

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of

Business Data Services in an Internet
Protocol Environment

WC Docket No. 16-143

Investigation of Certain Price Cap Local
Exchange Carrier Business Data Services Tariff
Pricing Plans

WC Docket No. 15-247

Special Access Rates for Price Cap Local
Exchange Carrier

WC Docket No. 05-25

AT&T Corp. Petition for Rulemaking to
Regulation of Incumbent Local Exchange
Carrier Rates for Interstate Special Access
Services

RM-10593

REPLY COMMENTS OF INTERNET2 AND EDUCAUSE

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The University Corporation for Advanced Internet Development (d/b/a “Internet2”) and EDUCAUSE submit these Reply Comments in response to the Commission’s Further Notice of Proposed Rulemaking (“*FNPRM*”) in the above referenced dockets.¹

SUMMARY

Research and education (“R&E”) networks play a critical and specialized role in advancing the broadband capabilities of our nation.² Internet2 and EDUCAUSE respectfully submit that it is unclear whether the proposals in the *FNPRM* would subject advanced R&E networking arrangements to a regulatory framework for which they were never intended. Internet2 and EDUCAUSE therefore request that the Commission clarify that R&E networks are not the subject of this proceeding and the services they provide do not constitute business data services (“BDS”).

In short, Internet2 and EDUCAUSE are concerned that the Commission arguably is advancing a binary view of broadband markets in which providers either fall into the retail broadband Internet access service (“BIAS”) category, or the newly proposed BDS classification, both of which would constitute telecommunications services under Title II.³ Specifically, the proposed definition of BDS is coupled with the conclusory statement that all providers of BDS are telecommunications carriers.⁴ This has caused some observers to suggest that all providers of high-capacity data services will be considered BDS providers subject to the regulations under

¹ *Business Data Services in an Internet Protocol Environment*, WC Docket No. 16-143, Tariff Investigation Order and Further Notice of Proposed Rulemaking, FCC 16-54 (rel. May 2, 2016) (“*FNPRM*”).

² As used throughout these comments, the term “R&E networks” means a not-for-profit network that has the purpose of promoting R&E in the United States.

³ See *FNPRM*, ¶ 13 (positing that “BDS is distinctly different from the mass marketed, ‘best efforts’ broadband Internet access services (BIAS) provided to residential end users, such as AT&T’s U-verse or Comcast’s XFINITY.”).

⁴ *FNPRM*, ¶ 257 (“We note that business data services are telecommunications services, regardless of the provider supplying the service. BDS providers are therefore common carriers.”).

consideration in this proceeding.⁵ This possibility is the primary reason Internet2 and EDUCAUSE are filing these Reply Comments – to ensure that the Commission remains clear that the definition of BDS applies only to common carrier networks. Any other approach would obscure the diversity inherent in how R&E networks operate separate and apart from retail and enterprise offerings. Chief among these critical distinctions is that R&E network operators are non-profit organizations that provide specialized, high-speed, and high-performance network arrangements to their own members based on individualized networking requirements. As a result, R&E network operators like Internet2 are private carriers.

Indeed, perhaps because this proceeding evolved from incumbent local exchange carrier (“ILEC”) “rate regulation and tariffing requirements, i.e., dominant carrier safeguards,” the Commission has not yet had cause to consider the unique aspects of the R&E community and the specialized networks that have been developed to meet its needs.⁶ As it stands, the record in this proceeding is devoid of any discussion regarding R&E networks. Accordingly, to avoid the unintended consequences that could result from this proceeding, Internet2 and EDUCAUSE draw the Commission’s attention to two main points.

First, the proposed regulatory framework for BDS should not apply to private networks, such as those operated by Internet2 and the R&E community. The definition of BDS proposed in the *FNPRM* assumes that all data transport services are telecommunications services offered directly to the public, when that is not actually the case. Instead, under longstanding Commission precedent, the Commission must evaluate whether a particular service arrangement is a common-carrier undertaking on a case-by-case basis.

