

Net Neutrality: Korea in Comparison with the EU

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1. Structure of Korean Regulatory Framework

Terminology

- **Internet Access Service (IAS)**
- **Internet Access Provider (IAS) vs Internet Service Provider (ISP) vs Internet Backbone Provider (IBP)**
- **Content and Application Provider (CAP) or Edge Provider**
- **Network Neutrality (NN)**
- **Traffic Management (TM)**
- **Managed Service (MgS) vs Specialised Service (SpS)**
- **Quality of Service (QoS)**
- **Internet Interconnection or Internet Exchange (IX)**
- **Peering vs Transit**
- **Bill & Keep (B&K) vs Sending Party Network Pays (SPNP)**
- **Content Delivery Network (CDN)**

1. Structure of Korean Regulatory Framework

Statutory Grounds for Network Neutrality (NN)

- **No clear statutory grounds in Telecoms Business Act**
- **Relevant Clauses**
 - Article 3(1) No telecoms business operator may refuse to provide any telecoms service, without justifiable grounds.
 - Article 28(3) Requirements for Terms and Conditions of Use for Common Telecoms Services provided by a Specified Common Telecoms Business Operator
 - Shall not unreasonably restrict the use of telecoms line facilities by other telecoms business operators or users
 - Shall not unreasonably discriminate against specific persons
 - Article 35, 39 *ex ante* Regulation on Access and Interconnection including internet interconnection
 - Article 50(1) *ex post* Regulation applicable to refusal or imposition of unreasonable terms with regard to internet access service

1. Structure of Korean Regulatory Framework

Non-binding Guidelines for NN

- **'Guidelines on network neutrality and Internet traffic management' of 2011 (NN Guidelines)**
 - It consists of five chapters including objectives, basic principles, managed services, mutual cooperation, and composition and operation of policy advisory bodies
 - Five basic principles define user rights, transparency in Internet traffic management (TM), prohibition of blocking, prohibition of unreasonable discrimination, and reasonable traffic management (TM)
 - The scope, conditions, procedures, and methods of reasonable TM and criteria for judging the reasonableness of TM shall be determined separately

1. Structure of Korean Regulatory Framework

Non-binding Guidelines for NN

- **'Guidelines on the reasonable management and use of network and transparency of traffic management' of 2013 (TM Guidelines)**
 - Provide details on reasonable TM and transparency in TM based on the NN Guidelines
 - Apply to general IAS rather than managed services (MgS)
 - It consists of a total of nine chapters including basic principles of TM and reasonable TM (judgment criteria, type), transparent disclosure of TM information, and user protection

2. Similarities

Regulatory Framework and Market Conditions

- **Similar Regulatory Framework covering IAS**
 - ISPs providing IAS are subject to *ex ante* regulation on access and interconnection
 - In Korea, ISP is classified as a common telecoms business operator, and the Internet interconnection is institutionalized in accordance with 'Interconnection standards for telecoms facilities' amended in January 2015 which imposes interconnection obligations between ISPs similar to those stipulated in the EU Access Directive
- **Competition in IAS market is generally effective**
 - Access and interconnection system of Telecoms Business Act of Korea imposing obligations on incumbent dominant ISP has led to the current competitive environment in Korea

2. Similarities

NN Policy

- **Common Features on NN Policy**
 - Prohibition of blocking, (throttling) and unreasonable discrimination
 - Affirmative transparency requirements
 - Exemption for reasonable TM
 - Shall be transparent, non-discriminatory and proportionate
 - Shall be based on technical measures
 - Managed Service vs Specialised Service
 - Services other than IAS with specific QoS requirements
 - To the extent that the quality of the best effort internet shall not be degraded below the optimal level
 - NRA should monitor the impact on the quality of IAS and the market
 - Examples: VoIP, VoLTE, IPTV services
 - IPTV Business Act Article 2(1): definition of IPTV. requirements of guarantee of a certain level of QoS

3. Differences

Legal Framework

- **No Legal Grounds**
 - NN policy measures are not based in the law as opposed to those laid down by the Open Internet Regulation in the EU
 - Infringements of Guidelines might fall within the scope of the prohibition laid down in Article 50(1) of Telecoms Business Act, subject to corrective measures and/or administrative fines

