

Internet Governance Forum 2020
Internet Governance Forum Group
Guatemala Chapter, Internet Society



IGF Forum Report
Guatemala, October 2020

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1. Foreword

This is the fourth time we have an Internet Governance Forum in Guatemala. This year, due to the world pandemic we are living due to the Coronavirus, we decided that it will be very difficult, if not impossible, to host a Forum like we had on the three previous years. The social distance regulations dictated by the Ministry of Health makes it very difficult to gather in close places. Our meeting had to be held like a video conference. We began to work in May of this year with basically the same group of stakeholders, however, there were a few that had other events in their agenda, and they preferred not to be part of our Committee. The list of this year stakeholders is below.

- Ministry of the Interior;
- Ministry of Education;
- Country Representation of UNESCO;
- Technology Campus;
- ISOC Chapter;
- Guatemalan Association of Private Schools;
- Asociación Empresarios por la Educación;
- Guatemala Internet Exchange Point Association;
- Guatemalan Chamber of Technology and Innovation;
- Universidad del Istmo

2. Planning

We began to meet steadily in July, we used ISOC's Zoom account to meet every week. After several meetings we realized that to do our IGF this year it was going to be more difficult than in previous years. Then, we moved the date of the IGF from September to the last Wednesday of October.

We decided to host electronic forums about the topics we felt were the most important from the Internet Governance in Guatemala on this new era. They are:

- Network Neutrality;
- Protection of Personal Data, Cybersecurity;
- Public Policies;
- Education for the XXI Century and beyond;
- Internet Infrastructure;
- Internet as a tool in the new era.

We had a host for each electronic forum and for our event. From funds we had from previous IGF, we got a good prize for the Webex meeting and events platforms, which we used for the event on October 28. We had several rehearsals. As expected, we had some problems at the beginning, but then everything went smooth.

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We invited two well know authorities as guest speakers. Olga Cavalli to deliver the opening statement, and Robert Zambrana for the closing statement.

3. Communication Strategy

As part of our communication strategy, we used the electronic forums to invite people to join us for the main event. We now have a “radio program” on the Internet, it airs every Tuesday night at 20 hours Central America time (GMT -6); it helped us promote our electronic forums and the main event.

We found that the Press Conferences, or Breakfast Session for the Press, like we had the previous years were a thing of the past. No Press Conferences are held on video. Therefore we invested in Twitter and Facebook. We hired a person to create videos promoting our electronic forums, the radio programs and the Forum. The artwork is attached to this

History of Internet in Guatemala: <https://www.youtube.com/watch?v=flgOPx-xXs8>

State and evolution of Guatemalan Internet Infrastructure: https://www.youtube.com/watch?v=-z0emFYiNq4&list=PL0KyvmMgZI9yP56zqgkZowZg31_1JA-Xp&index=2

Education for the XXI Century and beyond: <https://www.youtube.com/watch?v=Ru6JwzkKPuQ>

Gender breach in Guatemala:

https://www.youtube.com/watch?v=A1WBZaTYB74&list=PL0KyvmMgZI9yP56zqgkZowZg31_1JA-Xp&index=4&t=73s

Public Policies: <https://www.youtube.com/watch?v=vz10iVu7i6U>

Network Neutrality: <https://www.youtube.com/watch?v=1W5NifKU-B8>

4. Agenda of the Forum

Internet Governance Forum Guatemala 2020 AGENDA Wednesday October 28	
16:00 to 16:05	Welcome. Alvaro Galvez, Manuel Rodas. ISOC Guatemala Chapter
16:05 to 16:08	National Anthem
16:08 to 16:12	Words from the General Coordinator of the Guatemala IGF Fred Clark, ISOC Guatemala Chapter
16:13 to 16:20	Welcome words from representatives of the participating institutions and organizations.
16:20 to 16:50	Opening Conference: The economic impact of the COVID-19 Pandemic on the Internet. Keynote speaker: Olga Cavalli, ISOC Board of Directors

