

Draft Report on the Study Visit to South Korea 2023

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1. Introduction and acknowledgements

Each year, BEREC organises a study visit to a non-member country to gain insights from the local electronic communications markets and digital ecosystem. During a typical study trip, the BEREC delegation meets representatives of the National Regulatory Authorities, the relevant ministries, as well as incumbent operators, new entrants and other stakeholders in the industry. Past destinations include Japan, Canada, India, the United States of America (West Coast and East Coast) and China. The BEREC Chair 2023, Konstantinos Masselos (EETT), joined by the Vice-Chairs Annemarie Sipkes (ACM), Tonko Obuljen (HAKOM), Robert Mourik (ComReg), Wilhelm Eschweiler (BnetzA), Branko Kovijanic (Ekip), László Ignéczi (BEREC Office), Ioanna Choudalaki (CN Chair 2023) and Aline Schumacher (CN representative of ACM) undertook a study visit to South Korea. A destination that BEREC intended to visit a couple of years earlier on but due to COVID had to be rescheduled and finally took place in 2023. The BEREC delegation met with senior policy makers, senior management of various global industry stakeholders (including telecom operator), the cyber security agency as well as representatives of the innovation ecosystem and academia. Meetings were held between 3 to 7 April 2023 in Seoul, Sejong and Daejeong with the aim to learn and exchange about regulatory and other developments in the field of electronic communications, end-to-end connectivity, cybersecurity and the internet ecosystem. We would like to warmly thank all the people we met in South Korea for their generosity of time and hospitality.

2. Key insights and main trends

This is a short overview of the key insights and main trends that were gathered during the BEREC Study Trip to South Korea in April 2023. It is important to note however that this overview should not to be viewed as absolute truths, or a complete definite picture but rather a reflection of the impression that the BEREC delegation got during their visit.

2.1. 5G and 6G

South Korea was the first country to launch commercial 5G networks in April 2019. In May 2022 45% of the country's people were on 5G (22.9 million 5G subscribers), one of the highest rates globally.¹ The government plays an important role in South Korea's drive of being one of the leaders in telecommunication around the globe.

The government has long been confident in becoming the global leader in 5G and played an essential role in the development of 5G. In 2013, the Korean Ministry of Science, ICT and Future Planning (MSIP) publicly announced the government's plan to make South Korea the

¹<https://www.reuters.com/business/media-telecom/skoreas-high-speed-5g-mobile-revolution-gives-way-evolution-2022-05-13/>

first country in the world to commercialize 5G services by 2020.² The government set up a detailed time plan on how to go about 5G deployment and commercialization. The government also facilitated collaborative work between companies, research institutes, and academia, and strongly promoted R&D work for the development of 5G equipment, devices, and applications, providing financial and administrative support, opportunities for field trials, and various forms of incentive, including tax benefits to companies.³ Also, according to some stakeholders, the policy drive of the Korean government to be the first nation to launch 5G seems to have been a trigger for the IP interconnect charging system in South Korea. The argument was that the costs of the ambitious 5G investments required additional revenue streams (see also paragraph 2.3).

But during the visit we also heard about the negative sides of 5G. Complaints from consumers that prices have gone up but that the offered services had not improved as much as anticipated. Partly because it did not mean standalone 5G but was built on 4G (much of the 5G deployment overlapped with LTE). In addition, it was being mentioned that there was a lack of demand from consumers (no incentive to move from 4G to 5G) since they don't use very complicated services for which you would need 5G (e.g. customers do not need 5G for watching Netflix). Academia pointed out that issues in existing 5G are on the latency (also pointed out by doctors as a challenge for not being able to do distant surgery for example), the lack of verticals and AI not being integrated in the design.

It seems that just like with 5G, the Korean government will play a huge role in the development of 6G. There is again a time table and the target is set for 2029-2030 for the first 6G commercial services, and in 2026 South Korea will host the 'Pre-6G Vision Fest'. In February the Ministry of Science and ICT (MSIT) launched the K-Network 2030 Strategy calling for Korean tech companies to develop world-class 6G technologies and software-based networks. The strategy consists of three pillars.