⁵ See, e.g., Comments of Charter Commc’ns, Inc. at 17-19 (filed June 28, 2016); see also Comments of Comcast Corp. at 61-65 (filed June 28, 2016).

⁶ *FNPRM*, ¶ 16.

Second, there is no policy rationale to regulate highly specialized R&E networking arrangements as BDS, whether under the proposed framework or otherwise. Indeed, the Commission has long held that non-profit arrangements with an organization's own members are facially distinct offerings that should not be regulated the same as the services that have been the focus of this proceeding. The Commission has further held that providers like Internet2 do not have any market power to justify the potential application of the BDS rules to them.

BACKGROUND

Internet2 is a member-owned, not-for-profit corporation founded in 1996 by the nation's leading higher education institutions. Today, Internet2 has grown to more than 476 members, including at least 314 research universities, government agencies and laboratories, private companies, regional R&E networks, and other non-profit organizations like EDUCAUSE that are devoted to assisting our nation's R&E community. Through its position as the country's premier national R&E network, Internet2 promotes the next-generation R&E missions of its members by providing pioneering network capabilities and unmatched opportunities for cross-collaboration to develop innovative solutions to common technology challenges.

Internet2 owns and operates an advanced national network infrastructure and identity management framework that serves a variety of constituencies within the R&E community. Using the latest generation of optical transport equipment, the Internet2 Network supports native 100 Gigabit services, with examples already in place offering 200 and 400 Gigabit optical services. In addition, the Internet2 Network has advanced Layer 2 services built on software defined networking ("SDN"), which allows the network to be optimized for users' specific

application needs. Internet2's current 17.6 Terabit capacity national network positions the Internet2 Network as one of the most advanced networks in the world.⁷

Further, state and regional R&E networks that connect to the Internet2 Network are similarly purpose built and dedicated to meeting the specific needs of the R&E community located within their respective footprints, including experimental networks to foster networking and application research between R&E centers. Indeed, the common thread that binds R&E network providers across the nation is that they are non-profit organizations specifically tasked with supporting the networking needs of the R&E community within their respective jurisdiction.⁸ Membership within Internet2, for example, is limited to a "U.S.-based non-profit or not-for-profit organization that is substate, state, or multistate in scope and that has a principal mission to provide network infrastructure and services primarily to the research and education community in the relevant geographic area, including, but not limited to, access to national

⁷ Internet2 also operates InCommon, the nation's trust federation for R&E. InCommon has more than 900 participants, with over 500 university and college participants and over 200 commercial participants. In conjunction with InCommon, Internet2 operates the Trust and Identity in Research and Education ("TIER") program, designed to create a coherent identity and access management toolkit for federation participants. In addition, Internet2 helps the R&E community select, develop, and deliver cloud solutions through the Internet2 NET+ program with commercial cloud service providers, maximizing the benefits of collaborative cloud environments and scale for academic institutions. More information about Internet2 is available at <http://www.internet2.edu/>.

⁸ In fact, Internet2 played a leading role in installing and managing a Broadband Technology Opportunities Program ("BTOP") project that was designed to fulfill the recommendation of the National Broadband Plan. That plan called for government agencies to work with the R&E community to facilitate a "Unified Community Anchor Network," that would support and assist anchor institutions in obtaining and utilizing broadband connectivity." *Connecting America: The National Broadband Plan* at 154 (Rel. Mar. 16, 2010) ("NBP") available at <http://www.broadband.gov/plan>. Internet2's U.S. Unified Community Anchor Network program ("U.S. UCAN"), the outgrowth of its BTOP award, focuses on extending R&E network resources to all community anchor institutions ("CAIs"), thereby expanding access to, and ultimately adoption of, next-generation broadband. Today, nearly 100,000 CAIs are connected to a non-profit R&E network.

Internet2 Network infrastructure and services.”⁹

EDUCAUSE is a non-profit association and the foremost community of information technology leaders and professionals committed to advancing higher education.¹⁰ Through analysis, advocacy, and professional development, EDUCAUSE supports IT professionals and the contributions technology makes to institutional and community-wide strategic initiatives. EDUCAUSE membership includes 2,300 colleges, universities, and related organizations. More than 68,000 individual participants comprise the EDUCAUSE community, including chief information officers and senior IT leaders; IT and cybersecurity professionals; academic deans; university librarians; teaching and learning professionals; and faculty members.

