



Perspectives from FSF Scholars
April 2, 2024
Vol. 19, No. 11

The "Network Slicing" Debate Exposes How Title II Will Kill Innovation

by

Randolph J. May and Andrew Long *

It is widely anticipated that at its [April 25 Open Meeting](#) the Federal Communications Commission will consider its proposal to classify Internet access services as “telecommunications” under Title II of the Communications Act, in effect, converting Internet service providers into public utilities. One of the issues garnering significant attention is “network slicing,” called “[a core component of the 5G standard being deployed in networks around the world.](#)” The debate surrounding “network slicing” is welcome because it rather convincingly demonstrates the inherently problematic nature of the proposal to impose public utility regulation on Internet service providers in a technologically dynamic marketplace. The controversy highlights the regulatory uncertainty necessarily created by FCC Chairwoman Jessica Rosenworcel’s proposal – uncertainty that inevitably would impede innovation and investment, thereby harming both consumers and competition.

In layman's terms, 5G network slicing allows mobile operators to provision multiple virtual networks within their flexible-use spectrum, each with a custom mix of attributes (relating to speed, reliability, latency, security, and so on) crafted to meet the unique needs of different use cases. The use cases may be both existing (broadband Internet access service (BIAS), voice, and video) and emerging (such as the Internet of Things (IoT), mission-critical public-safety services, autonomous vehicles, and telemedicine).

By making it possible for mobile operators to separate, for example, autonomous-vehicle signaling data – which requires extremely low latency and no packet loss but not a significant amount of sheer capacity – from other types of traffic, 5G network slicing, which might just as easily be called “network optimization,” can improve overall network efficiency, including for "best efforts" level of Internet traffic. It therefore is an unquestionably constructive tool, one that can benefit broadband customers as well as users of niche services – and thereby drive the deployment of 5G networks.

Mobile network operators have legitimate concerns that this innovative and nascent network management capability might be prohibited outright by so-called open Internet rules or, just as problematically, be shrouded in a fog of regulatory uncertainty so thick that it renders the use of network slicing an unjustifiable risk. For example:

- Might network slicing be maligned as "throttling" or "paid prioritization," either in all or certain instances to be determined at a later date, most likely in an enforcement context? In our [comments](#), Free State Foundation scholars explained that paid prioritization arrangements are "pro-innovation and pro-consumer" and, "[i]n view of the broadband market's competitiveness and the lack of any showing of likely harm, the Commission should not impose any blanket prohibition on ISPs' freedom to individually negotiate agreements to prioritize specific data traffic for compensation when other data traffic is not impaired or degraded."
- As AT&T pointed out in a recent [ex parte letter](#), "mobile operators hold flexible use licenses. 'Flexible use' means licensees are free to provide a variety of potential services." 5G network slicing fosters that flexibility and enables the offering of allowed "non-BIAS" services. Might this or a future Commission conclude that it impermissibly degrades BIAS service?
- Is network slicing "primarily technical" and therefore "reasonable network management" – or is its primary justification claimed problematically to fall, ambiguously, in the "other business practices" category?
- Last, but certainly not least, how might this, or a future, Commission apply the indeterminate "general conduct" standard to network slicing?

Accordingly, [T-Mobile](#) has asked the Commission, among other things, "to continu[e] to exclude non-BIAS data services (or 'specialized services') from reclassification and update[e] the Commission's *illustrative examples* of non-BIAS data services to include services that new enabling technologies like network slicing can support" (emphasis added). At the same time, it "emphasized that it is not asking the Commission to create a wholesale exemption from open internet rules for services powered by 5G network slicing." Instead, it suggests that "[a] *present-day* list of non-BIAS data services should include *present-day* slicing-enabled offerings" (emphasis added).

Of course, T-Mobile's request makes sense. But, as the italicized phrases reveal, any list compiled in April 2024, or during the next year or two, no matter how supposedly comprehensive or prescient, will not include as-yet-unknown future innovative use cases. And when those future innovative use cases emerge, they will find themselves in a problematic gray area subject to much regulatory risk, including possible sanctions.

Not to worry suggests a group of determined Title II proponents that includes the Open Technology Institute at New America (OTI), Public Knowledge, Barbara Van Schewick, and Scott Jordan. In a [March 11, 2024, ex parte submission](#), they concede that consumers can benefit from "technologies such as network slicing" – though tellingly OTI, in a [separate ex parte letter](#), argued that 5G network slicing is "*inherently paid prioritization*" (emphasis in original). According to the OTI – Public Knowledge group, to determine whether network slicing may be used as part of BIAS, a mobile operator need only abide a *four-part test* that demands nondiscriminatory access to network slices for third parties and includes highly subjective concepts, such as network slicing may "not *significantly* degrade the performance of the default BIAS service available at that time" and "the capacity and performance of the default BIA service [must] continue to improve over time." At what rate they do not say.