1. 'Ramp up innovation efforts for the next generation network to become a market leader'. MSIT wants to promote global technology competition by advancing 6G R&D, to promote commercialization and development of materials, parts and equipment industries and open RAN technologies. To this end the Ministry is conducting a preliminary feasibility study for R&D projects. It will host in 2026 the "Pre-6G Vision Fest" to demonstrate 6G research outcomes. And it will promote competitiveness in low-orbit satellite communication technologies.
2. 'Build more robust and safe network infrastructure'. Focussing on improving backbone networks, private networks (fiber optic cable construction in new buildings) and reducing energy consumption.
3. 'Create a robust and competitive ecosystem for the industry'. MSIT will establish and operate a specialized support system for network software from

² <https://www.sciencedirect.com/science/article/pii/S0308596121001944#abs0015>

³ <https://www.sciencedirect.com/science/article/pii/S0308596121001944#abs0015>

2024. The Ministry will support the development of key components of open RAN and relevant technologies, establish a test bed for piloting functions and performance, and host the Plugfest, an equipment interoperability demonstration event, jointly with the three major telecom companies every year. On export promotion MSIT plans to actively participate in discussions on reshaping global supply chains to support the country's network equipment export and expand Korean companies' presence in the global market. Plus they will stimulate talent, postgraduate and doctoral talent.

With 6G services multiple characteristics are expected: diversification of data consumers, digital representation of everything, extreme performance, softwarized, emergence and convergence of new verticals, very low latency, an expansion of service coverage areas (in extreme places, such as the desert) and real-time integration of physical and digital worlds. A fusion of the physical and digital world with an increasing role of AI.

2.2. AI and innovation

Innovation, R&D and competitiveness are key elements in South Korea's drive of being one of the leaders in digital, ICT and telecommunication. This was one of the main reasons to pick South Korea as the destination of our study trip. Big telecom/ICT companies with their own inhouse R&D departments, top universities and multiple research institutes to learn from.

AI is being seen as one of the most important future developments and change making ingredient for services. The topic is on everyone's agenda and expectations are high:

- SK telecom (a leading telecommunications operator in South Korea) is shaping into an AI company by combining AI to a wide range of connectivity technologies based on telecommunications. They aim to become the leading AI company in Korea and have won two GLOMO Awards at the World Mobile Congress in 2023. One for 'LITMUS' their AI-based location analysis platform. It uses location data they acquire from the movement of their customers but they also try to predict the future movement of the users. And secondly for their AI-based walking navigation service for the visually impaired G EYE Plus.
- Examples in the use of AI at the 'Asan Medical Center' and the use of AI visual explanations are said to be very helpful for patients to understand the information better.
- Also the Electronics and Telecommunications Research Institute (ETRI) see a big role for AI in 6G. This will different from 5G because AI was not considered in 5G in the beginning, it was added. In 6G they think it can be an important ingredient.
- The Korean Communications Commission (KCC) is, as a regulator, also very interested in the main impact of AI and metaverse on end-users. They want to protect end-users (especially young people are using metaverse a lot in Korea) from the commercialization of these new technologies. Two acts are under way regarding metaverse and AI regulation. Their AI act is said to be quite similar to the EU one.

Besides AI we got an exciting impression of the South Korean sense and drive for other innovations. Impressive tours at the future experience centre T.UM of SK Telecom. Where we got a chance to visit the 'future city HI-Land 2053' and got a first-hand experience of the leading ICT media technology (going on board the Hyperloop to get to the Space Control Centre, the Space Shuttle and more futuristic spaces). As well as a glimpse of the future of the semiconductor, display and mobile industries at the Samsung Innovation Museum. And a spectacular insight into the use of a 'holographic camera technology' and a look at the development of 'tabletop holographic display technology' at the lab tour at ETRI.

2.3. IP IC Policy

Another major topic in South Korea and currently in Europe is IP Interconnect charging. Travelling to South Korea for the study trip while the debate in Europe was (and still is) at a peak level was a coincidence as South Korea was our intended destination already 3 years ago but due to COVID the plan had to be rescheduled.

During the trip IP-IC policy has been discussed and views were exchanged. The delegation got technical explanations of how it works, as well as passionate attempts in favour and against the Korean system. After the various meetings we cannot draw very clear conclusions one way or the other, often because claims made were not substantiated with evidence.