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16:50 to 17:00	Recess and instructions to join the three virtual conferences
17:00 to 18:00 (Simultaneous)	Public Policies, Moderator: María Mercedes Zaghi Protection of Personal Data, Cybersecurity, Moderator: Román Estuardo Cancinos Network Neutrality, defense of Freedom of Speech, Moderators: Fred Clark, Estuardo Alvarado
18:05 to 18:10	Recess and instructions to join the three virtual conferences
18:10 to 19:10 (simultaneous)	Education for the XXI Century and beyond, Moderators: Diana Brown, Manuel Rodas, Kimberly Barrera, Verónica Spross de Rivera Internet Infrastructure: Moderator: Marco Antonio Tó Internet as a tool in the new era: Moderators: Estuardo Sandoval, Donald Rodas
19:10 to 19:15	Recess
19:15 to 19:45	Conference: 5G beyond a new generation of mobile telephone service, Keynote Speaker: Roberto Zambrana, ISOC Bolivia Chapter President
19:45 to 20:00	Forum's conclusions and recommendations, presented by each forum moderator
20:00 to 20:15	Closing statement: Alvaro Gálvez, ISOC Guatemala Chapter

5. Development of the event

The day of the event we get together in 40 minutes before the hour to make sure we were able to join the main event. Then we separated into our individual events and participated as expected, kept a record of the questions and comments for our conclusions and recommendations. The opening and closing statements were incredible good. We are very fortunate to have them deliver the speeches on our Forum.

It was a different from the previous three years, not been able to see the audience was strange, but we all were glad to get our share of questions and comments. The event closed around 20:30 hours, a little later than expected.

6. Conclusions and recommendations

Below are the conclusions and recommendations gathered from each of the Forum Leader's.

General conclusions:

- It became evident the lack of a legal framework in the country on issues related to the Internet for the protection of Guatemalan users of all ages;
- The lack of a Legal Framework does not offer protection to Internet users, especially children and teenagers;
- The participation of a wider audience in the Forum provided us with a broader range of opinions and points of view on the topics discussed at the forum.

Public Policies:

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There are various issues related to public policies on the digital issue that were mentioned and are key for our country in the current economic reactivation due to the pandemic.

- Indicators and statistics of the technology sector need to be strengthened to attract investment among others and measure progress;
- Community networks as an alternative to decrease the digital gap;
- There is no National Broadband plan;
- The Cybersecurity Law has not passed yet, there are many cybersecurity issues because of the lack of a legal framework;
- Need to know if there is the “Remote Work”, or “Work from home” legislation, if any; rules and statistics from this sector;
- There is a need for transparency, to learn about the Digital Government and Open Government initiatives;
- The Government reports progress on connectivity, e-signature, e-commerce, and digital procedures;
- Broadband Internet Service coverage is still low for all rural areas of Guatemala.
- Also important are the innovation policy and, of course, inclusion issues, connectivity and access problems that were reported, and have been reported on rural areas.

Protection of Personal Data, Cybersecurity

- Security is a vital issue when developing any type of application especially if the application contains personal data or of great social impact, further more if, it is going to be a web application accessible to a large number of people.
- Many times, the above is an aspect in which unfortunately, not all the effort is devoted. This is why there are numerous security flaws in applications, which compromise the business, even causing significant losses of both information and monetary.
- Any piece of technology that processes information can be used in criminal actions. It does not need to be a mobile phone, PC or tablet.
- The examiner generally provides all the supporting documentation, highlighting relevant information, but also a report detailing the data what was extracted.
- As with other types of evidence, proper chain of custody and collection and extraction techniques are critical to the credibility of the evidence and must be fully documented.
- The laws governing prosecution and prosecution differ from state to state.
- Digital crime can easily cross jurisdictions, making standardization an increasingly critical problem for law enforcement, requiring the development of a Guatemalan protocol and manual for digital evidence management.
- Quality control and warranty is similar to other forensic specialties in the Cybersecurity lab, you must have and follow guidelines.

Network Neutrality

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- In our country, the issue of Network Neutrality is not known to all Internet users, the exposed information caused surprise, it was not known that filtering and censorship were part of Network Neutrality;
- Content is arbitrarily filtered on specific sites for self-interest reasons;
- There is concern on the part of users that Internet service providers should actively involve in investing in educational applications;
- In some countries the Central Government censors the content, pressuring service providers for political interests.
- What is mentioned in the information source is not always what the social networks publish.

Internet as a tool for business in our new time

- Before the COVID-19 Pandemic, the internet was a basic tool for the development of any business. The Pandemic changed that dependence on the internet business, from basic to being strictly necessary for the existence of any business, migrating all operations from face-to-face to remote through the internet.
- The pandemic brought with it a great responsibility to take advantage of user-generated data.
- Data generated from online applications trend predictions for consumer habits or quality of life, depending on who uses the data.
- The Internet can only help businesses prosper where the Internet service is available.

