Republic of Korea IGF Report 2019

"Sustainable Internet, Governing Together"

Slogan, Venue and Date

■ The slogan of the 8th annual meeting of Korea Internet Governance Forum(Kr-IGF) was "Sustainable Internet, Governing Together"

■ Date : July 5, 2019 (Fri)

■ Venue : Convention Center, Sejong University, Seoul, South Korea

■ Websites

○ Kr-IGF Program http://igf.or.kr/category/2019-krigf/2019-prog

○ Korea Internet Governance Forum(Kr-IGF) http://www.krigf.kr/

○ Facebook: https://www.facebook.com/krigf.kr/

○ Youtube: https://www.youtube.com/channel/UCLS-Tn-Ibkvu6ngPdhFQobA/videos

■ Host : Korea Internet Governance Alliance (KIGA)

■ Co-organizers: Korea Internet & Security Agency (KISA), Electronics and Telecommunications Research Institute(ETRI), Korea Hosting Domain Association, Naver, Gabia, Cyber Commons, Kakao Corp., Open Net Korea, Hankyul Law Group, Korean Progressive Network (Jinbonet), Korea Internet Corporations Association, Korea Information Society Development Institute (KISDI), Future of Internet Forum, IPLeft, CODE (Creative Commons Korea), GP3Korea (16)

■ Sponsors : Ministry of Science and ICT, Kakao Corp., Naver, Gabia, Hankyul Law Group (5)

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Key Discussion Areas : Cybersecurity, Privacy, Platform Economy, AI

The 2019 Kr-IGF event begun with keynote speeches by Jinsoo Lee, the Ministry of Science and ICT, and Myoung Sun Noh, Korea Internet & Security Agency. The event consisted of eight workshop sessions, two tutorial sessions and one open public hearing. Workshop sessions provided three thematic sub-tracks: 'Internet for All', 'Safe Internet', and 'Internet as Resources'

The Internet for All track has workshop sessions as follow : (1) 'What is The Internet the Youth Want', (2) 'Internet Access and Sustainable Development in Underdeveloped Economy', and (3) 'The Multistakeholder Approach to

Governance'. **_Safe Internet_** track offered (1) 'Cyber Threats using AI : How to Countermeasure it' and (2) 'Cybersecurity and Democratic Governance'. Then, **_Internet As Resources_** track covered (1) 'Platform Economy and Labour in the era of the Fourth Industrial Revolution', (2) 'GDPR Compliance Implementation and Privacy of WHOIS Domain Name Holders', and (3) 'The Future of Net Neutrality Regulation: Network Fee for Cache Server, Network Slicing, and Zero Rating'.

In addition, **_Tutorial sessions_** provided general public with introduction on 'Public Heading : the 2nd level of Numeric Domain Introduction Policy' and 'Double-edge Applications: Ethics & Governance of AI'. Besides, 'Open Data Licensing in Participatory Platforms ' session was proceeded in open-public hearing style.

Outcome of the 2019 Kr-IGF

South Korea's Internet Governance Forum(Kr-IGF) has ben activated in 2012 as a nationalwide event. 2019 Kr-IGF annual event convenes all interested sectors : corporate entities, civil society, young users, start-ups, entrepreneurs, technical community, software developers, activists, data scientist, academics, governmental agencies and public sector institutions. Through 2019 Kr-IGF, diverse stakeholder groups had meaningful opportunities to discuss and, make comments on policy questions pertaining cutting-edge technologies and Internet. In particular, the event highlighted the major policy related problems facing society today : the relationship between platform economy and labour in the era of Fourth Industrial Revolution, Cybersecurity, Privacy, Net Neutrality, and artificial intelligence. The event ushered multi-stakeholders to productive policy dialogues. In addition, Kr-IGF was featured with ICANN's participation which organized a workshop session which discussed the importance of multi-stakeholder approach in Internet governance.

It was notable that Kr-IGF hosted two Youth workshops at first time that were prepared by trainees of Asia Pacific Internet Governance Academy and college students. Kr-IGF shared viewpoints from domestic dialogues of the national IGF with various participants of the Asia Pacific Regional Internet Governance Forum (APrIGF) in Vladivostok, Russia. In 2019 APrIGF, Kr-IGF brought significant input on multi-stakeholder based cbersecurity policy-making, disinformation, and social, ethical, political ramification and inclusion of artificial intelligence.