On the background of the Korean system it was highlighted that it was probably related to the development of 5G. The argument that the costs of the ambitious 5G investments required additional revenue streams, hence IP interconnect payments, was acknowledged by some stakeholders. Just like spectrum these are costs that operators should be allowed to recoup. And it was expected by law makers that IP charging (and charging content providers) would lead to a lowering of the retail price for consumers.

At the moment the regulation from 2016 requires lower tier ISPs to pay for traffic to higher tier ISPs. Since there is no regulated wholesale access in Korea, there are three main networks / ISPs, each with many customers. Besides the three main ISPs there are a number of smaller networks / ISPs with smaller numbers of customers. These smaller providers pay the larger higher tier providers for data sent to these higher tier networks. Foreign content providers (CPs) are currently not required to pay interconnect fees but a change to the regulation is being considered to bring these foreign CPs into the fold.

The opinions on the consequences of the IP interconnect system varied depending on who we met. It was a great privilege to be able to have these open conversations and discussions on this policy while the debate is ongoing (in South Korea as well as in Europe).

Organizations who offered their opinion, which was not substantiated with data or hard evidence, in favour of the system highlighted that:

- The system allows for justified returns for network use.

- The policy would lead to lowering consumer pricing, something they would expect to see happening in the future.
- Interconnection fees is a means by which operators can recoup spectrum fees that they need to pay to the state.

Critics of the system who offered their opinion, not substantiated with data or hard evidence, such as internet companies, smaller ISPs and academics, argued that:

- The system causes a break on local Korean content. Local Korean CPs find it difficult to find a host for their content. For example, a video streamer who might become popular would generate a lot of traffic and then a smaller ISP would be liable for the related IP interconnect payments; ISPs don't want to run that risk.
- Many smaller ISPs find their sustainability threatened or have gone out of business because they have to pay the higher tier ISPs interconnect fees but don't seem to get anything in return.⁴
- Lack of Innovation (no new Korean unicorn since 2016).
- Consumer detriment and consumer disappointment due to high subscription prices and low quality.
- Lack of competition among the three main Korean operators.

3. Overview and brief summary of meetings held by the BEREC delegation

3.1. Korea Communications Commission (KCC)

The Korea Communications Commission (KCC) is responsible for regulating broadcasting and communications services, protecting their users, and dealing with other matters required for maintaining the independence of broadcasting services. Their mission is to contribute to promoting the freedom, public nature and public interest of broadcasting by actively responding to the convergence between broadcasting and communications sectors.

The key functions of the Commission include: the formulation and implementation of policies pertaining to terrestrial broadcasting, general service and news-only program providers; the investigation and imposition of sanctions against violations conducted by broadcasting or communications business operators; the development and implementation of wide-ranging measures aimed at protecting users and their personal information; preventing the circulation of illegal or harmful information; the arrangement of broadcasting commercials; the formulation and enforcement of policies on programming and evaluation; and the development of policies for media diversification.

⁴ As mentioned, it is important to understand the context that there is no wholesale network access in Korea.



During the meeting KCC and BEREC exchanged views on future-looking trends and regulatory developments in the field of telecommunications and digital policy.

- KCC highlighted that climate change is considered important in formulating policies. They target at net zero emission in 2050 and ICT will play a key role by reducing emission and achieving energy efficiency.
- They are investigating platform practices. Harmful and illegal content is a key priority for KCC. They will establish a one stop shop for online information and institutional support will be provided to resolve day to day issues of users of digital services. Regarding the tools that KCC uses to protect end-users: the Online platform user protection act was issued in 2021 but has not been fully implemented yet. They are very interested in the EU DSA/DMA measures and experiences in the future.
- KCC is also interested on the main impact of AI and metaverse on end-users as they want to protect end-users (especially young people are using metaverse a lot in Korea) from the commercialization of these new technologies. There are two acts under way regarding metaverse and AI regulation. In particular, an AI act is under way in the National Assembly and it is quite similar to the EU one.

3.2. SK Telecom and future experience centre T.UM

SK Telecom is a leading telecommunications operator in South Korea and part of the SK Group, one of the country's largest chaebols⁵. It is shaping into an AI Company by combining AI to a wide range of connectivity technologies based on telecommunications. SK Telecom aims to become the leading AI company in Korea.⁶

⁵ A chaebol is a large industrial South Korean conglomerate run and controlled by an individual or family.

