

Meeting Report

arm **igf** 7

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ՀԱՅԱՍՏԱՆՅԱՆ ՀԱՄԱԺՈՂՈՎ

ARMENIAN INTERNET
GOVERNANCE FORUM

ԵՐԵՎԱՆ, ՀԱՅԱՍՏԱՆ | YEREVAN, ARMENIA

#armigf2022

10 ՆՈՅԵՄԲԵՐ
NOVEMBER

Կազմակերպիչներ Organizers



ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ
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IGC | INTERNET GOVERNANCE
COUNCIL OF THE
REPUBLIC OF ARMENIA



Internet Society
Armenia Chapter



ISOC AM

Հովանավորներ Sponsors



Internet
Society



ISOC AM

RIPE NCC



What is IGC and ArmIGF?

ArmIGF 2022

Organizing committee

ArmIGF 2022 sponsors

ArmIGF 2022 program

- Opening ceremony
- Transfer of foreign IT companies to Republic of Armenia, challenges, opportunities, cooperation
- Regulation of information on the Internet, legal regulations
- Fragmentation of the Internet. "Clean Network" or "New IP"?
- Internet infrastructure in Armenia and Starlink services
- NFT domains: competition or cooperation?
- Internet accessibility, support for vulnerable groups of Internet users, children online safety

Session discussions

Participation

Coverage - Media, TV, Radio

Thank you

What is IGC and ArmIGF?

The Internet Governance Council of the Republic of Armenia (IGC) is a multi-stakeholder council consisting of representatives from the Government, Private sector, Academia, Media, and NGOs.

The objective of the Council is to respond to the challenges taking into consideration the opinions of all stakeholder groups when making decisions.

The IGC is guided by the transparency principle and publicizes its activity through the official website igc.am. Internet governance requires new ways of working which will be equivalent to an unprecedented rapid development of the information society.

The IGC Charter and public participation is the key and the best guarantee of its successful development.

The Chair of IGC is the Deputy Minister of High-Tech Industry and the Secretariat is the “Internet Society” NGO (.am/.huu ccTLD Registry).

The Armenian Internet Governance Forum (ArmIGF) is a national IGF initiative organized by the IGC, the “Internet Society” NGO and the Internet Society Armenia Chapter with the support of the Ministry of High-Tech Industry of the RA.

Armenia joined the global IGF in 2015 and the first Armenian internet governance conference was organized. ArmIGF is an open, inclusive, transparent platform for dialogue and cooperation.

ArmIGF 2022

ArmIGF 2022, the 7th Armenian Internet Governance Forum, was held in Yerevan, on November 10, at Best Western Plus Congress Hotel.

It was organized as a one-day event, in a hybrid format, to provide the opportunity to participate more people from far regions of the Republic of Armenia. The new website was created during the preparatory works with the URLs to the previous forums: armigf2022.am

YouTube streaming and Zoom platform links were provided to all registered participants, as well as posted on the website.

For the speakers from the international organizations, the interpretation was organized during the whole meeting.

ArmIGF 2022 program was discussed and created by the members of the organizing committee, representing different stakeholder groups including the government and private sector. The registration was open from October 3 till November 3 on the website and through the URL on the FB event page.

- *It is an annual meeting with the participation of representatives of the state, public and private sectors.*
- *Issues related to Internet governance are discussed, and information and best practice are presented.*
- *Contributes to the development of the Internet's opportunities, to confronting emerging risks and challenges, as well as to the universal understanding and solution of problems.*

ArmIGF 2022 Organizers



MINISTRY
OF HIGH-TECH INDUSTRY
OF THE REPUBLIC OF ARMENIA

IGC

INTERNET GOVERNANCE
COUNCIL OF THE
REPUBLIC OF ARMENIA



RIPE NCC
RIPE NETWORK COORDINATION CENTRE



Internet Society
Armenia Chapter



ISOC.AM

armix
armenian internet exchange

Organizing and coordinating team / IGC members



Kristina Hakobyan



Grigori Saghyan



Vahan Hovsepyan

[#armigf2022](https://twitter.com/armigf2022)

Internet Society Armenia Chapter NGO board members PR and technical team members



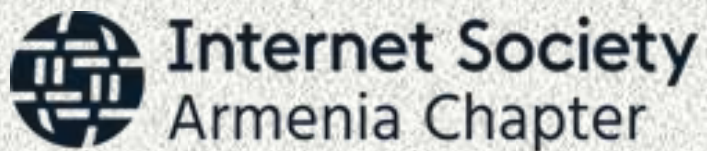
- *Katarina Gevorgyan*
- *Vesmira Harutyunyan*
- *Narine Derdzakyan*
- *Ani Dallakyan*
- *Lillit Galstyan*
- *Nana Poghosyan*
- *Ashot Harutyunyan*
- *Aram Verdyan*