Infrastructure

- In Guatemala we see a slow deployment of high capacity technologies, both fiber optic and cellular networks. The foregoing, both in the country's capital or urban centers, and more slowly in the interior of the country and rural areas.
- Many times we focus on cellular technologies 3G or close to 4G in the Capital City, but there is a lot of opportunity area to grow in the interior of the country, where there is little or no cellular coverage; and those places where there is coverage, have bandwidths of 2G or 3G technologies in the best of cases, that is, with very poor capacity.
- The COVID-19 pandemic brought to light that residential and cellular networks have few options for new technologies and this impacted many in the time of confinement, having stability and capacity problems of their residential links to be able to carry out better way your telecommuting tasks and online education.
- Currently the market has old technologies such as Digital Subscriber Line (xDSL) or HFC (Hybrid Fiber Copper) networks, which are slightly newer, but only in the Guatemala City or some of the departmental seats.
- The thought of Fiber to the Home - FTTH through PON (Passive Optical Network) technologies can be seen in some apartment buildings in Guatemala City, where the first investment in infrastructure is minimal, but a Massive deployment nationwide is still in the long run.
- 5G technologies will take a medium to long term to reach Guatemala. This will depend on the political will of various actors, starting with the Central Government of Guatemala and that of a

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market that in turn demands new forms of access with greater capacity, which in turn makes investment of this type viable.

- Fiber optic technologies are making greater advances, the latest technology of "Super Channels" in optical media was presented. This technology has the capacity to transmit around 30 Tera bits per second (Tbps), through a single fiber optic strand, improving the capacity of the current fiber already installed, by more than 30%.
- Recently began the operation of the first Internet Traffic Exchange Point in Guatemala (IXP.GT for its acronym in English)
- The IXP provides a neutral and local point in Guatemala so that different ISPs, Content Generating Networks (CDNs) and different organizations can exchange traffic locally, without the need for the traffic to leave the borders of Guatemala. This brings many benefits, such as minimizing the delay of user access to content, security by maintaining local traffic, resilience in the Internet of Guatemala due to the main Internet services that will be implemented, such as root domain servers, copy of the ccTLD.gt, security in routing between ISPs, among others.

Education for the XXI Century and beyond

- Technology has become the key instrument for the development of various teaching methods, through interactive platforms that allow students to test their knowledge in a dynamic way and through video conference tools that provide an approach more personalized between student-teacher.
- The dynamics of a hybrid education must have the student involved through interactive activities which require not only responses in real time, but also require investigative procedures, teamwork, as the skills of the twenty-first century.
- The most used dynamic and with great success is "Flip the classroom". This tool allows the student at home to observe and work on material prepared by the teacher, through videos and other inputs, and then upon returning to the classroom, whether virtual or face-to-face, concerns and doubts are shared, the results obtained, milestones reached.
- The evaluation, additive and formative, has undergone modifications in accordance with the requirements of the new methodologies. The wide use of platforms, which have different evaluation modalities, provide varied styles of dynamics.
- The interaction of the teacher with the student is of great importance, imparting a human moment in the process. The debate is a model that allows the student to demonstrate their range of knowledge in addition to communication skills.
- The implementation of projects provides the opportunity for the student to demonstrate the mastery acquired, in the disciplines involved.
- Regarding the "hardware", there is a great variety of devices available for the educational population. There is no perfect device; and the essential approach to find the right one is the age of the student.
- The example of pre-primary levels and the use of "touch" devices; from high school especially, and the use of laptops, (laptop) and some use of desktop. In that instance, the inclusion of keyboard and mouse is necessary.

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- The pedagogical objective is also a guide for the best choice; including the programs and applications necessary for the use of the device, and the RAM that may be required.

Recommendations:

Overall recommendations:

- Need to have a Legal Framework in Guatemala, through passing a Cybersecurity Law.
- Need to have a National Internet Broadband Plan in Guatemala, with tangible and achievable goals.
- Strengthen the Community Network initiative in the rural areas of Guatemala to increase the Broadband Internet Service.
- Maintain Network Neutrality, neither the Government, nor private companies, like Social Networks should filter what the users publish, with the exception of what is widely accepted as subject to censorship, like child pornography, or to promote illegal actions or crimes.
- The Guatemalan Government should develop a plan to incorporate Computer technology in the classroom in Public Education.
- Use the electronic forums from the igf.gt page to continue the discussions about Public Policies.