⁶ <https://www.sktelecom.com/en/view/introduce/vision.do>



During the meeting several presentations were given where the following topics were addressed:

- SK Telecom presented LITMUS, which is a GLOMO Award winner at World Mobile Congress 2023. It is an AI-based location analysis platform. It uses location data they acquire from the movement of their customers but they also try to predict the future movement of the users. With the purpose to resolve network resource imbalance, traffic and environmental problems (dynamic traffic lightning system), secure urban safety and build urban transportation infrastructure.
- Secondly they presented an AI-based walking navigation service for the visually impaired G EYE Plus, also awarded with a GLOMO Award, powered by VLAM (Visual Location and Mapping). It was initially designed for visual autonomous driving and then adapted for impaired people both for indoors and outdoors usage.
- Thirdly they presented their action about the Urban Air Mobility (UAM): transportation through urban airspace. Korean government is considering to issue a UAM Act as new set of regulations is needed for UAM.
- BEREC presented a comprehensive overview of the digital platform regulation in Europe, specifically the Digital Markets Act and the Digital Services Act.

After the meeting we visited the future experience centre T.UM where we got a chance to visit the 'future city HI-Land 2053' and got a first-hand experience of the leading ICT media technology (going on board the Hyperloop to get to the Space Control Centre, the Space Shuttle and more futuristic spaces).⁷

⁷ <https://tum.sktelecom.com/eng/main.do>

3.3. Korea University School of Law

The Korea University School of Law is located in Seoul and a member of the SKY universities. The Law School is the oldest law school in Korea and widely considered to be a very prestigious law school. Professor Kyung Sin (KS) Park of Korea University Law School and Director, Open Net (Korea) invited the BEREK delegation for an open discussion on the IP-IC rules in Korea together with representatives of SME's Soonwoo Kwon - Chief Journalist of 3PROTV, Myungjin Song - Team leader of Startup Aliance and Junghun Shin - CEO of Inet Hosting Inc.



During the meeting presentations were given and an exchange of views was held about:

- The introduction and developments (amendments) of the IP-IC rules in Korea were discussed. The SPNP has been inspired by the idea that internet has to be paid by volume of traffic and not by speed.
- It was being discussed that the IP-IC rules in Korea are covering the relationship among ISPs (and not CAPs) but the impact was felt among the whole ecosystem as ISPs started charging CAPs.
- The Korean delegation mentioned that a lack of incentive to host popular content was noticed and this is resulting in a lack of competition among ISPs. In addition, it was mentioned that local Korean content providers find it difficult to find a host for their content. Also, that since 2016 there has not been a single new Korean unicorn and that they believe that there was a direct correlation with the introduction of IP-IC fees.
- It was discussed that it's foreseen that AI will have a big impact on the traffic volume of ISPs and that ISPs are making investments in AI/CPs.
- BEREK presented an overview of the current discussion in Europe and BEREKs previous work on the topic.

3.4. Samsung and Samsung Innovation Museum

Samsung Group, or simply Samsung, is a South Korean multinational manufacturing conglomerate. It is the largest South Korean chaebol. In 2019 it celebrated its 50th anniversary. Samsung strived to become No. 1 in the system semiconductor industry while simultaneously driving growth in areas such as AI and 5G. Samsung has annual sales of more than 400 million mobile devices worldwide.⁸



During the presentations and discussion Samsung focused on the following topics:

- Samsung highlighted that software (virtualization, softwarization), chipsets and sustainability (ESG and trust) are important features in their vision on networks.
- Virtualization (Open-Ran/Virtual-Ran) versus hardware RAN was discussed including the important elements of trustworthiness, investments in Open Ran and Cybersecurity. Samsung considers that it's very important that Open Ran grows within Europe as it is a whole ecosystem and they believe that EU policy should promote it.
- As regards 6G the main characteristics according to Samsung are: extreme performance, softwarized, intelligent, integrated communication and computing, support of non-terrestrial coverage, very low latency and trustworthy. Candidate bands

⁸ <https://www.samsung.com/uk/about-us/business-area/it-and-mobile-communications/>

for 6G are 90-300GHz and 7-24 GHz. They expect commercialization of 6G around 2029-2030.

