Computer & Communications Industry Association
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Proposal to Mandate Payments by Content and Application Providers (CAPs) Undermines the Future of U.S.-Korea Trade

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Executive Summary

The Republic of Korea has long been a global leader in investing in, and reaping the benefits, of digital technology. It boasts one of the world's most advanced telecommunications networks and is home to world-class developers of both content and applications that drive the Internet economy. U.S investment in Korea in these sectors, and the robust bilateral trade it supports, is at the heart of a mutually beneficial economic relationship. Underlying these strong ties is both countries' commitment to competitive telecommunications networks, which is the foundation of a successful digital economy.

This foundation, a core element of the Korea-U.S. Free Trade Agreement (KORUS) is, however, now at risk. Legislative proposals in Korea seek to mandate the imposition of novel network usage fees on content and application providers (CAPs) serving Korean consumers over the Internet. Such a development would threaten the carefully developed architecture of the Internet and could seriously damage the economic viability of both Korean and U.S. content and application suppliers. This architecture, based on voluntary commercial arrangements, is uniquely suited to integrating technological change and changing market dynamics into the fabric of commerce. It has delivered a resilient and efficient global network that has allowed digital trade to flourish. Instituting mandatory usage fees, by contrast, will create an Internet that is both more expensive, less innovative and of lower quality, all of which will ultimately hurt U.S. and Korean CAPs and Korean consumers.

With trade in both goods and services increasingly relying on data flows, proposals to mandate the extraction of fees related to such flows, for the benefit of a small number of Korean network operators, will materially hurt U.S. exporters and investors, as well as the Korean consumers and businesses that depend on such traffic. By undermining competitive networks, Korea's status as a digital pioneer will be put in jeopardy and may lead Korean entrepreneurs and creators to look to friendlier markets. In addition, such a step would undermine Korea's ability to contribute to new trade-enhancing initiatives, such as the Indo-Pacific Economic Framework (IPEF).

This paper, prepared by the Computer & Communications Industry Association (CCIA),[1] explains in detail how the proposed network usage fee legislation conflicts with existing trading obligations and how it departs from long-standing international practice.

[1] CCIA is an international, nonprofit association representing a broad cross section of computer, communications and Internet industry firms. For over 50 years, CCIA has remained dedicated to promoting innovation and preserving full, fair and open competition throughout our industry. Our members employ more than 600,000 workers and generate annual revenues in excess of $465 billion. For more, please go to: www.ccianet.org.

Background

For the past several years, Korean Internet service providers (ISPs) have actively campaigned to shift the costs of running and expanding their networks onto the services their customers demand (streaming video, games, and other applications). As these content and application services grow in popularity they generate increasing data flows, often from U.S. suppliers. In response, Korean ISPs have sought government action to mandate imposing so-called "network usage fees" on designated global CAPs, in parallel to what they are also seeking to impose on Korean CAPs.[2] In 2020, the Korean Telecommunications Business Act (TBA) was amended to require designated CAPs[3] to ensure a vaguely defined goal of "stability of service" in delivering content to Korean end-users, but did not mandate the payment of network usage fees.

Over the past year, legislative proposals have been tabled to the Korean National Assembly's Science, Information and Communications Technology, Broadcasting & Communications Committee. Some proposals seek to impose an obligation on CAPs to enter into a network use agreement with Korean ISPs. Other bills would additionally mandate that CAPs be required to pay "network usage fees" to Korean ISPs under such an agreement. Failure to comply would result in the issuance of a correction order or a penalty surcharge.

Adoption of any of these proposals would set an unfortunate precedent for taxing the delivery of data and would significantly disrupt the division of roles between ISPs and CAPs that has enabled the growth of the Internet-driven economy.

