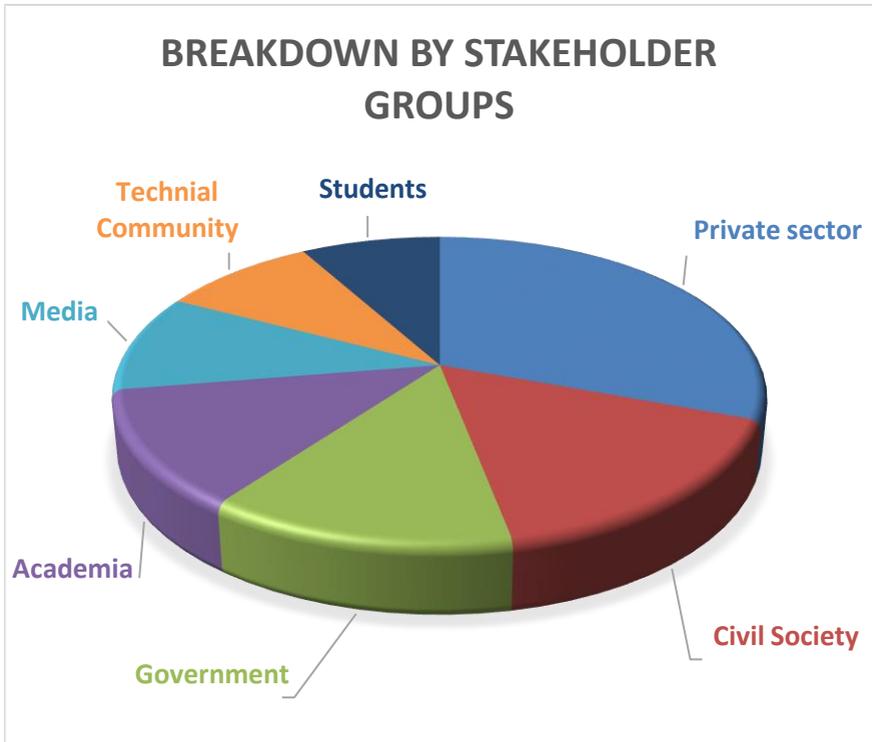


In regards to gender representation, 59% of all participants were male and 41% female.

The comparison with the previous year attendance recorded increased percentage of female participants (31% to 41%) and correspondingly decreased percentage of male participants (69% to 59%).



All stakeholder groups were represented at the meeting:



- Private sector: 30%
- Government: 13%
- Media: 10%
- Student: 8%
- Civil society: 16%
- Academia: 12%
- Technical community: 9%

In comparison with the last year stakeholder groups' participation it was recorded an increase for private sector (22% previous year and 30% this year), academia (5% vs 12%), media (3% vs 10%) and a decrease for technical community (22% vs 9%), government (20% vs 13%) and civil society (18% vs 16%).

## Media Coverage

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The third Armenian IGF was widely covered by the media, which also testifies to the significant increase of media representatives' participation. Most of the coverage materials were presented in Armenian but some sources provided the information in English and Russian as well. Below is the list of media coverage on ArmIGF 2017.

- [http://mtcit.am/pages.php?lang=1&id=6805&page\\_name=news](http://mtcit.am/pages.php?lang=1&id=6805&page_name=news)
- <https://digital.report/armigf-2017-printsip-neytralnosti-seti-ne-dolzhen-byit-narushen/>
- <https://arpinet.am/157-armigf-2017.html>
- <https://goo.gl/zUTbyk>
- <https://armenpress.am/arm/news/907417/vahan-martirosyany-masnakcel-e-haykakan-internet-karavarman.html>
- <http://www.lragir.am/index/arm/0/country/rss/161757>
- <http://www.itel.am/am/news/9370>
- <https://www.facebook.com/KotaykRegionalLibrary/>
- <https://b24.am/economy/68181.html>
- <https://www.youtube.com/watch?v=ghIdGARXNy8>
- <http://analitikaua.net/2017/ekspert-voznikshie-vsledstvie-razvitiya-interneta-vyizovyi-v-armenii-takie-zhe-kak-i-vo-vsem-mire/>
- <http://www.golosarmenii.am/article/58353/minyust-nuzhen-standart-bezopasnosti-dlya-baz-lichnyx-dannyx>
- <https://topsy.one/hashtag.php?q=armIGF2017>
- <http://armenianreport.com/pubs/168155/>
- <http://m.slaq.am/arm/news/1203932?translit=1>
- <https://artsakhpress.am/rus/news/73512/armyanskiy-ekspert-nizkaya-gramotnost-nashikh-polzovateley-v-seti-pomogaet-kiberatakam-iz-azerbaiydzhana.html>
- <http://haynews.am/hy933589/1506930330>

## Acknowledgment

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