"Insight of the TOP"

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"Opportunity for Challenge
- In the era of IoT and Big data-"

Under rapid transition into the era of IoT and Big data, Republic of Korea is one of the leading countries who is responding to these opportunities and challenges proactively. At the occasion of the APT Cyber-Security Forum in Cambodia, I interviewed Dr. Lee and asked about current ICT policy and r egulatory issues in Korea, especially personal data protection and privacy perspective.

- **What ICT business and consumer trends we should observe in Korean market?**

A lot of things are going on. First, let me explain some figures. As of March 2016, Korea's smart phone and high-speed internet penetration rates were 91% and 94% respectively, which were the highest in the world. The average access speed of high-speed internet is 29Mbps, and Korea has continuously maintained the fastest speed since 2014.

Accordingly, convergence services are growing significantly with transitions to a smart society where most Koreans can conveniently use smart phones and have access to high-speed internet. As seen in the development of smart cars, smart healthcare, smart homes, smart grids and smart education, ICT convergence is expanding rapidly across every sector and is improving quality of life for Koreans.

Furthermore, by providing a variety of movies and dramas online, OTT services are fulfilling viewers' demand to watch only the media content they want at an affordable price. With media convergence and the introduction of new market players, operators are finding themselves in a heated contest with new competition.

Under these circumstances, consumer protection issues are becoming more and more complicated. The rise of convergence services has created a regulatory blind spot for consumer protection, where harm to users in this new area is not regulated in either field.

Furthermore services that use personal data such as IoT, cloud computing and big data are growing at a fast pace. Although technical and institutional standards to protect personal data are already in place, there are continuous, large-scale personal data breaches due to the lack of effort and investment.

In addition, the surge of cyber fraud like malware infected smart phones, phishing and mobile phone bill fraud is a serious societal issue costing the economy hundreds of billions of won every year.

- In order to respond those trends and challenges, what are the important policy and regulatory issues to be tackled in coming few years?

There are several dimensions in this aspect. First, spectrum is the source of competitiveness for ICT services. Korea needs to respond to the increase in data traffic and to supply sufficient spectrum when needed in order to promote technology development.

The Korean government supplied spectrum for the 5G pilot service in January 2016 and conducted an auction of the 140MHz LTE spectrum band in April 2016. We are planning to secure and supply more than 300MHz of spectrum necessary for new services such as IoT, drones, and self-driving cars.

Specifically, in light of the urgency of new technology development like 5G, the government drew up the 5G

Master Plan in January 2014 and proposed a roadmap which includes a pre-5G demonstration in December 2015, pilot service by December 2017, and full-scale service by December 2020. We will make the necessary policy to develop technology according to the roadmap and provide services in due time.

Second, we recognize that current regulations are limited with respect to new media services based on internet and mobile such as OTT or web content. Thus, we are drawing up measures to promote these new services. We will remove current technology-based regulations which distinguish between RF-based cable/satellite service and IP-based IPTV service to promote competition.

Third, the advent of diverse telecommunications services and new forms of services has also inevitably caused harm to users. There is a need to strengthen users' capacity and to form a protective environment. Korea plans to legislate a new law so-called the Broadcasting and Telecommunications Users Protection Act in order to combine protection causes in separate laws and to strengthen relief for users.

Lastly, we will relax the strict opt-in rules on the vast amount of data that is continuously collected and used on the condition of de-identification through telecommunications services like IoT. Instead, we will put in place regulatory measures like "opt-out" to strike a balance between protection and use of personal data.

- **Data protection may require striking a balance between privacy and business activity including data transmission across boarders. What is KCC's perspective for privacy and data protection in the era of Cloud computing, Big Data and IoT?**

In response to the rise of new services that use personal data, such as cloud computing, big data and IoT, the KCC is striving to gain the trust of the people through strengthening personal data protection while also finding ways to use personal data safely.

First, in order to strengthen the concept of "protection" and keep companies accountable, the government has introduced the systems for legal compensation for damages (May 2014) and punitive damages (March 2016) as well as recommendations for disciplinary action for executives including CEOs (March 2016).