Korea already has some of the world's highest wholesale bandwidth costs due to the lack of competition among ISPs, a practically non-existent Internet Exchange market, and a unique market structure where ISPs pay each other a regulated rate when traffic exchanges between networks result in unbalanced flows. The result, in addition to high wholesale bandwidth prices,[4] has made Korean ISPs reluctant to host CAPs on their networks (since data terminating on a rival network could incur charges). This has led to what appears to be a significant exodus of Korean CAPs from Korea to more competitive markets[5] which only exacerbates the position of Korean ISPs: Korean ISPs must pay for international connectivity to pick up content hosted outside of Korea. This development has impacted service quality, by introducing delays (latency) into data transmission.[6]

The obvious solution, which is the norm elsewhere in the world but which Korean ISPs have rejected, is to encourage CAPs, in voluntary negotiations with ISPs, to install temporary storage facilities in Korea that would bring their content closer to users (known as caching servers) and for ISPs to exchange traffic without monetary compensation (referred to as "settlement-free peering"). Such investments by CAPs

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[2] While Korean CAPs are currently not legally required to pay such fees, the three dominant ISPs, who together enjoy a market share of over 90 percent, have succeeded in imposing them on domestic CAPs in the Korean market.

[3] This obligation applies to content and applications providers with an average of 1 million users and responsible for 1 percent or more of domestic Internet traffic in Korea. Several U.S. suppliers are subject to this obligation, the key feature of which is reporting requirements.

[4] According to Telegeography, transit prices in Seoul in 2021 were 8.3 times higher than in Paris and 4.8 times higher than in New York. Quoted by Wik Consult, p. 36, at https://www.bundesnetzagentur.de/EN/Areas/Telecommunications/Companies/Digitisation/Peering/download.pdf?__blob=publicationFile&v=1.

[5] *See* Park and Nelson, 2021, "Korea's Challenge to the Standard Internet Interconnection Model" p. 74, at: https://carnegieendowment.org/files/202108-KoreanWayWithData_final5.pdf.

[6] A July 2022 OECD report estimates the average latency of the Internet in Korea at 171 ms, the worst in the OECD, compared to an OECD average of 77 ms. See https://www.oecd-ilibrary.org/docserver/755e2d0c-en.pdf?expires=1661906364&id=id&accname=guest&checksum=B31B209001CDBFD6B8A7DD02284CEB47 at p. 52.

reduce ISPs' international bandwidth costs and result in higher quality service for consumers—a mutually beneficial outcome for CAPs, ISPs, and consumers. In rejecting this approach, the three ISPs that dominate Korea's market appear more focused on leveraging their bottleneck control over access to Korean consumers in order to extract additional payments from CAPs. They also appear willing to tolerate degraded quality in the hope that, with the introduction of new legislation, they can force CAPs to pay an additional fee as the price of reaching Korean consumers who otherwise will continue to exchange traffic outside of Korea.

Trade Rule Conflicts

Key provisions of the Korea-U.S. Free Trade Agreement (KORUS) that would likely conflict with a requirement that U.S. suppliers must pay network usage fees to Korean ISPs.[7]

1. **The proposals would restrict the ability of U.S. content and applications service providers to access the Korean telecommunications network on reasonable and non-discriminatory terms and conditions.**

Under **KORUS Article 14.2 (Access and Use),** Korea is required to ensure that all U.S. service suppliers are offered access to and use of any public telecommunications network or service on reasonable and non-discriminatory terms and conditions. This provision is critical to the functioning of the entire set of cross-border services commitments, since electronic delivery has become the dominant means by which U.S. cross-border suppliers reach Korean businesses and consumers. Unjustified restrictions on such access can adversely affect suppliers using networks to access the Korean market. Although Korean ISPs have targeted the U.S. CAPs as their priority source of new revenues, the proposed legislation would apply to any data-intensive service, and thus could conceivably apply to connected cars, financial services, online shopping, or any other service that meets the specified threshold.

The purpose of this KORUS provision, to prevent network operators from using control over access to end users to impose unreasonable terms and conditions (including fees) or discriminate against specific suppliers, is directly relevant to network usage fees in Korea.

Whether or not a fee is reasonable might appear to depend on how it was set. However, as previously discussed, any mandated fee or mandated contractual relationship would be presumptively unreasonable, given the prevalent global norm of voluntary agreements for settlement-free peering, and the anticompetitive implications of conferring authority to set terms and conditions (including rates) on the one player in the Internet ecosystem able to exercise monopoly power over access to its subscribers—the ISP. Both these factors are further discussed in Section 2 below.

As previously stated, traffic-exchange agreements among CAPs and ISPs outside of Korea are concluded on the basis of voluntary commercial negotiations. The legislative proposals in Korea, however, to mandate negotiations and/or fees would be compulsory. As such, the measure would take on the character of a government-imposed condition for access to the Korean network. However, Korea's scope for imposing such conditions is significantly constrained by its KORUS obligations.