3. Differences

NN Policy

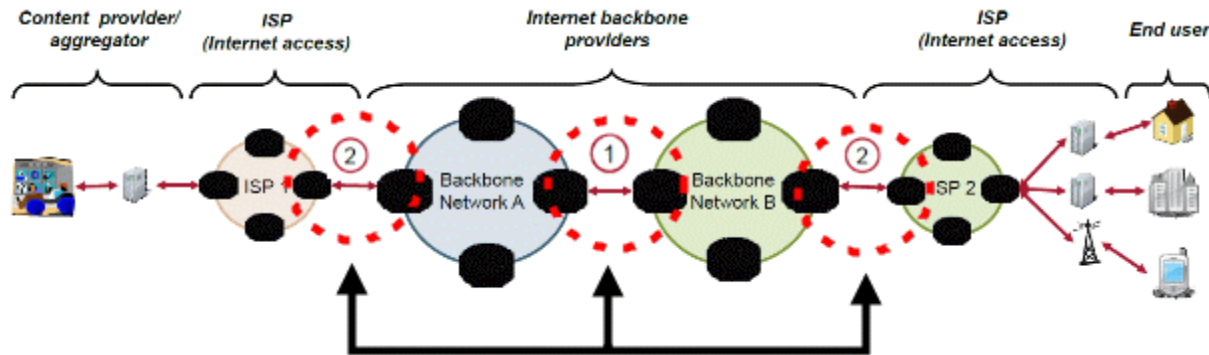
- **Difference in TM Policy**
 - Korean guidelines doesn't have a distinction between reasonable TM and exceptional TM
 - examples of resonable TM(network integrity, congestion management, legislative measures) are actually exceptional ones going beyond resonable TM
 - Korean guidelines doesn't have an explicit ground for availability of economic TM
 - Three types of TM: technical, economic, and financial
 - Economic TM: TM based on agreement and commercial practices
 - application-specific TM such as zero-rating
 - Managed services rules in Korean guidelines are much vague compared with specialised services rules in the EU

4. Impact of Regulatory Change in Internet Interconnection Charging Mechanism

Basics of NN and internet interconnection regulation

- **Distinction between internet interconnection and NN**

- Internet interconnection typically refers to the exchange of traffic between ISPs that have Internet networks, and traffic exchanges between users (including CAPs) that do not have Internet networks and ISPs are excluded from the scope of interconnection.
- Traffic exchanges between users and ISPs, especially CAPs and ISPs, are subject to NN issues



Internet interconnection section : ① Peering, ② Transit
<Lee, Sang Woo (2017)>

4. Impact of Regulatory Change in Internet Interconnection Charging Mechanism

Internet Interconnection Regulation in Korea

- **Institutionalisation of Internet Interconnection**

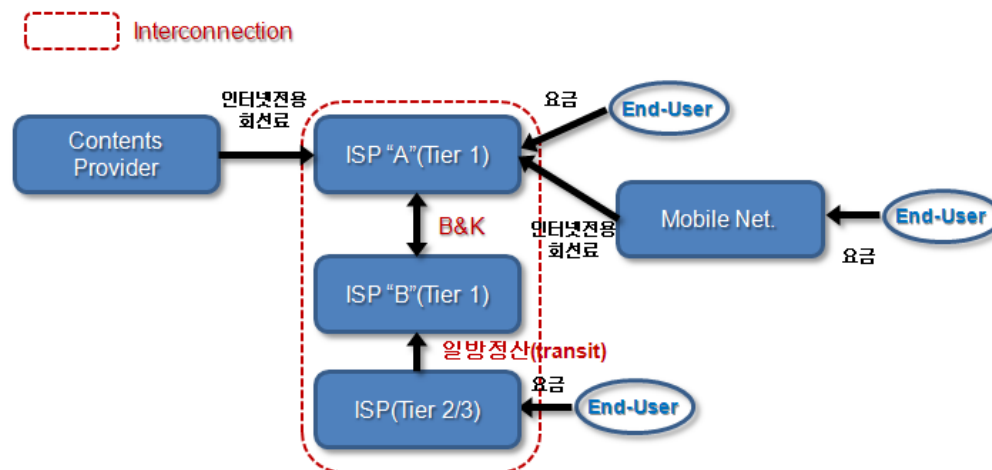
- As ISP is classified as a common telecoms business operator, revised 'Interconnection standards for telecoms facilities' of January 2005 institutionalises internet interconnection. This imposes an interconnection obligations *ex ante* on ISPs.
- Since no ISP satisfies the requirements of Article 39 (3) of the Telecoms Business Act in which specific ISPs are obliged to conclude an interconnection agreement, the conclusion of the agreement is, in principle, discretionary pursuant to Article 39 (1) of the Act.
- However, in order to ensure the fulfillment of prescribed regulatory obligations, Article 50 (1) i) (imposition of unreasonable or discriminatory conditions and restrictions), and ii) (refusal or non-performance of the agreement) provide the types of prohibited acts corresponding thereto, and the illegality is presumed *de facto* or statutorily, so that the degree of *ex ante* regulation is high.
- Traffic exchanges between ISPs and CAPs are recognized as Internet access, which is a retail transaction between end users and operators, and are excluded from the Internet interconnection scope.