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International I star organizations as ArmIGF 2022 sponsors



ISOC.AM



ArmIGF 2022 Program

9:00-10:00

Registration and welcome coffee



Opening ceremony

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10:00 - 10:30



☐ *Avet Poghosyan*

IGC, MHI of the RA

☐ *Igor Mkrtumyan*

Internet Society NGO board chair

☐ *Danko Jevtović*

ICANN, Board Vice-Chair

☐ *Anja Gengo*

Internet Governance and policy advisor at the IGF secretariat

☐ *Vahan Hovsepyan*

RIPE NCC, External relations officer

☐ *Kristina Hakobyan*

Internet Society NGO board member



Panel discussions



10 ՀՈՅԵՄԲԵՐ
NOVEMBER

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10:30 - 11:30



Transfer of foreign IT companies to Republic of Armenia, challenges, opportunities, cooperation

☐ *Hayk Chobanyan* (moderator)

Union of Advanced Technology Enterprises NGO

☐ *Davit Sahakyan*

Ministry of High -Tech Industry of RA, deputy minister

☐ *Hamlet Mkrtchyan*

Ministry of Economy of RA, deputy CEO at national center for innovation and entrepreneurship

☐ *Davit Grigoryan*

DevSoft, head of the company





10 ՀՈՅԵՄԲԵՐ
NOVEMBER

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11:30 - 12:30



Regulation of information on the Internet, legal regulations

☐ *Liana Doydoyan*

Freedom of Information NGO, expert

☐ *Davit Margaryan*

Head of the Legal and Licensing Department of the RA TV and RC

☐ *Samvel Martirosyan*

ArmSec Foundation Director

☐ *Arshak Kerobyan*

Ministry of HTI of RA, Head of digitalization department

☐ *Grigori Saghyan*

Internet Society NGO board Vice-chair

☐ *Hayk Mkrtchyan*

The head of the general department of combated crime of the Police





Fragmentation of the Internet. "Clean Network" or "New IP"?

- ❑ *Grigori Saghyan* (moderator)
Internet Society NGO board Vice-chair
- ❑ *Vahan Hovsepyan*
RIPE NCC, External relations officer
- ❑ *Thomas Mazejian*
CIO at MTS Armenia

10 ՆՈՅԵՄԲԵՐ
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12:30 - 13:30 

#armigf2022

13:30 - 14:30 

Lunch





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14:30 - 15:30



Internet infrastructure in Armenia and Starlink services

❑ *Vahan Hovsepyan* (moderator)

RIPE NCC, External relations officer

❑ *Igor Mkrtumyan*

Internet Society NGO board chair

❑ *Dan York*

Internet Society, Low Earth Orbit satellite project leader/
online

❑ *Karen Grigoryan*

Ministry of HTI of the RA, head of communication division

❑ *Gevorg Gevorgyan*

PSRC, head of telecommunications department

❑ *Armen Muradyan*

Union of operators” NGO, board chair





10 ՀՈՅԵՄԲԵՐ
NOVEMBER

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15:30 - 16:30 

#armigf2022

16:30 - 17:00 

NFT domains: competition or cooperation?

Arthur Varderesyan

Menq Consulting managing partner, IP & IT consultant

Vigen Arushanyan

President of the Armenian Blockchain Association

Davit Arakelyan

Crypto Development Armenia NGO, CEO

Arman Arzumanyan

Brandon LLC, CEO





10 ՀՈՅԵՄԲԵՐ
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17:00 - 18:00



Internet accessibility, support for vulnerable groups of Internet users, children online safety

☐ *Kristine Gyonjyan* (moderator)

Union of operators NGO CEO

☐ *Yuri Avetisyan*

Armenian association of the blind NGO of the disabled

☐ *Gevorg Gevorgyan*

PSRC, head of telecommunications department

☐ *Arshak Kerobyan*

Ministry of HTI of RA, head of digitalization department

☐ *Lusine Grigoryan*

Media Initiatives Center, media literacy expert

☐ *Lusine Muradyan*

RA, Ararat region, secondary school named after Levon Ghazaryan, teacher of informatics





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18:00 - 18:30



Wrap-up Q&A



*Opening and
welcome speech*



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☐ *Avet Poghosyan*
IGC, MHI of the RA

☐ *Igor Mkrtumyan*
Internet Society NGO board chair

☐ *Danko Jevtović*
ICANN, Board Vice-Chair

☐ *Anja Gengo*
Internet Governance and policy advisor at the IGF secretariat

☐ *Vahan Hovsepyan*
RIPE NCC, External relations officer

☐ *Kristina Hakobyan*
Internet Society NGO board member

*At the opening of the Armenian Internet Governance Forum 2022, the moderator, **Katarina Gevorgyan**, welcomed all high-level guests, online and onsite participants.*