[7] *See* https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text. While this analysis focuses on KORUS obligations, a network usage fee could also be actionable under Section 301 of the U.S. Trade Act of 1974, due to the unreasonable and unduly burdensome nature of the payment obligations.

Article 14.2.5 states:

> Each Party shall ensure that no condition is imposed on access to and use of public telecommunications networks and services, other than as necessary to:
>
> (a) safeguard the public service responsibilities of suppliers of public telecommunications networks and services, in particular their ability to make their networks or services available to the public generally; or
>
> (b) protect the technical integrity of public telecommunications networks or services.

This same constraint is memorialized in the source of the KORUS rule, Article 5 (c) of the WTO's Annex on Telecommunications which also includes a WTO notification obligation to which Korea would be subject to.[8]

While Korean ISPs are obviously looking to extract additional profit through these usage fees, there is no evidence that in the absence of such fees they could not continue to offer Internet access service to the public generally, or address the integrity of such services. The fact that CAPs have a long record[9] cooperating with ISPs throughout the world to achieve these very ends demonstrates that such a condition on access is not only unjustified but actually contrary to such goals, as it will reduce CAPs incentives to help manage traffic more efficiently and reduce potential congestion.

With respect to the discriminatory effect of the proposed legislation, there are two aspects worth noting.

First, since current proposals build upon the 2020 amendments of the Telecommunications Business Act (detailed in Article 22-7) which instituted the previously discussed thresholds for designated CAPs, they would incorporate those traffic and subscribership distinctions.

Imposing network usage fees on designated CAPs on the basis of such distinctions, even if they also are applicable to Korean CAPs, would be patently discriminatory, since most Korean CAPs would not meet the threshold and be subject to the requirements. Importantly, "discrimination" in this context refers not simply to discrimination on the basis of nationality, but is defined as "no less favorable than that accorded to any other user of like public telecommunications networks or services in like circumstances."[10] In other words, the fact that some Korean CAPs may also be subject to network usage fees does not relieve Korea of its obligation to ensure that a U.S. CAP does not face requirements other market participants do not, and an arbitrary threshold for users or traffic could not justify such discrimination.

Secondly, a similar constraint applies to how Korea treats U.S. CAPs as compared to CAPs from third countries. The Most Favored Nation obligation that is found both in Korea's telecommunications-

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[8] *See* https://www.wto.org/english/tratop_e/serv_e/12-tel_e.htm. The notification provision states: "Any new or amended measure significantly affecting such use shall be notified and shall be subject to consultation."

[9] *See* Analysys Mason, "Infrastructure Investment by Online Service Suppliers" at: https://www.analysysmason.com/contentassets/8f975fb4e2b34ca18f31825ce38df24a/infrastructure-investment-by-online-service-providers---20-dec-2018---web.pdf.

[10] See Article 14.24, Definitions, at https://ustr.gov/sites/default/files/uploads/Countries%20Regions/africa/agreements/korus/14Telecommunications.pdf.

specific commitments (in the cited Article, 14.2), but also in its general service commitments both in KORUS (Article 12.3) and also the WTO's General Agreement on Trade in Services (Article II). Based on these obligations, Korea could not treat a supplier of a third country less favorably than it treated a U.S. CAP—for example, requiring Google to pay a network usage fee, but not imposing the same requirement on Google's competitors, such as the Chinese company Baidu or the Russian company Yandex — another clear form of unlawful discrimination.

Again, the fact that all companies meeting the threshold, irrespective of nationality, would be subject to the fee requirement would not justify the disparate treatment, given the arbitrary nature of the thresholds. On the other hand, if Korea tried to solve this problem by applying network usage fees to all data and all suppliers, it would be faced with the impossible task of tracking data from and imposing fees on the millions of websites Koreans visit, each of which arguably affects the network reliability the ISPs ostensibly seek to address.

2. **The proposals would enhance the already-significant market power of Korea's dominant ISPs, with likely anticompetitive effects.**

Under **KORUS Article 14.5 (Competitive Safeguards)**, Korea is required to "adopt or maintain appropriate measures for the purpose of…preventing suppliers from engaging in or continuing anticompetitive practices." This provision, derived from the WTO Reference Paper on Basic Telecommunications,[11] reflects the concern that incumbent telecommunications operators have long had the incentive, and ability, to abuse the dominance they exercise through exclusive access to their telecommunications subscribers.