- Samsung's sustainability policy targets three pillars: Net zero (carbon reduction and renewable energy), resource circularity (water, waste, materials and e-waste) and innovation technologies (pollutants control, clean air research).

After the meeting the BEREC delegation visited the Samsung Innovation Museum where we learned about the history of Korea's electronic industry, the past, present and future of the semiconductor, display and mobile industries.

3.5. Korean Internet & Security Agency (KISA)

The Korean Internet & Security Agency (KISA) focusses on cybersecurity in the private sector (other areas are the public sector and national defence). It aims to protect their country and people's safety from cyber threats. According to ITU, Korea is considered the 4th country in terms of cybersecurity maturity.⁹



The BEREC and KISA delegation exchanged views on:

- KISA's Strategy as of 2019 is based on the themes: critical infrastructure, incident response capacity, trust based governance, cybersecurity industry, cybersecurity culture and international co-operation. A new strategy is planned for 2023.
- KISA explained and presented (a part) of their operations. They have 5 regional offices (Oman, San Francisco, Costa Rica, Tanzania and Indonesia) and 100.000 security professionals to secure digital safety. They monitor the network 24/7.
- Two significant projects were pointed out by KISA. The Cybersecurity Alliance for Mutual Progress (CAMP) which was initiated by the Korean government. Members (64 in total consisting of KISA, foreign government bodies, public organizations and non-profit organizations related to cybersecurity) cooperate together in this network

⁹ <https://www.itu.int/epublications/publication/D-STR-GCI.01-2021-HTM-E>

platform to lift up the overall level of cybersecurity of the members. The members share development experiences and trends of cybersecurity. And secondly the ASEAN Cyber Shield project initiated by KISA in January 2023. An international cooperation effort between South Korea and the Southeast Asian Nations Association (ASEAN). The project's key initiatives include the operation of an online cybersecurity curriculum in the region, research on cybersecurity certification schemes, ASEAN hacking defence competitions, and cybersecurity student exchanges.

- BEREC presented its work on Cybersecurity, supporting the European institutions (the European Commission, the Network and Information Systems Cooperation group and ENISA) to strengthen the Union and its single market.

3.6. Asan Medical Center

The Asan Medical Center is a hospital located in Seoul and provides highly specialised medical care. It opened in 1989. In recent years it has broadened its collaboration with other international medical institutes and opened up its services to foreign patients.



Following an introduction to the hospitals and the technologies that they use a discussion took place about the use of communication and AI in the Asan Medical Center:

- Examples included: the use of software to 'read' bone age, the use of 'deep brain – AI dementia diagnosis software' whereby 50 pieces of the brain can be analysed in 1-2 minutes where this used to take 10-20 minutes, the detection of coronary artery calcification which would take 30-40 minutes when it used to be done manually and with the new techniques would give instant results. Asan Medical Center also mentioned that AI visual explanations are also very helpful for patients to understand the information better.

- They also mentioned that with the use of cloud, such services could also be available in other regions (even distant surgery). But in practice communication (sharing images, reading), reliability and latency of the networks are very critical factors and still challenges. Even like security (sensitive, private information) and data protection.

3.7. Korea Internet Corporations Association (KICA)

The Korean Internet Corporations Association (KICA) is an association focusing on the Korean digital industry by building connections and promoting cooperation among businesses in the ICT industry. One of their strategic directions is 'ICT industry related regulatory reforms' thereby working closely with the government, national assembly (law-maker) and academia to reduce the *"unreasonable regulations that affect the industry in a negative way"*. Members of KICA are businesses among which (South Korea's) global ICT companies such as Naver, Kakao, Nexon, Netflix and SK communications.