The OTI – Public Knowledge group’s three-part test for non-BIAS services, lifted from the [2015 Open Internet Order](#), is plagued with similarly unacceptable levels of uncertainty. They ask the Commission in their [March 11 ex parte](#) to hold that a type of service “evades” Open Internet protections unless “the *particular* type of application requires a *specific* level of quality of service, which is *objectively* necessary for the *specific* type of application.” Take a moment to focus on the italicized terms: “particular,” “specific,” “objectively.” You don’t need to be a linguistic expert, a network engineer, a lawyer, or an FCC commissioner, to know how utterly subjective and unpredictable decisions dependent on those requirements would be. They are anything but “bright line.” The outcome of decisions would turn on seemingly metaphysical distinctions beyond the ken of even supposed experts. Internet service providers without foreknowledge of how the experts might decide to interpret “particular,” “specific,” or “objectively” at any given time that someone utters the incantation “Open Internet” understandably will be reluctant to invest in innovative new applications and services.

The proposals by OTI – Public Knowledge and other pro-regulation advocates regarding “network slicing” represent nothing more than highly subjective "solutions" to highly hypothetical claimed problems. They do serve the purpose, however, of laying bare the unacceptable level of regulatory uncertainty that Title II reclassification of broadband Internet access would inject, unnecessarily and inevitably, into a vibrantly competitive marketplace utterly devoid of instances of present consumer harm.

To encourage continued investment and innovation, the Commission should shelve its entire proposal to impose a public utility straitjacket on Internet providers and let technological advancements and marketplace competition do the job of enhancing consumer welfare.

* Randolph J. May is President and Andrew Long a Senior Fellow at the Free State Foundation, a free market-oriented think tank in Rockville, MD. The views expressed in this *Perspectives* do not necessarily reflect the views of others on the staff of the Free State Foundation or those affiliated with it.

Further Readings

Seth L. Cooper, "[The FCC's Ignoring Broadband Competition](#)," *Perspectives from FSF Scholars*, Vol. 19, No. 7 (February 22, 2024).

Randolph J. May, "[FSF Submits Reply Comments on the Safeguarding and Securing the Open](#)," *FSF Blog* (January 17, 2024).

[Reply Comments of the Free State Foundation](#), *Safeguarding and Securing the Open Internet*, WC Docket No. 23-320 (January 17, 2024).

Randolph J. May, "[Communications Law and Policy Priorities for 2024](#)," *FSF Blog* (January 11, 2024).

Randolph J. May and Seth L. Cooper, "[Stop the Biden FCC's Plan to Control Internet Networks](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 52 (December 20, 2023).

Seth L. Cooper, "[PRESS RELEASE: The FCC's Proposal to Convert Internet Providers Into Public utilities Should Be Stopped](#)," *FSF Blog* (December 14, 2023).

[Comments of the Free State Foundation](#), *Safeguarding and Securing the Open Internet*, WC Docket No. 23-320 (December 14, 2023).

Daniel A. Lyons, "[Refreshing the Record on Net Neutrality](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 50 (November 14, 2023).

Randolph J. May, "[Let Us Not Raise a Ruckus Over Net Neutrality](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 48 (October 31, 2023).

Seth L. Cooper, "[Net Neutrality Regulation Is Not a Public Safety Measure](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 46 (October 18, 2023).

Randolph J. May, "[Net Neutrality Redux: A Fight Over First Principles](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 45 (October 16, 2023).

Seth L. Cooper, "[FCC Ambiguous 'General Conduct' Standard Is Bad Policy and Likely Unlawful](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 44 (October 13, 2023).

Randolph J. May, "[PRESS RELEASE: The FCC's Proposal to Impose Public Utility Regulation on Internet Providers Is Deeply Flawed](#)," *FSF Blog* (October 19, 2023).

Seth L. Cooper, "[A Reader on Net Neutrality and Restoring Internet Freedom: A Relevant Book for 2023](#)," *FSF Blog* (October 4, 2023).

Randolph J. May, "[PRESS RELEASE: FCC Proposing to Reimpose Net Neutrality Regulations Is Foolhardy](#)," *FSF Blog* (September 26, 2023).

Randolph J. May, "[Reimposing Burdensome Net Neutrality Mandates Will Harm Consumers](#)," *Perspectives from FSF Scholars*, Vol. 18, No. 39 (September 21, 2023).