*Katarina has informed about the format of **ArmIGF7**, as well as guided regarding the event details. She wished all the online and onsite participants and speakers a fruitful day, active discussions, and productive collaboration.*



*With this she invited for the welcoming speech the deputy minister of MHI of the RA, **Avet Poghosyan**. He mentioned that these kinds of events are very important and useful for the tech community of the country, especially for the Ministry of High-Tech industry of the RA which is the Chairman of the Internet Governance Council.*

Mr. Poghosyan said that sometimes the government stays behind with its new regulations, decisions and activities and the Internet Governance forum is the place where the field-related updates and new opportunities are presented, which of course push them to be more engaged and faster in the decision-making processes. As well as wished everyone a constructive day.





The ISOC Armenia NGO board chair Igor Mkrtumyan welcomed all the guests and highlighted the importance of the forum which allows bringing all the issues to one place to discuss and find better solutions for the Internet sustainable future.

Mr. Mkrtumyan distinguished several directions the ISOC Armenia works on.

The broadband Internet for the rural regions of Armenia will provide the young generation with high-quality Internet, especially in villages, and the government's involvement in this process is very important.

We need to create a “cyber army” in Armenia to stand against cybercrimes in the virtual environment. For that, we held a lot of classes for teachers, parents, and kids. But to reach everywhere we will need broadband Internet everywhere.

As of today, we have registered 40000+ domains in the .am zone. It is a small amount. People have to realize that the FB page is not enough to run small or big businesses, they have to register a domain name in .am zone, and create a website to go viral.

Representatives of two I star organizations welcomed the participants in pre-recorded video format.

Anja Gengo, Internet Governance and policy advisor at the IGF secretariat announced that the Global IGF is going to be held in Addis Ababa, hosted by the Ethiopian government and we are united to discuss the critical issues regarding Internet fragmentation, freedom of information, removing accessibility obstacles, good governance e.t.c.



Danko Jevtovich, ICANN Board Vice-Chair thanked the organizers, the ministry of HTI of Armenia, and ISOC Armenia chapter. ICANN has supported the ArmIGF for already several years. He provided information regarding ICANN activities and highlighted that ArmIGF is a great platform to discuss the issues connected with the Internet, domain names, and how to provide the safety of the online area.



Vahan Hovsepyan -RIPE NCC, External relations officer stressed that the Internet Governance forum is not only for governing the Internet better but for discussing the issues related to the Internet with as many people as it is possible and trying to understand in what reality we live and act.

He called that reality the 4th digital revolution, where digital transformations completely change our lives.

He underlined that cultures and nations that do not recognize the significance of these changes will fall behind and be compelled to play by the rules of other nations. We will be able to develop into a prosperous country once we understand that we must be leaders in every system. We have to understand what kind of developments and in which fields will push us forward, and for sure it relates to Internet development and effective governance also.

The Internet is a new reality, and we have to try to make it beneficial for our country, and for our society. As they say, the Internet is like a sea for the countries that don't have the sea, because it brings unlimited opportunities for everyone and everywhere.

Kristina Hakobyan -Internet Society NGO board member, also welcomed everyone on the 7th ArmIGF, and summarized the activities ISOC Armenia chapter has done during this period.

- Digitalization of libraries and support with computers (about 100 computers were donated to the libraries in rural regions of Armenia, but still, 2000 computers are needed)
- Working on Internet accessibility for people with disabilities.
- We are collaborating with different organizations and the government regarding the issues of online information safety and security.
- Regarding issues with the content under .am and .huy ccTLD, the arbitration system was implemented.
- As Kristina Hakobyan mentioned ISOC Armenia is continuously working on bringing accessibility and safety to the online environment, which is very important for our
- multistakeholder community.





□ *Hayk Chobanyan* (moderator)

Union of Advanced Technology Enterprises NGO

□ *Davit Sahakyan*

Ministry of High -Tech Industry of RA, deputy minister

□ *Hovhannes Aleksanyan*

The Office of the High Commissioner for Diaspora Affairs,
head of strategy development department

□ *Davit Grigoryan*

DevSoft, head of the company

□ *Hamlet Mkrtchyan*

Ministry of Economy of RA, deputy CEO at national center for
innovation and entrepreneurship



The panel discussion was about the situation we have nowadays in Armenia with a vast number of relocated companies from different countries, which is at the same time a challenge and an opportunity, especially in terms of internet governance.

This is one of the main topics for the tech community. So we brought this issue on this platform to discuss with the government representatives (Ministry of high-tech industry, ministry of economy), the private sector, and civil society.

Several points were stressed.