The most obvious anticompetitive effect of network usage fees lies in the fact that all three of the major ISPs — KT, SK Broadband, and LG — also provide video content through both cable and IPTV services.[12] KT, which enjoys over 40 percent market share in the broadband space, most recently boasted 9.2 million video subscribers.[13] SK Broadband directly cited gains in the IPTV market as a significant factor in its revenue growth and it most recently reported 5.7 million subscribers.[14] SK Broadband has also joined three terrestrial broadcasters in South Korea to back the streaming platform "Wavve," which is investing hundreds of millions of dollars to expand and eventually compete in the international market.[15]

Accordingly, a fee imposed on a company (whether Korean or foreign) seeking to offer video service would put that service at a competitive disadvantage and allow the ISP to subsidize its own video service with that revenue—one of the specific cases of anticompetitive conduct identified in this rule as proscribed conduct.

This exact concern was addressed directly in the United States in the 2016 review by the Federal Communications Commission (FCC) of the merger between two major cable television and broadband suppliers, Charter Communications and Time Warner cable.

As a condition of the merger, the FCC required the combined company to offer interconnecting suppliers settlement-free peering, and cited video traffic specifically:

[11] https://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm.
[12] https://www.statista.com/statistics/700775/south-korea-kt-skylife-digital-tv-user-number/.
[13] https://corp.kt.com/eng/attach/record/2022/KT%201Q22_ER%20PT_ENG_FFFF.pdf.
[14] https://www.sktelecom.com/img/eng/annual/20210716/SKT2020AnnualReportENG.pdf.
[15] https://deadline.com/2021/04/leading-south-korean-ott-platform-content-wavve-ceo-talks-900m-originals-drive-international-roll-out-season-2-of-hit-anthology-show-sf8-1234733354/.

> [T]o prevent New Charter from raising prices on companies that deliver Internet traffic—including online video traffic—requested by its broadband subscribers, we condition the transaction on a modified version of the Applicants' settlement-free interconnection commitment.[16]

For Korea to not only tolerate the current commercial practice on imposing such fees domestically, but take the further step of mandating them (or mandating a contract that leads to such a result), would be an extraordinary repudiation of a commitment to competition memorialized in KORUS.

3. The bills are contrary to Net Neutrality principles in KORUS.

Addressing the abusive conduct of an ISP discriminating in favor of its own services (particularly video offerings) has long been a concern of regulators in many jurisdictions, and a motivating factor in the development of "net neutrality" rules around the world.

While Korea has not promulgated net neutrality through regulation, it did agree in **KORUS' Electronic Commerce Chapter**[17] to principles addressing ISPs' role in maintaining open and competitive networks. These provisions were articulated in **Principles on Access to and Use of the Internet for Electronic Commerce (Article 15.7)**.

Given the lack of specific regulation in this area, Korea and the United States also agreed to a side-letter providing an explanatory gloss on how such principles should be implemented–articulating a recognition of the value of commercial negotiations, with an important caveat. As expressed in this side letter,

> [. . .]lawful contractual arrangements between network providers, application and service providers, content providers and Internet users may be consistent with these principles, provided that the Party's relevant authorities do not determine that the arrangements are exclusionary.[18]

Due to the strong possibility that mandatory network usage fees would be exclusionary, and the lack of a finding to the contrary by Korean authorities, it is difficult to square Korea's adherence to these principles with legislative proposals to institute such fees (or mandating contracts resulting in such fees) in law.

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[16] *See* paragraph 10 in 31 FCC Rcd 6327 6327 ¶ 10 (8), available at https://www.fcc.gov/document/commission-approves-charter-twc-and-bright-house-merger.

[17] https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/asset_upload_file816_12714.pdf.

[18] *See* https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/asset_upload_file844_12735.pdf.