Kr-IGF had stenographers dictate statement of speakers in the venue, and consequently it enhanced the accessibility of disabled persons to IGF workshops. Moreover, college students who worked as supporters widely publicized Kr-IGF annual meeting online via blogging and facebook posting. KIGA Secretariat re-arranged video footage archive of the IGF workshops in Youtube channel. (https://www.youtube.com/channel/UCLS-Tn-Ibkvu6ngPdhFQobA/videos)

Korea Internet Governance Alliance (KIGA)

Korea Internet Governance Alliance (KIGA) is a multi-stakeholder platform that facilitates the discussion of public policy issues pertaining to Internet policy and it intakes discursive voices. Its organizational nature is a coalition of private and public sector that advocates for a multi-stakeholder approach to Internet governance. It brought stockholders ranging from public institutions, technology companies, Internet entrepreneurs, users, technology start-ups, academics, to civil society organizations, so that they could actively participate in discussion on governing Country Code Top-Level Domain (ccTLD) resources and Internet polices. KIGA has been run by diverse stakeholder groups including governmental agency, based on the bottom-up decision making process.

KIGA Meeting held in Seoul, South Korea (2019)

☐ Kr-IGF Youtube

www.youtube.com/channel/UCLS-Tn-Ibkvu6ngPdhFQobA/videos
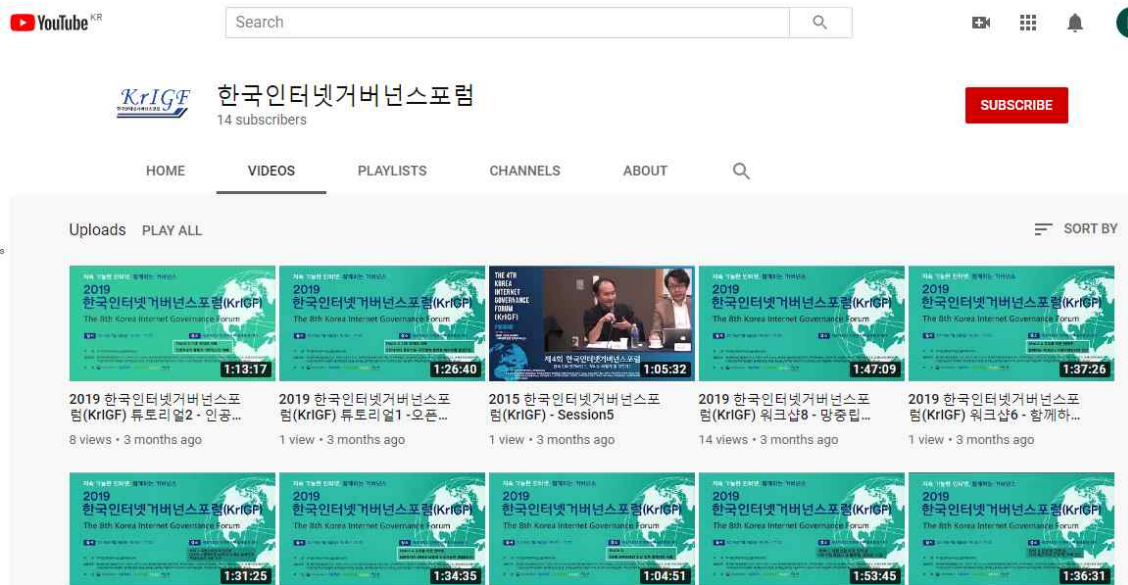
☐ Kr-IGF Facebook

www.facebook.com/krigf.kr/

2019 Kr-IGF Program Committee

The Kr-IGF Program Committee in 2019 prepared the annual meeting bringing regional stakeholders together. In May, the Committee announced open call for the event seeking a wide range of participation from all sectors. Therefore, any personnel and organizations wanting to participate were invited to submit proposals for workshops or tutorials. After receiving proposal applications, the Committee applied criteria to evaluate workshop proposals. The four major criteria in the evaluation process were:
 * Level of organization: 25%
 * Relevance: 35%
 * Format : 25 %
 * Diversity : 15%

Here is the list of the Program Committee members.
- Byoung-il Oh, Korean Progressive Network Jinbonet, Civil Society (Chair)
- Boknam Yoon, Hankyul Law Group, Civil Society
- Jihwan Park, Lawyer, Civil Society
- Boknam Park, Youngin Digital Industry Promotion Agency, Civil Society
- Miru Lee, Korean Progressive Network Jinbonet, Civil Society
- Kyu-Hong Lee, Hipo-Farm, Civil Society
- Yeseul Kim, KAIST, Civil Society
- Sun Young Shim, Sungshin Women's University, Academia
- Jae Won Son, Korea University, Academia
- Young-eum Lee, Korea National Open University, Academia
- Dongman Lee, KAIST, Academia
- Eun Chang Choi, The Free Internet Project, Academia
- Hyun Soo Kang, Tech Community
- Dongi Lee, UNIST, Tech Community
- Eunphil Choi, Kakao Corp., Private Sector
- Sang Hyup Lee, Naver Corp., Private Sector
- JaeWhan Kim, Korea Internet Corporations Association, Private Sector
- Tae-eun Kim, KISDI, Public Institution
- Kum-noh Lee, Korea Consumer Agency, Public Institution
- Boyoung Kim, KISA, Public Institution