- ✓ We have to understand that relocation is a common process, though Armenia was never among the countries, where high-level companies and specialists relocate to, now the situation changed in 2022 and it showed that Armenia may lay up a claim on becoming that very place.
- ✓ The development of the regions of Armenia in terms of broadband Internet and the involvement of the representatives of the different sectors in that process.
- ✓ Another important side of the relocation tendency is that the repatriates from different countries will make it to Armenia and we have to help them with that.



As the deputy minister of the Ministry of High-Tech Industry of RA, Davit Sahakyan mentioned, the high volume of relocations was not expected, so the government had to deal with regulations of proper processes faster than they usually do. It was not easy and not smooth, but that was a great experience and proved that it is important to implement pro-activeness to react effectively further.

The government has decided that 50% of the taxes that relocated businesses pay for 10 or more employees would be reimbursed in order to help them deal with the challenges posed by the state of the world. With this, a significant number of recently registered tech companies were announced.



In order to assist the relocated businesses, they are assigned to areas with high-quality infrastructure and access to the Internet.

The deputy minister highlighted that in order to forward any development program for enhancing the potential of the tech community, good quality Internet service must first be made available in nearly every region of the country.



Hovhannes Aleksanyan emphasized that the Armenian diaspora is widespread and likely the largest in the world. The Internet plays a crucial role in bringing Armenians in various countries with disparate time zones together.

The Office of the High Commissioner for Diaspora Affairs ran several initiatives entirely remotely, particularly during the Covid era, so the value and the importance of the Internet good connection are on the first line.

The highest number of applicants for Armenian residency is recorded in 2022, and a major part of that procedure is done via the online system that the Passport and Visa Department of the Republic of Armenia implemented with the police.

The Office of the High Commissioner for Diaspora Affairs together with the Ministry of the economy of RA, provided consultation to relocated foreign companies on how to register and run their business in Armenia. In order to create a better environment the infrastructures including the Internet have to be improved. As well as a big data is creating better collaboration.

The representative of the private sector, **Davit Grigoryan** talked about the flow of foreign and Armenian entrepreneurs to Armenia, and the main goal is to create a proper environment to help them to stay and act in Armenia as long as possible. This is a strategic objective for our country.

With this, he encouraged the representatives of the government to stay in touch with the private sector so as to be really involved in solutions to different obstacles.



Hamlet Mkrtchyan mentioned that due to the situation in the world a lot of small and big companies moved to Armenia and the Ministry of Economy is the key supporter in terms of registration nuances, and tax regulations, as well as with the huge network inside and out of the country.

So, they are working on creating a «one-window» format platform with all the important and necessary information regarding all the regulations and programs that the relocated companies and not only can get engaged with.

Few programs were mentioned for the coming year

- The central bank of Armenia starts the classes « how to manage the risks connecting with USD rate fluctuations for the tech community and entrepreneurs. It will be a pretty good contribution to the field.
- The new strategy of the technology sector is under development and the ministry of high-technology is open to any offers which will help to bring the country to a new level of development.





□ *Liana Doydoyan*

Freedom of Information NGO, expert

□ *Davit Margaryan*

Head of the Legal and Licensing Department of the RA TV and RC

□ *Samvel Martirosyan*

ArmSec Foundation Director

□ *Arshak Kerobyan*

Ministry of HTI of RA, Head of digitalization department

□ *Grigori Saghyan*

Internet Society NGO board Vice-chair

□ *Hayk Mkrtchyan*

Head of Department for Combating High-Tech Crimes
in the General Department of Combated Crime of the Police

Liana Doydoyan, the moderator of the session, highlighted that the topic is very important for our country.

We must first comprehend the level of cooperation between the government and civil society. Should the government respond to security issues more strictly than civil society or other stakeholder groups?

What programs or strategies are now under consideration, taking into account the country's recent situation (44-day war, false information on social media and beyond, lack of official information, etc.)?





Legal restrictions on the decision to prohibit any online media outlet or social network do not exist. For instance, recent temporary access restrictions to the social networking site TikTok weren't applied by all mobile operators.

The reasons for these choices are never made clear because there is practically no law in Armenia that allows for the blocking of specific websites in the absence of war or other emergencies. These websites are closed down, then revived for unknown reasons mentioned by **Samvel Martirosyan**.

Davit Margaryan stated that there are a number of problems in the modern world of information security. The "On Audiovisual Media" law has been in effect in the RA since 2020, but there are still ongoing problems that must be fixed before the legislative rules are done.



The Internet Society of Armenia decided to monitor the websites under the .am and .huy domains on their own since there are no official laws in force. According to **Grigory Saghyan**, the rapid reaction team was established to respond quickly to any problems and take appropriate action.