Departure from International Practice and Telephony Regulation

The result of the proposed bills—requiring U.S. CAPs to enter into contracts and pay network usage fees to Korean ISPs in order to access the Korean market—is a significant departure from the global norm of how Internet traffic is currently exchanged. While there are a variety of arrangements CAPs and ISPs rely on to ensure a smooth flow of traffic from CAPs to the requesting end-user, no jurisdiction mandates contracts or payments. A recent survey of 10,000 ISPs in 148 countries revealed that 99.98 percent of traffic they exchanged was settlement-free.[19]

While regulated interconnection rates and an obligation to negotiate was the norm in telephony, data flows have always been handled differently than voice calls. As beneficiaries of legal monopoly rights prior to the introduction of competition, incumbent telecommunications operators focused on defending their voice networks against new entrants (and, historically, battled to keep interconnection rates as high as possible). Data networks, however, evolved in what was always a both more competitive and less regulated market, where market dynamics were markedly different. A key difference was the interactive nature of the Internet, where most activity (and perceived value) of communications was not in the ability to “push” or send traffic, but to “pull” or receive it from the now 1.5 billion websites available globally. This was evidenced in the design of networks, which were typically optimized for downloading rather than uploading data.

To gain customers, ISP had to compete on offering global access to websites and services—the value that motivates customers to pay for access in the first place. As a consequence, ISPs in most markets have sought to maximize the efficient and low-cost transmission of data, the investment costs for which were recovered directly from their subscribers generating the traffic. The alternative (based on the phone model), a tax on incoming data, would ultimately have to be recovered by content or service suppliers, raising costs to consumers and thus suppressing demand for data access. An additional advantage of voluntary negotiation, as compared to price-regulated interconnection, has been avoiding inefficient “regulatory arbitrage” that inevitably results from price regulation: a government-guaranteed price motivates companies to distort business plans to capture revenues from the price-regulated service, which is shielded from market competition. One can easily see how this could take root in Korea with mandatory network usage fees, incentivizing business models to attract traffic simply so a cost can be assessed on the sender.

Arguments for network usage fees have largely centered on claims from ISPs that they require compensation for the burden they carry, in network maintenance and expansion, to accommodate ever-greater volumes of traffic that their users generate by accessing the services and content they want. However, these arguments fail to account for the successful history of the Internet, where collaborative arrangements and voluntary negotiations have served to align the interests of CAPs, ISPs, and consumers in facilitating an efficient, resilient, and cost-effective network. As noted previously, CAPs have the same interests and incentives as ISPs in reducing network congestion, since they share the same customers. CAPS’ significant investments in the transmission, storage, and caching of data is clear evidence of a rational market response. For example, recent data indicate that major U.S. suppliers have invested over $8 billion in submarine cables, and additional billions in local caching infrastructure—much of it in the Asia-Pacific region.[20]

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[19] https://www.pch.net/resources/Papers/peering-survey/PCH-Peering-Survey-2021/PCH-Peering-Survey-2021.pdf.

[20] *See* https://blog.telegeography.com/telecom-headlines-june-2021.

Introducing new and unnecessary network usage fees will upset this alignment of interests, returning to a telephony model where high costs, lack of choice, and a less efficient network serve one market participant at the expense of the broader economy (including its trading partners). The U.S. and Korea recognized that preserving the unique commercial and technical architecture of the Internet was in their mutual interest. The 2007 KORUS side letter referenced earlier memorializes this conclusion:

> [T]he Parties recognized that, consistent with a report of the Organization for Economic Cooperation and Development (OECD) in 2005, commercial arrangements between competitive suppliers have effectively addressed the international aspect of the cost distribution [between network providers, application and service providers, content providers, and Internet users].[21]

Adoption of a usage fee mandate thus would contravene more than 15 years of network management policy.

Conclusion

Robust and efficient data flows between the United States and Korea are an increasingly important pillar of the thriving trading relationship between the two countries. The ability of U.S. and Korean firms to each offer their products and services on a cross-border basis, enhanced by significant investments, is a testament to the value KORUS has brought to both countries, in no small part through a commitment to maintaining open and competitive markets. Network usage fees, or mandatory negotiation, threaten this balance. They will lock in and expand an inefficient mechanism for the exchange of traffic that hurts both consumers and businesses alike while imposing additional charges that will eventually be imposed on Korean consumers seeking to access content from abroad. From the perspective of Korea's trade obligations, this broad-based tax on cross-border services cannot be squared with Korea's commitment to ensure access and use of Korea's networks on a reasonable and non-discriminatory manner, a core obligation undergirding the entire scope of cross-border services commitments. And the message this policy would send to investors, innovators, and content creators considering Korea as a hub would be unambiguous: look elsewhere.

[21] https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/asset_upload_file844_12735.pdf.