During the meeting an exchange of views on the following topics took place:

- KICA gave a presentation introducing the association and its work.
- The IP-IC rules in South Korea were discussed. The discussion of the IP interconnect charging system In South Korea started in 2012 and a regulation was passed in 2016. This was marked by KICA as a major change: before 2016 no parties were paying and after 2016 all parties were paying. According to KICA it lowered the competition and it resulted in less business with new CPs. In addition, they mentioned that the 2016 revision brought chaos in the Korean internet ecosystem and that the 3 major telecom operators benefited.
- Foreign Content Providers (CPs) are currently not required to pay interconnect fees but another change to the regulation is being considered to bring these foreign CPs into the fold. This would mean that American CPs such as Facebook and Netflix would have to pay.
- BEREC gave a short presentation about their strategic orientations, the status of the SPNP debate in Europe and our previous work on the topic.

3.8. The National Assembly of the Republic of Korea

The National Assembly of the Republic of Korea, often shortened to the National Assembly, is the unicameral national legislature of South Korea. Elections to the National Assembly are held every four years. The latest legislative elections were held on 15 April 2020. During the meeting the BEREC delegation met with Mr. Jo Seung-Lae who was elected to represent in the National Assembly.



During the meeting the following topics were discussed:

- The Korean delegation presented first and explained that Korea initially had state owned companies for telecoms and that the companies were privatized. The private companies invest in networks, and three companies are investing in 5G. They aim for a stable network that people can use to get various services from CPs. According to their view the recent debate between ISPs/CPs includes also the concept of network stability.
- The Korean delegation pointed out that they follow with very much interest BEREC's relevant work.
- Regarding future developments: at that moment of visiting (and until this report was written) the court case SK/Netflix (about their peering relationship) is still pending and the outcome of that case is seen as very important. Additionally, the National Assembly is investigating the practise that foreign content providers (CPs) are currently not required to pay interconnect fees. Lot of users complain saying that in case of relevant charges the quality will go down, there will be a lack of innovation and the usage fee could go up.

3.9. Ministry of Science and ICT (MSIT)

The Ministry of Science and ICT makes policy but is also a regulator. The basic regulatory framework for the communications sector is set out in the South Korean 'Telecommunications Business Act' (TBA) and the 'Radio Waves Act' (RWA). MSIT and the Korea Communications Commission (KCC) are the main regulatory bodies that are responsible for enforcing these regulations.

On 28 November 2022, a new Digital Partnership between the European Union and the Republic of Korea was launched. This future-oriented partnership will strengthen the cooperation between trusted and technologically advanced partners in the digital area that is crucial for the sustainable advance of European and Korean economies, and for our trade and investment ties. It will foster joint work on semiconductors, next generation mobile networks, quantum and High-Performance Computing, cybersecurity, artificial intelligence, platforms, data and skills.



At the meeting the delegations exchanged views on:

- MSIT welcomed the BEREC delegation as the first EU institution visiting after the digital partnership of last November.
- In February MSIT launched the K-Network 2030 Strategy calling for Korean tech companies to develop world-class 6G technologies and software-based networks. The strategy consists of three pillars.
 1. 'Ramp up innovation efforts for the next generation network to become a market leader'. MSIT wants to promote global technology competition by advancing 6G R&D, to promote commercialization and development of materials, parts and equipment industries and open RAN technologies. To this end the Ministry is conducting a preliminary feasibility study for R&D projects. It will host in 2026 the "Pre-6G Vision Fest" to demonstrate 6G research outcomes. And it will promote competitiveness in low-orbit satellite communication technologies.
 2. 'Build more robust and safe network infrastructure'. Focussing on improving backbone networks, private networks (fiber optic cable construction in new buildings) and reducing energy consumption.
 3. 'Create a robust and competitive ecosystem for the industry'. MSIT will establish and operate a specialized support system for network software from 2024. The Ministry will support the development of key components of open RAN and relevant technologies, establish a test bed for piloting functions and performance, and host the Plugfest, an equipment interoperability demonstration event, jointly with the three major telecom companies every year. On export promotion MSIT plans to actively participate in discussions on reshaping global supply chains to support the country's network equipment

export and expand Korean companies' presence in the global market. Plus they will stimulate talent, postgraduate and doctoral talent.

- For the test pads to experiment on Open RAN MSIT invited not only Samsung to participate but also Ericsson, Nokia and Japanese companies.
- Regarding Open RAN in Europe it was discussed that cybersecurity is an important topic. It was highlighted by BEREC that vendor choice is the operators choice but some members states do have vendors with a security mark. The EU welcomes vendors as this would be good for security and market prices. Smaller players are developing on security of Open RAN and energy usage (especially after energy prices went up last 1,5 years).
- MSIT expects 6G to be more about having AI and security measures built in. AI needs to be used to make networks smarter and energy efficient.
- MSIT expects spectrum to become more diverse. 10-24 GHz and Sub terra will be used for 6G.