- Jeong Min Lee, KISA, Public Institution

2019 Kr-IGF Program

Track 1	Track 2	Track 3	Track 4
Internet for All	**Secure Internet**	**Internet as Resources**	**Tutorials**

Time	Sessions			
09:30~ 10:00	Registration			
10:00~ 10:45	**Opening Ceremony (Main Hall)** ☐ **Congratulatory Remarks :** Jinsoo Lee (Section Chief, Ministry of Science and ICT) Myoung Sun Noh (Internet Service Support, KISA) ☐ **Opening Speech** **[Academia]** Dong Man Lee (KAIST) **[Corporate Entity]** Joung Hyun Shin (Korea Hosting Domain Association) **[Civil Society]** Jae Won Son (Korea University) **[Tech Community]** Sun Young Han (Konkuk University) **[Public Sector]** Hae Nyoung Huh (KISA)			
10:45~ 11:00	Break Time			
10:45~ 12:15	**Youth Session: What is The Internet the Youth Want?** ☐ Moderator: Donggi Lee (UNIST) ☐ Presenter: NaKyong Lee (Keimyung Univ) ☐ Panel: Moohong Lee (Korea Cyber Univ), Boosung Koo(Deolux) Minsung Kim(Bangeojin High), Yoolee Cho (Busanjin High), Seonho Choi(Kyoungbook Univ)	**Cyber Threats using AI : How to Countermeasure it?** ☐ Moderator: Eun Chang Choi (Free Internet Project) ☐ Presenter: Kyoung Kon Kim (Korea Univ) ☐ Panel: Joohyong Oh (KISA), Hyun –jeong Lee(Koscom), Kyoungho Kim(S-Oil)	**Platform Economy and Labour in the era of the Fourth Industrial Revolution** ☐ Moderator: Kwang Seok Lee(Seoul Tech Univ) ☐ Panel: Seong Jong Lee (Platform Workers Union), Meena Jung(Korea Startup Forum), Young Mee Choi(Life Magic Care Coop)	**Public Heading : the 2nd level Numeric Domain Introduction Policy** ☐ Moderator: Boknam Yoon (Hankyul Law Group), ☐ Presenter: Jeong Min Lee (KISA) ☐ Panel: Kyong Ran Kang (Ajou Univ), Young-eum Lee (Korea National Open Univ)
12:15~ 13:30	Luncheon			
13:30~ 15:00	**Internet Access and Sustainable Development (SDG) in Underdeveloped Economy**		**GDPR Compliance Implementation and Privacy of WHOIS Domain Name Holders**	**Open Data Licencing in Participatory Platforms**

	□ Moderator: Dain Won (Chung-ang Univ) □ Presenter: Sohee Kim (Mount Holyoke Univ) □ Panel: Hyemin Bae (Yonsei Univ), Hasun Yoo (Cheonbuk Univ), Yearim Hwang (Sookmyong Univ), Tae-eun Kim (KISDI)		□ Moderator: Kyong Ran Kang(Ajou Univ) □ Panel: Sang Min Kim (Gabia), Boknam Yoon (Hankyul Law Group), Eung Jun Cheon (You-me Law Group), Young Woo Shin (Korean National Assembly Research Service)	□ Presenter: Jeo Un Park (Data Analyst) □ Presenter: Jihwan Park (Lawyer)
15:00~ 15:15	Break			
15:15~ 16:45	**Working Together : The Multistakeholder Approach to Governance**	**Cybersecurity and Democratic Governance**	**The Future of Net Neutrality Regulation: Network Fee for Cache Server, Network Slicing, and Zero Rating**	**Double-edge Applications: Ethics & Governance of AI**
	□Moderator: Jia-Rong Low (ICANN) □ Panel: Bryan Tan (Former President, ISO Singapore), Boknam Yoon (Hankyul Law Group), Yesul Kim	□ Moderator: Jihoon Cho (Lawyers for a Democratic Society) □ Panel: Byongil Oh (Jinbo Net), Seokchul Kwon(Cubepia), Seoung Joo Kim (Korea Univ), Young Woo Shin (National Assembly Research Service)	□ Moderator: Ka Yeon Kim (Open Net Korea) □ Panel: Heejoung Lee (Korea Univ), Mino Choi (Security Consultant), Hongwha Song(Netis Korea), Yeol Um(Ministry of Science and ICT)	□ Presenter: Eun Chang Choi (Free Internet Project)

Summary of Workshops and Tutorials

Session	Workshop #1. Youth Session: What is The Internet the Youth Want ?		
Time	July 5. 11:00~12:30 am	Venue	Convention Center, Sejong Univ
Moderator	Dongi Lee (UNIST)	Presenter	Na Kyong Lee (Keimyung Univ)
Panel	Moohong Lee (Korea Cyber Univ), Boosung Koo(Deolux) Minsung Kim (Bangeojin High School), Yoolee Cho (Busanjin HighSchool), Seonho Choi(Kyoungbook Univ)		