In this vein, the "Guidelines on the Right to be Forgotten" were announced in June 2016. These guidelines provide support to users who have lost the right over their own online content, for example after deactivating their membership to an online community. They can now request their previous posts be deleted from the community.

Furthermore, building upon strengthened personal data measures, the government drew up the "Guidelines on Personal Data De-identification Measures" (June 2016) to ensure that anyone who attempts to use personal information without user approval must first take strict de-identification measures.

Additionally, the KCC is pursuing amending the Network Promotion Act regarding opt-in regulations on personal data such as allowing exemptions from approval requirements for cases where use of personal data is necessary to carry out the service. Another proposed amendment adds an exemption for cases without approval to support the international transfer and safe protection of personal data, and allows international transfer of data to be stopped when there is serious concern of infringement of user rights.

In particular, cloud computing and the changing environment brings about not only free transfer of personal data between countries,

but also increasing calls for strengthening protection measures and users' right of control over their personal data.

The issue of personal data transfer between countries cannot be resolved by individual countries alone. Rather, this issue requires policy coordination through bilateral and multilateral cooperation, and effective responses require policy research and coordination by international organizations like APT.

- **How do you describe Korean consumers' behavior or attitude in terms of ICT service usage and privacy?**

A survey on personal data protection carried out in August 2015 found that 96.1% of internet users take personal information protection and privacy as a serious matter when using the Internet. Regarding awareness of threats to personal information, "privacy breaches and personal information leakages" had the highest response of 78.4%, followed by "financial loss due to phishing, smishing etc." 76.1%, and "harm from malicious code infection" 74.5%.

The responses regarding severity of harm from each breach were "personal data leakages and privacy breaches"(87.7%), "financial loss due to phishing, smishing etc."(85.3%), and "harm from malicious code infection" (85.1%), showing that harm from privacy breaches was considered the most serious.

In order to respond to these issues, Korean users showed great interest in issues such as "concrete examples and related information on prevention of and response to breach" and "information on consultation and reporting breach."

The number of users who have collected information on and studied privacy and personal data issues has increased to 70.9%, by 8.9% from the year 2014, showing that the number of users who respond actively to these issues is increasing steadily.

84.3% of users use data protection products for their computers and other devices, and 92.1% of these product consumers update their vaccine software. Additionally, users ran their malicious code detection programs about once a month. To safeguard their privacy and protect personal data, 70.8% answered that they don't open the attachments in

suspicious e-mails and 67.8% said they do not click on unknown websites.

- What do you think about APT role and its future for ICT development in this region?

As the only international body on broadcasting, telecommunications and ICT in the Asia Pacific region, I believe APT has done an exemplary job in unifying opinion on issues such as reducing the infrastructure gap between member countries and international standards.

With the increasing importance of convergence, building a fair market environment, and user protection, APT can provide a good platform for member countries and beyond to discuss these issues together. Additionally, APT proactively finds and proposes the best solutions for these various issues and serves as the bridge to facilitate cooperation between members.

Thanks to APT's efforts as a facilitator and moderator, governments, enterprises and research institutions across the Asia Pacific region have been able to develop new convergence technology and policies, and create a synergy effect to improve users' welfare.

This has not only brought economic benefit, but also has created a positive ripple effect across member countries, expanding cooperation in the areas of diplomacy, security and culture.

In particular, through work programs like the APT Policy and Regulation Forum, members were able to share information on policy and industry that is both useful to their country and in line with international standards. Furthermore, members were able to exchange views on issues where there is a conflict of opinion.

I hope that we can solidify the communication channels between the Korea government and APT regarding fair competition and user protection, and pursue diverse cooperation through joint research, forums and exchange of personnel.

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[Editor's Note]
From Commissioner Dr. Lee's energetic conversation, I could vividly feel the atmosphere of Korean ICT business and service environment. With his insightful analysis and bright perspective, he even seems to be enjoying his heavy responsibility to establish a path for balanced development of ICT for Korea. We should continue to watch what Korea does as a leading country in this field. (M. Kondo)