The team includes members from the .am ccTLD registry, ISOC Armenia, police, and civil society. Collaboration in this stage between different stakeholder groups is the key to the right decisions. The government representative's function is also highly important in the discussions, so the monitoring group should be expanded.

On the other hand, in order to increase cyber security and lessen cybercrime, cyber and digital literacy needs to be developed. A variety of educational activities are carried out by the "Internet Society" NGO, including those for teachers, students, journalists, and others.

Since protecting and educating various socioeconomic strata is one of ISOC's key goals, the seminars will continue to be held.





There is a lot of work to be done in terms of regulations and policymaking so that there are clear guidelines when it comes to cybercrime, fishing, and misinformation, as noted by **Hayk Mkrtchyan**, head of the department for combatting high-tech crimes.

Because we must obtain additional information from Internet service providers, domain registrars, and other organizations where the information is typically restricted, the virtual world is even more harmful than the real one. Unfortunately, solving problems takes time.

Since there cannot be just one sector responsible for the fight against misinformation, we make an effort to include people from various government departments, and law enforcement agencies.

We must concentrate on the low while keeping in mind the boundaries between the concerns with information freedom and misinformation.



With all the points of view and problems that were raised, Liana Doydoan, an expert on “Freedom of Information” NGO concluded that we have to have

- reliable official information coming from the proper authorities
- a demanding and educated society
- knowledgeable media
- open communication and cooperation between all stakeholder groups



*Fragmentation of the Internet.
"Clean Network" or
"New IP"?*



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□ *Grigori Saghyan* (moderator)
Internet Society NGO board Vice-chair

□ *Vahan Hovsepyan*
RIPE NCC, External relations officer

□ *Thomas Mazejian*
CIO at MTS Armenia

The digital world reflects changes in the global order, significantly decreasing the likelihood of an Internet that is all-encompassing.

The globe is faced with a choice over how to use the 5G connection: to connect to the American or the Chinese system.

This choice is being presented by the fragmentation of the Internet.

In October, it was revealed that the US National Telecommunications Regulator (FCC) was required by the aforementioned statute to compile a "black list" of forbidden parties, which might include the Chinese firms ZTE and Huawei.

United States government institutions are already under orders not to cooperate with businesses that use Chinese telecom equipment.





The 7th Armenian Internet Governance Forum (ArmIGF-2022), which was held in full awareness that the fragmentation of the Internet is becoming a global challenge, discussed the economic, financial, technical, and other challenges Armenia would face if it joined one Internet management system over another.

The US embassy recently sent a request to the global Internet Society NGO as well. They have questioned the organization's use of ZTE or Huawei technology

If Armenia begins the process of switching to 5G connectivity, it is evident, even without this survey, that the specified ban may have an impact on the country. This was stated by **Grigori Saghyan**, the vice president of the ISOC Armenia Council.

The 5G network, the next-generation Internet connection, will need the globe to make a difficult choice. As a result, there may exist two Internet: one "American" and one "Chinese". Without suffering any harm, Armenia is attempting to stop Internet fragmentation. It requires proper alignment and careful planning. A schedule for the introduction of 5G connectivity has not yet been established by the RA authorities.

The New IP initiative, according to **Vahan Hovsepyan**, an external relations officer at RIPE NCC, is not just a Chinese endeavor; many other countries have already committed.

Any standards that are implemented must take into account a variety of factors from the perspective of RIPE NCC. There are risks, costs, and fees involved with discussing every problem with the technical community and the in-place structures.

Armenia's new IP topic isn't currently all that relevant, but a crucial factor is that right now, security is all that matters to the country's decision-makers. However, they must consult with experts and members of the technical community in order to get answers to questions like how challenging it would be to apply the new IP standards and what their benefits and disadvantages will be.

Therefore, we must comprehend that all stakeholder groups must be involved in the Internet governance area while implementing technological standards and making policy decisions. Understanding how all those choices and developments will impact the technical community, internet service providers, operators, and others will be helpful





Viva Armenia, one of the largest Internet and mobile service providers in Armenia, consistently puts customer satisfaction first. Demand is rising, which means there are more investments being made this year.

Of sure, we need improved management systems and proper governance in order to attract additional investment. We use both Chinese and US equipment when it comes to the equipment. However, we make a judgment based on how well it satisfies our technical requirements and what pricing offers are available, not on the manufacturing country.

In case the Armenian government decides that equipment from China or US is restricted, we will consider the new regulations. But it will affect different sides of the business. Unfortunately, the terms "New IP," "Clean Network," and "Internet Fragmentation" all refer to politics rather than technological advancements. The protection of customer data is the most crucial aspect of our jobs as the Internet and mobile service providers, thus security is a requirement for everything we do.