Internet itself has been widely used by people from all walks of life. So various users' positions or opinions should be reflected. Because the environment of Internet usage are different, there is a generation gap. To fill the gap, the voices of youth should be taken into account in terms of multistakeholderism. Currently students cannot use mobile phones during the class and other educational activities without the permission of teachers. Most schools allow teachers to have authority to confiscate the electronic devices and return them after school or a month later. These practices caused much inconvenience and made human right complaint. The National Human Rights Commission recently recommended that complete ban of mobile phone in schools violates the freedom of communcation. Schools are not obliged to follow the recommendation because that it is not legally binding. Therefore, schools and students are at odds over phone bans. It is notable that students user' voice and their ownership are hardly found in discussion about whether lifting phone bans or not in schools. Basically, schools seems to be engrossed in banning far from guiding students how to use it in appropriate ways. Instead of insisting the flat ban rule based on top-down approach, schools would better look into the needs of students, so that schools can adopt reasonable criteria－for example without permission in case of family emergency, mobile banking and for purposes of education.

   The Internet is characterized by its connectivity, but it has double-sides. While innovative devices like smart watch or AI speakers certainly improve the quality of life, many individuals remain deeply over the possible misuse of personal data. While social media platforms provide easier way regarding how to post content, the youth are not much aware of how users data are being used for commercial purpose. They are unfamiliar with detailed privacy setting and the benefit from limiting the range of personal data. When young users download smartphone apps, they are also not knowledgeable what will happen after compulsory agreements of app without other choice. When young people brows online news or rumors, they tend to subconsciously believe all of them without filtering or skepticism. All kinds of information is easily accessible online, but the youth's media literacy is not sufficient to winnow out truth from falsehood. In particular, algorithms for content distribution are often biased to get more attention of users. To enhance media literacy, schools are asked to provide relevant training or education program.

Session	Workshop #2. Cyber Threats using AI : How to Countermeasure it?		
Time	July 5. 11:00~12:30 am	Venue	Convention Center, Sejong Univ
Moderator	Eun Chang Choi	Presenter	Kyoung Kon Kim (Korea Univ)
Panel	Joohyong Oh (KISA), Hyun–jeong Lee(Koscom), Kyoungho Kim(S-Oil)		

Although AI has many positive applications, we should be mindful of and proactive about the potential for its misuse. AI experts warned potential security threats from malicious uses of AI in 'Malicious AI Report'. These threats range from deepfake video, disinformation news bots to adversarial attacks. These dangerous activities are highly likely to cause harms in the physical world and undermine national security. In the near future, most of cyberattacks will be carried out automatically. If attackers rely on machine learning to capture data, analyze it, cyberattackers will certainly improve its accuracy and efficiency. A series of adversarial attacks on AI system can make it do something other than what it was intended to do. It misleads machine learning into a false prediction that will be linked to system down or damages. Adversarial examples make machine learning models vulnerable to attacks. For instance, a self-driving car crashes into a wall because it ignores a stop sign.

Attribution of cyberattacks is inherently not an easy task and it takes time and resources to analyse tiny trace of evidences. Using commodity malware and exploiting tools already helps them avoid detection and attribution. AI makes attribution much more difficult. As the number of connected devices(IoT) in 5G networks, there will be more loopholes that hackers can easily infiltrate into the system. However, international consensus on cyberattacks is blurry. There is no consensus on where to draw the line for self-defense in cyberspace. Tallinn Manual also turned out to be inadequate. Therefore, regulatory code would hardly become an effective way to deter a series of attacks from unknown actors.

On the flip side AI can effectively detect attempts of cyberattacks which is can be one of the most effective prevention methods to block malicious cyber-attacks. AI is at the cusp of enhancing the security in the financial industry, and it helps to detect fraud, predict credit score to prevent fraud. To respond to cyber threats, it became important to use AI to secure detection technology with high level of accuracy. 'K-Cybesecurity Challenge' event provides compeition tracks 'AI-based malware detection' and 'automatic vulnerability detection'. Through the event, Korea Internet & Security Agency (KISA) shares various vulnerability discovery models with private sector which already adopted in public institutions. Overall, what matters to cybersecurity would be a showdown between attacker's AI and defender's AI.

Session	Workshop #3. Platform Economy and Labour in the era of the Fourth Industrial Revolution		
Time	July 5. 11:00~12:30 am	Venue	Convention Center, Sejong Univ
Moderator	Kwang Seok Lee(Seoul Tech Univ)		
Panels	Seong Jong Lee (Platform Workers Union) Meena Jung(Korea Startup Forum), Young Mee Choi(Life Magic Care Coop)		

Crowdworking platform, on-demand services and gig economy depend on labour in physical world. These are basically newly adopted labour delivery system but both national and gloabl labour scheme put countless platform workers out of social protection system. digital platform become a driving economic force across many industries and at the same time some challenges are unfolding in a society. Against this backdrop, this workshop sesesion was proposed to discuss the instability of gig economy workers.