3.10. Fair Trade Commission

The Korea Fair Trade Commission (KFTC) is South Korea's regulatory authority for economic competition. The KFTC formulates and administers competition policies, and deliberates, decides, and handles antitrust cases. The KFTC is committed to four main mandates: promoting competition, strengthening consumers' rights, creating a competitive environment for SMEs and restraining concentration of economic power.

The KFTC is very active in the digital field with cases against Google¹⁰, Apple¹¹, doing research into cloud services¹² and fining two major Korean app providers Naver and Kakao. They presented these last two cases during the meeting.



¹⁰ <https://www.lexology.com/library/detail.aspx?g=e4de81c2-c9fb-4c97-af34-6afe65e2abd7>

¹¹ <https://www.competitionpolicyinternational.com/apple-exec-attempted-to-physically-block-korean-probe-regulator/>

¹² <https://mlexmarketinsight.com/news/insight/anticompetitive-concerns-exist-in-cloud-services-market-south-korean-antitrust-watchdog-says>

During the meeting presentations were given and exchanges were held on the following topics:

- KFTC promotes self-regulation apart from implementing competition law. KFTC released their method of self-regulation in March 2023.
- In January 2023 KFTC published guideline on how to review monopoly of online platforms and criteria for dominant power. They are also planning to revise the criteria on corporate mergers.
- KFTC gave an overview of the Naver case. They fined Naver Corp, the nation's biggest search engine, in 2021 for manipulating search algorithms in favour of the company's online shopping site. It was the first fine KFTC imposed on a digital platform for making algorithmic changes.
- Secondly KFTC gave an overview of the Kakao Mobility case of February 2023. South Korea's largest taxi-hailing app operator was fined for discriminating taxi drivers who were not subscribed to its paid membership. Kakao T, rigged the app's algorithm to allow franchised cab drivers under the Kakao T Blue brand to receive more calls from taxi users compared to non-franchise taxis, irrespective of the distance between the caller and the taxi.¹³
- BEREC presented an overview of the DMA regulation and the delegations discussed the future implications.

3.11. Electronics and Telecommunications Research Institute (ETRI)

Our last visit was to the Electronics and Telecommunications Research Institute in Daejeong. ETRI is a non-profit government-funded research institute. They do research and have laboratories in multiple fields, for example: AI computing research, terrestrial & non-terrestrial integrated telecommunications research, hyper-reality Metaverse research, digital convergence, ICT strategy etc.

¹³ <https://www.kedglobal.com/business-politics/newsView/ked202302140024>



During the meeting ETRI gave two presentations:

- The first presentation was an 'Introduction to the regulatory approach of internet interconnection in South Korea'. The developments in the regulation were presented. They mentioned that after 2016 they noticed both positive and negative effects in terms of quality. ETRI added that it has been heard that ISPs have tried to improve their tier in competitive conditions and that no negative effect on end-users was reported.
- The second presentation was on '6G vision & technologies'. With 6G services they expect diversification of data consumers, digital representation of everything, emergence and convergence of new verticals, an expansion of service coverage areas (in extreme places, such as the desert) and real-time integration of physical and digital worlds. A fusion of the physical and digital world with an increasing role of AI.

They want to overcome issues in the existing technologies (5G) such as improving the latency (E2E latency), to support verticals and to focus on spatial coverage. And they see a big role for AI in 6G, as AI was not considered in 5G in the beginning, it was added. In 6G they think it can be an important ingredient.

ETRI pointed out that critical spectrum bands for 6G are more high frequency areas as 100-300 GHz. The upper meter band (7-24 GHz) is lately being considered. There is a lot of debate about millimeter deployment. They consider that some lower stable frequency is needed. Lower than 6 GHz is already crowded. That is why they propose to have 100-300 GHz for 6G.

After the meeting we got a lab tour and got to experience the use of a 'holographic camera technology' and got to have a look at the development of 'tabletop holographic display technology'.