□ *Vahan Hovsepyan (moderator)*
RIPE NCC, External relations officer

□ *Igor Mkrtumyan*
Internet Society NGO board chair

□ *Dan York*
Internet Society, Low Earth Orbit satellite project leader/ online

□ *Karen Grigoryan*
Ministry of HTI of the RA, head of communication division

□ *Gevorg Gevorgyan*
PSRC, head of telecommunications department

□ *Armen Muradyan*
Union of operators” NGO, board chair

The satellite era of internet development has begun.

Cable Internet can be substituted by satellite Internet. The first need for using it is the availability of free frequencies; the benefit is that there are no geographical limitations.

What are the advantages and difficulties that Armenia will experience with the deployment of satellite internet? These topics were discussed in one of the professional circle sessions.





Dan York, the Project Leader for the 2022 Low Earth Orbit (LEO) satellite project was an online connected speaker and provided the LEO Satellite System—and how it can help to build an open, globally-connected, secure, and trustworthy Internet for everyone.

As well as, the data regarding the difference in satellite performance vs. fixed broadband Internet in Europe was provided.

Satellite Performance vs. Fixed Broadband Internet in Europe
Speedtest Intelligence® | Q2 2022

	Download (Mbps)	Upload (Mbps)	Latency (ms)
All Providers Combined, Romania	131.41	94.23	6
All Providers Combined, Spain	127.19	99.21	13
SpaceX Starlink, Portugal	123.01	28.52	43
SpaceX Starlink, Netherlands	122.43	16.17	48
SpaceX Starlink, Austria	112.01	17.14	53
SpaceX Starlink, France	110.98	16.39	57
SpaceX Starlink, Belgium	110.40	14.05	47
SpaceX Starlink, Hungary	109.56	20.53	63
SpaceX Starlink, Spain	109.44	25.87	37
All Providers Combined, Portugal	108.55	73.13	7
SpaceX Starlink, Sweden	107.96	19.80	57
All Providers Combined, France	107.05	88.22	12

Satellite Performance vs. Fixed Broadband Internet in Europe
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SpaceX Starlink, Austria	112.01	17.14	53
SpaceX Starlink, France	110.98	16.39	57
SpaceX Starlink, Belgium	110.40	14.05	47
SpaceX Starlink, Hungary	109.56	20.53	63
SpaceX Starlink, Spain	109.44	25.87	37
All Providers Combined, Portugal	108.55	73.13	7
SpaceX Starlink, Sweden	107.96	19.80	57
All Providers Combined, France	107.05	88.22	12

Dan York highlighted that the large systems of low earth orbit (LEO) satellites are being launched by businesses like SpaceX, Amazon, OneWeb, and Telesat in a race to deliver Internet connectivity.

The digital divide might be reduced because of these LEO "constellations," especially in rural areas. But they could also put Internet access into the hands of a few large companies and introduce new security and privacy concerns.



Advances in space technology have enabled satellites in [low earth orbit \(LEO\)](#), under 2,000 km from the ground, to provide Internet access that is faster and has a higher capacity. But, these systems are far more complex. Because they are orbiting close to the planet, they are always in motion relative to the ground and are not fixed over a location. Instead you need many LEO satellites to provide coverage. Some companies providing LEO Internet access are launching hundreds, thousands, and even tens of thousands of satellites!

Satellite Internet may provide the same speed throughout the entire country because the satellite signal is equally accessible in both high and low locations of the country. Setting up a network of land stations is not that difficult. Those stations are in charge of capturing the satellite signal and sending it to the servers. It will also be far less expensive than cable internet.

According to **Karen Grigoryan**, head of the communication division at the Ministry of HTI of the RA, the implementation of satellite Internet entails the resolution of a number of issues, requiring both a state-level strategy (since the subject relates to the security domain, which is particularly important for Armenia) and the involvement of the private sector.

The issue is that in order to access the frequency channels designated for government communications—which also serve the RA's defense ministry and National Security Service - they must first be untightened. This is a completely new technology, which develops very fast and we have a lot to do, not to stay behind. We expect the procedure done by the end of the next year.





The online participants asked what the actual opportunities, plans, and objectives were for Armenia's deployment of 5G. **Gevorg Gevorgyan** estimates that Yerevan, the capital of Armenia, will likely have 5G service in two years and two other major cities in three. Even though it won't be the best, it can be applied to the Internet of Things. Internet service providers will be informed about the tender. In order for people in various places to have access to the same quality of Internet connection, internet service must comply with the necessary criteria.

Unfortunately, we can see that over those two years, nothing was done and the state did not allow access to the frequency, mentioned **Igor Mkrtumyan**. So, in order to test it and determine whether we will be able to utilize it in rural areas, ISOC Armenia has ordered a Starlink item of equipment. Anyway, we have to hurry, because the world is developing pretty fast, and the technology era requires a proactive attitude.