In platform labor market, the number of low-skilled jobs are prevalent. Platform labor market is not genuine innovation, but it merely digitized the existing industry.

How can we empower more workers to create a working environment that suits their need? With this question, the panelist looked into the relationship between platform owner and gig workers. We need to consider platform workers' labour rights and social safety-net that at leasti should include health insurance and social security.

Platform Workers Union contended that Korean labour law should be applied for gig workers in case they are in joblessness because of unexpected industrial accidents. When digital platforms charge fees to customers, the revenues from platform business model should be shared with gig workers. Since traditional labor-management relations could not accommodate an emergent phenomenon of gig workers, they are currently put in fairly vulnerable situation. To this end, social consensus is required prior to providing protection for them. But provided that the Labor Standards Act is very rigid, the government should lay the groundwork for discussing gig workers' rights.

On the other hand, most start-ups believe that platform companies deserve to get legitimate earnings from a commission fee, as they have invested significant R&D expenditures to materialize creative ideas. And also platforms are not simply brokering transactions but successfully replacing the advertising market.

To tackle challenges regarding platform economy, government and companies need to estabilish rule and good practices. At the same time gig workers are setting up community organizations like 'coop' which can speak for voice for profit sharing. In platform economy, the labour market is much more fragmented. Thus, vulaberable gig workers will have to rely on the connected power of labour union (for example. delivery couriers, chauffeur service, housekeeper etc.) We are being faced with the rise of the platform economy. To achieve consensus on labor welfare in on-demand service platforms, a mutual understanding between gig workers and platforms are required. Based on that consensus, our social institutions will be evolved accordingly.

Session	Workshop #4. Youth Session: Internet Access and Sustainable Development in Underdeveloped Economy		
Time	July 5. 13:30~15:00 pm	Venue	Convention Center, Sejong Univ
Moderator	Dain Won (Chung-ang Univ)		
Presenter	Sohee Kim (Mount Holyoke Univ)		
Panel	Hyemin Bae (Yonsei Univ), Hasun Yoo (Cheonbuk Univ), Yearim Hwang (Sookmyong Univ), Tae-eun Kim (KISDI)		

The access to the Internet has become an essential factor for the growth and human rights in underdeveloped countries. Despite its importance, universal and affordable access to the Internet is far way due to high level of costs, insufficient infrastructure and devices, monopoly of a few telecommunication companies prevalent in developing and emerging countries, and lack of content in various languages.

Student panelists discussed the role of the United Nation agencies, civil society, and social enterprises. They are making towards building a more inclusive global information society. Each actor strive to implement the SDGs, which make it possible for citizens of the poorest countries to use Internet services at low cost. They commented on pros and cons of zero-rating and Project Loon that provide Internet access without financial cost under certain conditions. In addition, ITU's activities in Africa focusing on ICT infrastructure development, Overseas Development Aid (ODA) cases, of ICT4D projects were covered.

Panelists moved on how 1) how the Internet access can help economic development, and sustainable development (SDG) ? 2) how we curb social adverse effects dealing with malicious information (sensational disinformation, harmful content) while sharing valuable information? (daily weather, e-commerce, market price of crops, health & disease, and educational content)

Then, panelists put their heads together to analyze the co-relation between poverty, democracy and Internet access. In some countries shutting down or controlling access to the Internet is go-to strategy. They suggested blockchain-based project information as a solution. Since the structure of digital ledger has no cental server, authoritarian governments will not have the power to censor or control it for political reasons.

More importantly, students underlined the importance of Internet's influence on primary education and empowering women. Developing educational content means a lot to children in poor countries because they are faced with a shortage of educational materials. One Laptop per Child (OLPC) was designed to be a non-rugged device to meet affordable prices. MobyStation only focused on the hardware. However, it lacked enough educational content for illiterate children. In this regard MOOC would be ideal solution.

Through the Internet, women could gain information they need in a safe environment. It's clear that education for women is linked to enhancing women's rights. But ODA projects for education and gender equality are rarely available.

Session	Workshop #5. GDPR Compliance Implementation and Privacy of WHOIS Domain Name Holders		
Time	July 5. 13:30~15:00 pm	Venue	Convention Center, Sejong Univ
Moderator	Kyong Ran Kang(Ajou Univ)		
Panel	Sang Min Kim (Gabia), Boknam Yoon (Hankyul Law Group), Eung Jun Cheon (You-me Law Group), Young Woo Shin (Korean National Assembly Research Service)		

Domain name is a textual identifier that allows Internet users to easily identify an IP address. Domain names play a key role in using the Internet, and issues have been raised continuously. In 2016, the transfer of domain name management from the US Department of Commerce to ICANN has completed. Meanwhole, from May 2018, European Union's General Data Protection Regulation (GDPR) came into force. It raised a critical question with regard to privacy protection of WHOIS. WHOIS is a query and response protocol that is widely used for querying databases that store the registered users.