Public Policies:

- The coverage of broadband internet service outside Guatemala City and its surrounding, as well as main Department Seats is very low. Many connectivity and access problems are reported. These problems should be solved by the Internet Service Providers.
- The group will try to continue their discussion on the electronic forum of the Guatemalan igf.gt site.
- The group agreed to organize with the support of the ISOC Guatemala Chapter more events about this subject in the near future.

Cybersecurity:

- Users must feel safe and have some confidence that our data that we are transferring will be protected against possible attacks (although what we also have to bear in mind is that our security is always something that will be in the spotlight)
- Businesses should be responsible for offering a safe service and make an effort to do so.
- Security should be the first aspect to take into account when developing any application, therefore, it based on applying methodologies that allow us to make secure applications.
- To carry out a secure development, in security matters, among other things; it is always recommended to use frameworks or libraries of the community or of companies before those developed by ourselves (since we cannot have all the vision that a community can have entire developer).
- To develop secure applications it is recommended to take into considerations three aspects:
 - Improve the security of applications;

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- Implement metrics about the security of the applications;
 - Raise awareness of application security;
- Countries should foster communication and cooperation, as well as ensure quality and consistency within the forensic community.
- To ensure the most accurate analysis of evidence, a forensic laboratory should implement policies and procedures governing facilities and equipment, methods and procedures, and analyst qualifications and training.
- Depending on the state or country in which it operates, a Cybercrime laboratory may be required to achieve accreditation to verify that it complies with quality standards, for that reason it is urgent to implement generally accepted standards and procedures in Guatemala to process digital evidence.

Network Neutrality

- Carry out information campaigns to train and educate users in order to transmit their reports on irregularities they receive from their service providers on the subject of Net neutrality.
- There must be an audit entity that receives and evaluates the reports of anomalies made by the users of the Network.
- The arbitrariness committed by any person, entity or Internet site in the content filtering must be classified as a cybercrime, since the procedure is given as is.
- Internet service providers must be involved in the provision of educational services to give added value to their users.
- Internet users must assert their right to defend the Neutrality of the Network by denouncing any fact that conflicts with it.
- Maintain Network Neutrality, neither the Government, nor private companies, like Social Networks should filter what the users publish, with the exception of what is widely accepted as subject to censorship, like child pornography, or to promote illegal actions or crimes.
- Users of social networks should report those publications that do not agree with the real facts.

Education for the XXI Century and beyond

- It is of the utmost importance that the video camera is open during the entire educational process as well as during evaluation times.
- Urge all ISPs, content generators, academia and any organization that has its own Autonomous System Number, to interconnect with the Guatemala traffic exchange point, IXP.GT.
- Imperative detail: adequate and constant training in the use of any device
- The human factor and its interaction with the use of the Internet in the educational process is an essential element in the integral development of the student. The organizational climate of the educational community, especially the support of the parent in the mediation process of the learning process, depends intrinsically on the knowledge and use of the Internet.
- The socio-emotional factor filters the process, and the inclusion of parent training in the use of technological tools becomes essential for a good educational result. It is true that the educational

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process was continued at a distance due to the goodness of the networks, connectivity and devices.

- The socio-emotional factor filters the process, and the inclusion of parent training in the use of technological tools becomes essential for a good educational result.
- It is true that the educational process was continued at a distance due to the goodness of the networks, connectivity and devices.
- The family environment, being this already the axis of the educational community, must include support in the development of skills and abilities of the parents or guardians who are at the side.
- The tools should be as friendly as possible, with simple and clear instructions for use. If it is not understood, it will be a challenge to understanding and instead of creating a socio-emotional environment of openness and creativity, it can lead to an environment of frustration, thus slowing down learning
- Initial teacher training, such as ongoing training for in-service teachers, ensure effective use of the Internet network.
- Even if the classroom is returned to the classroom, technology will be the mainstay of education from the twenty-first century onwards, and it is imperative that platforms, applications and search engines driven by the internet and their use are present within training at all times.

Internet as a tool for business in our new time

- Businesses should be very careful not to trade with user's data without their written consent. There should be fines for businesses that use unauthorized data.
- Promote the country's software industries in international markets.
- Promote the Internet coverage throughout the country to have more people benefit from internet-based technologies.