Armen Muradyan, board chair of the Union of Operators NGO, announced the project that was undertaken in collaboration with the government, ISOC Armenia, and Internet service provider Arpinet to connect Shaghap village in the Ararat region to the Internet.

A lab called "Armat" was developed in the community as well to give the next generation a chance to advance their digital skills.

We still don't know for sure how Starlink will operate, how many satellites it will require, or how much it will cost. The competition will be intense, and what offer will be made to Armenia is still up in the air. There shouldn't be equality across the board because different countries have varying standards and opportunities.

Armenia has to be ready for this digital transformation and have a clear vision for building out its Internet infrastructure.

NFT domains: competition or cooperation?



#armigf2022

□ *Arthur Varderesyan*

Menq Consulting managing partner, IP & IT consultant

□ *Vigen Arushanyan*

President of the Armenian Blockchain Association

□ *Davit Arakelyan*

Crypto Development Armenia NGO, CEO

□ *Arman Arzumanyan*

Brandon LLC, CEO

Web3 is an opportunity to introduce new features of the Internet.

Blockchains, digital currencies, and NFT domains serve as the foundation for this approach of building a decentralized mechanism for data recording and storage. The adoption of bitcoin, the first cryptocurrency, made blockchain well-known. Blockchain is already regarded as suitable and adaptable for every industry and job function.

The time, location, and author of each piece of data are automatically identified with this method as they are stored across tens of thousands of servers.

The back number cannot be changed due to the blockchain's level of security. Armenia's technological community is also involved in the development of new Web-related features.

In Armenia, a free economic zone was established in 2018 with the goal of developing blockchain technologies. In 2021 97% rise was announced comparing with 2016.



The industry-leading application for tracking digital currency is Armenian, which is supplied from Yerevan. One of the most well-known bitcoin brands just had a commercial shot in Yerevan.

We may also utilize other instances to demonstrate how our technology community has a significant opportunity to increase the adoption of blockchain , **Vigen Arushanyan**, president of the Armenian Blockchain Association, stated this.



According to the information he provided NFTs (non-fungible tokens) are a distinctive sign of personal identification, the creation and operation of which are free, in contrast to the currently popular TLDs (top-level domains). NFTs that apply to Web3 are completely owned by the registrant. They could be used to safeguard copyright and crypto trade.

The blockchain in Web3 ensures that NFTs are unique. In other words, a fraudulent token cannot be produced. This also gave rise to the notion of adding additional content to NFTs in 2016–17. And in 2020, smart contracts were introduced, with the initial list of items including artwork later being enlarged. Tokens were linked to cryptocurrency wallets, making it feasible to make money.

Davit Arakelyan the CEO of Crypto Development Armenia NGO, presented nowadays trends in cryptocurrency. Explained how it will change the economy in general and in our country particularly.

This is an unstoppable process, so the country should gain the advantages from this in terms of tech developments.



The CEO of the domain registrar company BrandOn, **Arman Arzumanyan** stated that NFT domains and overall NFTs in branding and in domain name field are coming to create the new virtual assets.



Although Web3 features have already caught the attention of well-known businesses, the moment for observable competition between these names is not far off, even if TLD domains are now utilized far more frequently than NFTs.

Web3 is a brand-new platform for human innovation and advancement. By limiting undesirable influences, the Internet community is currently working to arrange the task of bringing it to an area of widespread application.

The practical interest and participation of Armenian businesses are crucial at this time. The Armenian professional community has a great chance to set new trends in the worldwide market for this industry, the moderator, Artur Varderesyan, summed up the ArmIGF-2022 thematic discussion.



☐ ***Kristine Gyonjyan*** (*moderator*)
Union of operators NGO CEO

☐ ***Yuri Avetisyan***
Armenian association of the blind NGO of the disabled

☐ ***Gevorg Gevorgyan***
PSRC, head of telecommunications department

☐ ***Arshak Kerobyan***
Ministry of HTI of RA, head of digitalization department

☐ ***Lusine Grigoryan***
Media Initiatives Center, media literacy expert

☐ ***Lusine Muradyan***
RA, Ararat region, secondary school named after Levon Ghazaryan,
teacher of informatics



The evolution of society is facilitated by internet access.

In Armenia, internet access services are provided by 13 landline operators, 204 network operators, and 3 mobile operators. As of July 2022, there were 3.5 million customers.

Broadband Internet access is offered by fixed communication providers to 650 localities in Armenia. 98% of the people in 550 of those towns have access to the Internet using an optical cable network.

Kristine Gyonjyan, CEO of the Union of operators of Armenia informed that the plans for the near future are to carry out this work within the framework of the "Community Networks" project, having had a similarly successful experience in Shaghap village of the same region with 230 farms. Efforts of private, civil, and state sectors were united. As a result, 4 more villages have to be connected to the Internet in order to consider the Ararat region as having the Internet.