   As the GDPR became de facto global rule, ICANN recognizes that collecting personal information should comply the GDPR. ICANN and the Internet community are looking into basic questions 1) why they should collect the registered users' information and disclose it. 2) how to define the purpose and means required by the GDPR in context of WHOIS. 3) how to safely disclose personal information of the registered users in WHOIS to the public.

 In #5 workshop session, penelists discussed following points:
 (1) ICANN's Approach: Interpretion of the compliance of GDPR pertaining to WHOIS system
 - Defining the purpose and scope of data processing for WHOIS operation
 - WHOIS has non-disclosed personal information : To which extent third parties can access to
   WHOIS information, and certification process for the access.

 (2) GDPR compliance to WHOIS: How it also impact on domestic Internet governance
 - GDPR matters to WHOIS at the gTLD level, but it can be applied to ccTLDs such as .kr and the name dispute dispute resolution system. In a process of criminal investigating, authority will ask to access WHOIS information.

 (3) Personal Information Protection Issue from the Registrar's Perspective
 - Registrar directly processes the registred personal information.

 (4) Legitimate methods to access WHOIS information : Review from the viewpoint of due process
 -Registred information of WHOIS can be reviewd through open WHOIS server. It would be possible also through court warrants, Article 83 of the Telecommunications Business Act (subscriber information), the Criminal Procedure Act. Panelist discussed how WHOIS information should be processed from a perspective of due process of law .

Session	Workshop #6. Working Together : The Multistakeholder Approach to Governance		
Time	July 5. 13:30~15:00 pm	Venue	Convention Center, Sejong Univ
Moderator	Jia-Rong Low (ICANN)		
Panel	Boknam Yun (Hankyul Law Group) Sandra Kim (Interpreter) Bryan Tan (ISOC Singapore) Yeseul Kim		

Speakers shared their own experiences applying the multistakeholder model of Internet governance at the national level in their own countries (i.e. South Korea and Singapore). They talked their experience in engaging the wider community, including general Internet users. Jia-Rong Low highlighted the difference between 'governance of the Internet' and 'governance on the Internet'. Traditionally, Internet Governance meant only the former, but the latter came to accommodate various issues beyond the Internet itself. He explained the background regarding how the multistakeholder model has been suggested, and how it applied to Internet Governance platforms including the Internet Engineering Task Force (IETF), the Regional Internet Registries (RIR), as well as ICANN. The multistakeholder model is directly associated with Internet Governance, but it comes with its challenges such as the need to balance inclusivity and accountability, which are resource intensive, while pushing policies and standards forward to keep up with evolving technologies and needs.

Yoon highlighted KIGA's history and structure, and how KIGA has been working in recent years towards having changes made to the Internet Address Resources Act to better recognize the multistakeholder approach to Internet governance. In terms of engaging the wider community, Boknam shared that a challenge for KIGA was to engage general Internet users.

Bryan Tan shared concrete examples of ISOC Singapore's efforts to engage different stakeholder groups on various issues they have concerns on, such as when the government drafted new laws to license online news websites or tackle fake news. What helped made their engagements effective was that ISOC Singapore would typically start with capacity development to help stakeholders understand an issue first. This could be in various forms, like talks, dialogues, and training sessions. Bryan displayed a case where Internet users faced legal action for circulating controversial content online. ISOC Singapore helped by running a simulation exercise for those concerned to help them understand what they could do. A Korean participant asked for details on how the simulation exercise was run. In his answer Bryan suggested participants' role play which lead people to better understading and self-awareness,

Kim called for more youth leaders to come forward, and encouraged them to join programs like the Asia Pacific Internet Governance Academy (APIGA). Globalization means Internet governance also naturally becomes globalized. While the multistakeholder model has its weaknesses, it is the closest model suitable for Internet governance. Learning from ISOC Singapore's experience, Kim hoped that ISOC Korea coud help to engage the wider Korean community in the near future.

Session	Workshop #7. Cybersecurity and Democratic Governance		
Time	July 5. 15:15~16:45 pm	Venue	Convention Center, Sejong Univ
Moderator	Jihoon Cho (Lawyers for a Democratic Society)		
Panel	Byongil Oh (Jinbo Net), Seokchul Kwon(Cubepia), Seoung Joo Kim (Korea Univ), Young Woo Shin (National Assembly Research Service)		

At the beginning of the workshop session, each panelist expounded hir/her own understanding an concepts of 'cybersecurity' or 'security'. This session primarily discussed the reasonable role of the National Intelligence Service. A panelist examplified a practice of private sector to stress a lack of process that sharing cyber threat information between the Ministry of Defense, National Intelligence Service (NIS) and private security companies even after the initial outbreak of cyber attacks. There is broad consensus that improved information sharing is critical to combating cyber threats. In this light, it would be desirable that cyber security-related information and clues must be well shared with department and security agency. In actual practice, conversely, information sharing is only delivered vertically (a top-down management style)

Kim pointed out that a taxonomy of electronic data must be in place. Although there is the legitimate need of building the cybersecurity taxonomy, Korea does not have it. Standards such as what kinds of data may genuinely affect national security as well as what sort of data should be treated as confidential.