Infrastructure:

- It is necessary to diversify the deployment and penetration efforts of the Internet both in the Capital City, as well as, and just as important, in the interior of the country.
- Access to new technologies that can give better bandwidths, even using spectrum frequencies that were previously used for other services, is imperative to investigate.
- Community networks is an excellent effort for communities, but we must also think about the most remote places, which must first see basic infrastructure, such as electricity and computer equipment, to later be able to add the Internet layer.
- New technologies such as TV White Spaces (TVWS), satellite access, among others, are good ways to introduce communities to the Internet for the first time, but it is insisted that we must also think about the deployment of fiber optics, which will later allow the installation of more advanced technologies and of greater capacity.
- It is recommended that the effort be made by several actors to improve infrastructure in Guatemala, from the central government, municipal government, private initiative, academia and

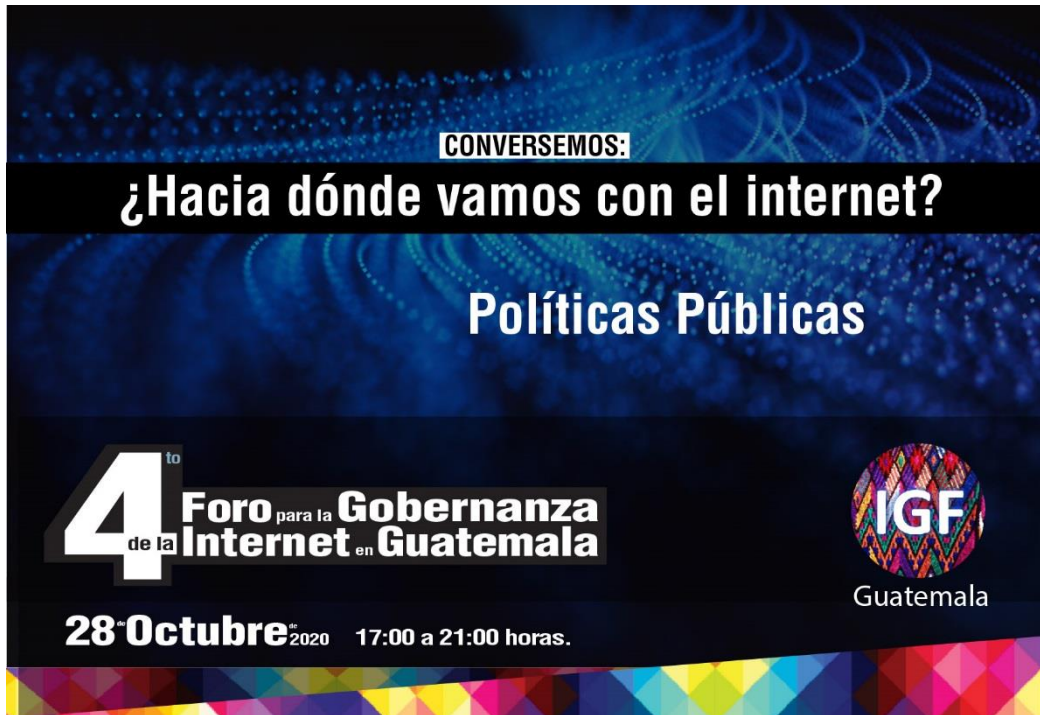
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international entities, creating synergies between several will make the investment shared and with better possibilities of success and expansion.

- Urge all ISPs, content generators, academia and any organization that has its own Autonomous System Number, to interconnect with the Guatemala traffic exchange point, IXP.GT.
- The Central Government must provide a healthy environment and free competition, so that the allocation of frequencies of the radio frequency spectrum, rights of way of optical fibers, installation of towers and cells, etc., promote the economic growth of users, companies, communities and eventually all of Guatemala.

Annex 1

Art to promote our event



Invitation to the Public Policies Forum



Invitation to the Cybersecurity Forum.



Invitation to the Infrastructure Forum.



Invitation to the Network Neutrality Forum.



HABLEMOS SOBRE: Políticas Públicas

Por una Internet libre, segura y confiable.



4^{to} Foro para la **Gobernanza**
de la **Internet** en **Guatemala**

f **Online** facebook.com/IGFGT
Miércoles **28 de Octubre**, 2020
17:00 a 21:00 horas.

Invitation to the Public Policies Forum.



HABLEMOS SOBRE: Internet

Herramienta en todos los negocios en la nueva normalidad



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Invitation to the Internet as a business tool in the new era.



Invitation to the Forum.



Invitation to the Forum.



Invitation to the Forum.