The country reports a 10% annual rise in the provision of broadband Internet due to the expense of economic growth.

Yuri Avetisyan, CEO of the Armenian association of the blind NGO of the disabled highlighted that access to the Internet is crucial for enhancing vulnerable people's quality of life.

People who are blind or visually impaired can now control their movements and activities online thanks to speech programs that are now in use.

Access to the internet is what connects our community to reality. The association of blind NGO members has the ability to read, write, and discover a method to earn a living online.

However, in order to include more blind people and give them equal access to opportunities, we must update our technical infrastructure and acquire new items.



Several projects were launched with the help of the ISOC Armenia chapter, and members of the blind association were invited to speak at other Internet governance-related events (ArmSIG, Digital literacy, etc.).



The RA Ministry of High-Tech Industry plans to make digital services available where they are not already available by the year 2024, stated **Arshak Kerobyan**.

There is a digital transformation strategy in Armenia. It has to deal with the reliability, equality, and accessibility of digital and Internet services. Investments include financial planning, policy-making procedures, and other essential resources.

The head of the telecommunications department at PSRC, **Gevorg Gevorgyan**, emphasized the importance of the government's measures and noted that 200 districts in Armenia had no telephone connections as a result of the telecom operator's monopoly. There was none provided.

We provided the resources that could be provided for a minimal cost. Instead, they demanded entire services under definite parameters and at the necessary standard.



The expert from the media initiatives center Lusine Grigoryan presented a report on "media literacy week," a project they initiated with the Ministry of Education and Science.

When it comes to the information people get from the various media, a serious lack of trust in the official information exist. On the other side, almost 50% of people never check the URLs they look through while seeking for information.

It is pretty difficult to understand what part of the nation are media educated.

The facility has been actively running for ten years, primarily focusing on teachers and pupils of school age. According to **Lusine Grigoryan**, a lot of teachers from all over the country are really motivated to improve their technical proficiency.

The media initiatives center has worked with about 1000 teachers on media literacy, information verification, what to look for while conducting searches on the global Internet, threats, and ways to safeguard children from the dangers that virtual reality poses. A number of online games have been released to make learning procedures more entertaining for kids.





The teacher of informatics at the secondary school of Ararat region Lusine Muradyan was invited to talk about the high-quality Internet accessibility of Shaghap village that was initiated by the Union of operators. It makes it easier to organize online classes for the school while having teachers from other regions.

The absence of transport in the community stops the children from attending classes on internet technology in other areas. A robotics classroom was constructed in the school in 2022, and it is a fantastic opportunity for the education of young people in the IT industry. Now they can get it while staying at home.

Children's online safety is another significant issue. To protect children online, parents and teachers must first become media literate. Each stakeholder group has a role to play in these processes to make the Internet better and safer both today and in the future, summed up **Kristine Gyonjyan**.

ArmIGF 7 in numbers

Participants 107

- *Online 16*
- *Onsite 91*

Sessions

- *Panel discussions 6*
- *Presentations 7*

Volunteers 10



Media coverage

The event was streamed online on Zoom, Facebook, and YouTube. The hashtag **#armigf2022** was used in the posting. Journalists from both traditional media and social media covered the event as well.

Links are provided below:

<https://www.aliqmedia.am/2022/11/11/91242/>

<https://rb.gy/h9kba4>

<https://www.aravot.am/2022/11/10/1303758/>

<https://www.aravot.am/2022/11/10/1303793/>

<https://rb.gy/qbjn6g>

<https://rb.gy/i0ahtt>

<https://www.youtube.com/watch?v=S7TfEgISe>

[Qo](#) (started from 24th minute)

<https://www.youtube.com/watch?v=5KtKwMkfwYM>

<https://rb.gy/wu08oo>

<https://fb.watch/hyIPS0SXZC/>



The ArmIGF 2022 team thanks

To all the regional, local, international, and corporate sponsors for supporting the seventh Armenian Internet Governance Forum, for hosting it, for bringing all participants together both in person and online, for helping to provide an open and transparent forum to discuss Internet issues, for participation, and for public media coverage of the event.

Additionally, thank you to the conference attendees, volunteers, moderators, rapporteurs, interpreters, journalists, photographers, designers, printing service suppliers, and everyone else who helped make ArmIGF 2022 a success.



Special thanks to

The Ministry of High-tech Industry of Armenia, Internet Governance Council, Internet Society Armenia Chapter NGO and Internet Society NGO as Conference Organizers as well as Internet Society (ISOC), ICANN, Internet Society NGO, IGFSA and RIPE NCC for sponsoring the conference.

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