A panelist from the National Assembly argued the collaboration would be possible only after the NIS clearly identified the scope of practice area and its purview regarding cybersecurity. Oh emphasized that the NIS should clearly distinguish its roles from other agencies and should handle cybersecurity practices transparently. He continued to argued that the reform of NIS is needed so as to limit its role as a foreign intelligence agency.
Other panelist express sympathy with Oh and said tha the NIS should obtain only the minimum amount of information and the rest of the information must share with other agencies through transparent partnership.

In addition, Kim suggested that if the National Assembly is to establish new control tower of cybersecurity other than NIS, the new agency should be given legitimate authority to have control over task. Currently, regardless of public institutions and private companies, those who were attacked tend to hide the security incidents. Kim argued that the realistic view is required in that preventing all sorts of attacks would be infeasible. Rather, it is suggested to revise a paradigm shift from perfect prevention scheme to 'cyber resilience', that is the ability to restore the original state quickly.

Overall, panelists generally agreed with following points: 1) the need of comprehensive cybersecurity control tower 2) pertaining executive force of the control tower agency based on hierarchical structure in the government organizations 3) the need of transparent cyber threat information sharing 4) clarification of 'data security' concepts.

Session	Workshop #8 The Future of Net Neutrality Regulation: Network Fee for Cache Server, Network Slicing, and Zero Rating		
Time	July 5. 15:15~16:45 pm	Venue	Convention Center, Sejong Univ
Moderator	Ka Yeon Kim (Open Net Korea)		
Panel	Heejoung Lee (Korea Univ), Mino Choi (Security Consultant), Hongwha Song(Netis Korea), Yeol Um(Ministry of Science and ICT)		

 To make the Internet work effectively, it must be fully connected. To this end, network packets must be flowed without conditions. A network packet is a formatted unit of data carried by a packet-switched network. This is the basic principle of net neutrality.

 Network access fee is paid to connect each user's electronic devices to the Internet. Network usage fees, on the other hand, are expenses that both the sender and the receiver have to pay on their way. If a dispute arises where a network fee is required, the individual will no longer be able to become the subject of mass communication. This is because it is necessary to pay the network fee in order to upload content that is popular among users. Therefore, the concept like a network fee does not exist in foreign countries in this regard.

 There may be suggestion about changing the way the Internet works. Even when consider this suggestion, however, it is not desirable for a particular operator to change the way the Internet operates using its status, which is also a realm of network neutrality principle. The easiest figure to look into the competition in the network connection market of each country. According to the stastics in 2018, the interconnection fees in Korea is the highest price.

 Zero-rating means you can only lift the limit for specific content while maintaining pay as you go. There is a 2017 report showing that one in two consumers are changing their carriers due to zero ratings. Internet users see zero ratings as an important factor when choosing a carrier. In terms of zero rating, Chile and the Netherlands found it violates net neutrality rule. Other countries don't see that it violates net neutrality rule. In the discussion of whether to do zero rating or fast line, we have to consider that network market in South Korea is very competitive.

 As for network slicing, 5G uses a different frequency than traditional 1G to 4G. For those who are able to pay, 5G can be used by those who pay more so that they can benefit from it. However, if the 5G is split and the difference between the high speed lane and the normal lane is used, the users cannot use the high speed lane. even if there is a problem in using the normal lane.

 The general internet access also plays an important role in everyday life as well as the premium Internet. For example, delivering information to general applications such as KakaoTalk in case of a disaster. It would a mistake to build a high-speed line with a reason that Internet resources increased.

Session	Public Heading : the 2nd level of Numeric Domain Introduction Policy		
Time	July 5. 11:00~12:30 am	Venue	Convention Center, Sejong Univ
Moderator	Moderator: Boknam Yoon (Hankyul Law Group)		
Panel	Jeong Min Lee (KISA) Kyong Ran Kang (Ajou Univ) Young-eum Lee (Korea National Open Univ)		

The second level of number domain refers to a domain name where domain consists of numbers (and hyphens (-), eg 1588.kr, 118.Korea). Overseas countries have allowed it since 2001, but in Korea, registration was restricted in consideration of the possibility of introducing ENUM service (possible to fax, phone, and e-mail with one identification number) at the time of introduction of the 2nd stage .kr domain in '06. However, three-level numeric domains (eg 118.or.kr) are allowed to register numeric domains from the beginning.

Korea Internet & Security Agency(KISA) organized a joint research group regarding numeric domains. The working group examined various issues that may occur when introducing numeric domains.