4. Impact of Regulatory Change in Internet Interconnection Charging Mechanism

Internet Interconnection Regulation in Korea

• Situation under previous Internet interconnection system

- According to the previous Internet interconnection system, it had Bill & Keep (B&K) principle in the case of peering and Sending Party Network Pays (SPNP) principle in the case transit as internet interconnection charging mechanism.
- In accordance with B&K principle in the same tier, the ISP did not have to pay for the traffic flowing from the CAP. Therefore, competition among ISPs has been intensified for constructing the content delivery network (CDN) and attracting major CAPs to their CDNs.



<Lee, Sang Woo (2017)>

4. Impact of Regulatory Change in Internet Interconnection Charging Mechanism

Change in Internet Interconnection Regulation in Korea

- **Ministry of Science and ICT (MSIT) Improved Internet Interconnection System in January 2016**
 - Expansion of internet interconnection coverage range from wired-wired network only to wired-mobile network included
 - Introduced standard internet connection conditions
 - Change of internet interconnection charging mechanism (based on traffic volume, one way settlement)
 - Traffic measurement and clearinghouse operations
- **Background of Institutional Improvement**
 - Awareness of the problem of reverse discrimination between CAPs as the traffic that flows from CAP increases, the bargaining power of CAP increases
 - Expecting that the wholesale market which is the trading market between ISPs would be formed in the IAS markets

4. Impact of Regulatory Change in Internet Interconnection Charging Mechanism

Change in Internet Interconnection Regulation in Korea

- **Impact of Institutional Improvement**
 - Increase of cost burden of direct interconnection (peering) for ISPs which has large amount of traffic flow from major CAPs due to change from settlement free peering (B&K) to traffic volume based one-way settlement peering (SPNP)
 - The need for new negotiations between ISP-CAPs in retail trade emerged
 - As the burden of interconnection charges for ISPs increases, the incentive for ISPs to improve the settlement method of network fee with major CAPs by negotiation increases and the likelihood of disputes also increases
 - In March 2018, The Korea Communications Commission (KCC) sanctioned Facebook's change of access path as an act of impeding users' interests
 - In February 2019, Facebook and SK Broadband signed network usage agreement

5. Questions

Some Questions in relation to Mr Sørensen's Presentation

- **Comparison between TM based on Article 3(2)(Commercial Practices) and TM based on Article 3(3)(Reasonable TM)**
 - Is it a right way to understand the former as economic measures and the latter as technical measures?
 - Why is the former more common than the latter?
 - Any example of reasonable TM in the EU apart from exceptional TM?
 - Do you think economic TM rules are necessary and effective? Any advice for Korea about introduction of such rules, particularly in relation to zero-rating case assessment?
- **MgS or SpS and 5G Technology**
 - Do you think new services applying 5G network slicing would be qualified for SpS?
 - Any advice for Korea about elaboration of MgS rules?

5. Questions

Some Questions in relation to Mr Sørensen's Presentation

- **Korea's recent regulatory change in internet interconnection charging mechanism**
 - What is your overall opinion about the way in which Korean NRA intervened in this issue through regulatory change?
 - You mentioned that if B&K is replaced with SPNP, regulatory intervention may be needed under EU rules. Given the change from B&K to SPNP in Korea, what kind of regulatory intervention would be needed to address the following issues?

Thank you