1. Restriction on registration of special numbers with publicity

  -10Y, 12Y, 13YY, and 107, 182, 188 numbers, such as 119, 120, and 107, 182, and 188 are controlled by the Telecommunication Code Management Regulations. So these numbers are required to be registered only by the relevant institutions to prevent public confusion and maintain public order.

  -10Y series numbers such as 100, which have been used for a long time as a service provider's customer center number, should not be restricted, but priority registration should be given to the relevant institutions for a period of about two months during the initial stage of registration of the second stage male domain to prevent national confusion.

2. Numbers indicating profanity : no need of restriction

  - There is an ambiguity problem of profanity restriction criteria

3. Restriction on registration of mobile phone number, etc .: no need of restriction

4. Restriction on Registration of Unique Identification Number (Resident Number, etc.)

  -In principle, registration identification policy such as resident registration number and passport number is required to protect personal information. In this regard, regulations should be established to enable follow-up actions such as extinction in case of violation

Session	Tutorial #1. Open Data Licensing in Participatory Platforms		
Time	13:30~15:00 am	Venue	Convention Center, Sejong Univ
Presenter	Jeo Un Park (Data Analyst)		
Presenter	Jihwan Park (Lawyer)		

This tutorial session introduced national participation platforms and showed how to use it. And then, two presenters explained draft of desirable open data licensing model, in particular regarding copyright. It is necessary to process existing data and analyze it. But the current laws are focused on protecting author's interests rather than allowing data analysis. Thus, it is difficult to utilize big data without getting explicit agreement from users. Since it cause enormous transactions cost, alternatively change of 'terms of use' would be better.

In South Korea, 'Kookmin Seangak Ham'(https://www.idea.epeople.go.kr) means citizens' think-box. 'Gwanghwamun 1st Avenue' (https://:www.gwanghwamoon1st.go.kr) is a representative participatory platform that citizens easily can access and suggest ideas together that will shape national policy. Gwanghwamun 1st Avenue is a place the main policy engagement available and through connecting various governmental websites. Citizen can participate in reviewing case studies related to government's policy and service through the platform.

Draft of Open Data Licensing in National Participatory Platforms
① The copyright of the post posted by the member in the service belongs to the member, and Government Innovation 1st Avenue can use the member post for the purpose of posting and processing in other services in the government.
② Anyone posting a member can copy and modify the work if it is deemed necessary in the process of extracting value from the information generated by processing the posting with the computer and analyzing the results, and the member must allow usage of data.

Session	Tutorial #2. Double-edge Applications: Ethics & Governance of AI		
Time	13:30~15:00 pm	Venue	Convention Center, Sejong Univ
Presenter	Eun Chang Choi (Free Internet Project)		

Enhanced algorithms and mass data analysis is rapidly changing AI applications in industry. Accordingly, there are bight side and dark side regarding AI applications. The Beneficial AI conference presented the Asiloma Principles that provided ethical prerequisites for using AI. But concerns over the AI accountability gap resurfaced. The tutorial was designed to illustrate application of AI and guide audience to understand ethical responsibility regarding possible misuse of AI, computational bias, Black Box problem and insufficient accountability.

Analyzing big data and machine learning shed a light in humanitarian activities in the field of global public health in underdeveloped countries in terms of sustainable development goals. For example AI is being used to diagnose malaria, and UN Global Pulse's Uganda suggested projects based on big data analysis. AI is used to identify inflows, disasters and respond to public health crises. AI traces up global environment phenomenon and climate change. In 2016 the International Telecommunication Union (ITU) launched 'AI for Good', a technical and academic community. "AI for Commons" is proposed which is useful for SDGs by linking networks of intergovernmental organizations. UN Global Pulse Uganda uses big data analysis to identify inflows, disasters and respond to public health crises in certain area.

On the flip side, harmful AI use cases includes digital security (hacking by machine learning, perception error due to hostile machine learning) physical security (terrorist drone attack) and politics security (profiling, monitoring, automated false information campaigns). Moreover, residents worry about rise of facial recognition. (China's Skynet Case, Face Recognition in Facebook Photos, Amazon Rekognition without users' explicit consent). And algorithms are used for preventive security or predictive policing like PredPol but it relies on low-quality of poor data sets. In this light the principle underlying GIGO (garbage in, garbage out) is essential when it comes to the real world deployment of algorithms.

Data is crude for the AI industry, and algorithms. So, data acquisition is very important. In countries without special privacy protection, such as China, the supply of data becomes easier. AI ethics requires 1) data governance and 2) data provision and 3)accountability. data provenance refers to a record trail that accounts for the origin of a piece of data (in a database, document or repository)Reliable data is essential for accurate judgment. Structured metadata designed to record the source of the data must be transparent so that, even if problems arise, the cause can be found or corrected. On AI ethics and regulation discussed in the international community. It is necessary to look into global discussion about AI ethics and refer to its implications for the direction of the 4th industrial revolution policy in Korea

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