Internet2 and EDUCAUSE therefore represent a broad cross-section of the most demanding network users in the country, namely scientists, academics, researchers in the nation’s leading academic and research institutions, and federal government agencies, among others.¹¹ R&E networks are distinctly designed and engineered to meet the needs of these highly specialized users who have expectations that they can move massive amounts of data on demand and with extraordinary speed. They anticipate that the network will deliver a predictable throughput up to 100 Gbps at any time they offer a workload to the network, and that Internet2

⁹ See <http://www.internet2.edu/about-us/membership/research-education-network-member-details/>.

¹⁰ More information about EDUCAUSE is available at www.educause.edu.

¹¹ Internet2’s collaboration is extended not only by deep relationships with dozens of state and regional networks in the U.S. but also mission-driven networks in leading science agencies, such as the Department of Energy’s (“DOE”) Energy Sciences Network (“ESnet”) and the National Oceanic and Atmospheric Administration’s science network, N-Wave. Internet2’s optical spectrum capability allows DOE, for instance, to build and reconfigure its own 100G networks with changing A and Z points on demand. Internet2 also collaborates with federal agencies by providing network and membership services to the Department of Agriculture, National Institute of Standards and Technology, Centers for Disease Control and Prevention, National Institutes of Health, the National Park Service, and other federal agencies.

and its state and regional R&E network partners will continuously engineer the network to stay ahead of the unique demands they are likely to generate.

To meet these demands, R&E networks are designed with distinctive characteristics in mind: abundant symmetrical bandwidth, low latency expectations, and low jitter guarantees that do not inhibit users' connections and that allow plenty of headroom for bursting applications without capping users' throughput during flash usage events. R&E networks provide flexible provisioning with multiple paths to meet the needs of specialized applications that require incredibly low latency, with transport capacities that are at least 100 times more robust than anything under consideration in this proceeding.

It is because of the special networking arrangements of the R&E community that Internet2 and EDUCAUSE respectfully file these Reply Comments so that the Commission can address the concerns of the non-profit R&E community in this proceeding. Specifically, the broad language in the *FNPRM* is generating confusion over the regulatory treatment of private networks, such as those operated by Internet2 and other non-profit R&E network operators. The Commission has a long history of treating operators of R&E networks as private carriers. Nonetheless, some commenters are interpreting the definition of BDS as if it includes private networks and private carriage arrangements. Internet2 and EDUCAUSE therefore ask the Commission to clarify that the proposed scope of the BDS framework is restricted to those entities that are operating as common carriers and does not apply to providers of private R&E networks.

I. THE PROPOSED DEFINITION OF BDS IS OVERBROAD

Internet2 and EDUCAUSE's concerns with the *FNPRM* are limited primarily to clarifying the scope of the Commission's proposed BDS regulations. Internet2 and EDUCAUSE

suspect that the Commission did not intend to bring the incredibly specialized networking arrangements of the R&E community into the scope of the suggested BDS framework.

Currently, the Commission is proposing to define BDS very broadly as a **telecommunications service** that:

transports data between two or more designated points at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that typically include bandwidth, reliability, latency, jitter, and/or packet loss. BDS does not include “best effort” services, e.g., mass market BIAS such as DSL and cable modem broadband access.¹²

As noted above, this definition arguably could create a binary broadband framework in which providers are either BIAS or BDS providers, with both subject to Title II common carrier regulations.¹³ However, the fact that the Commission states that “business data services are telecommunications services, regardless of the provider supplying the service,” suggests that the Commission is limiting its analysis to the services that historically have been subject to this proceeding.¹⁴ That is, while certain assumptions may have been true in the context of tariffed ILEC offerings around which this proceeding originated, as the Commission itself has previously ruled, whether a provider has made a common carriage offering “must be determined on a case-

¹² *FNPRM*, ¶ 279 (emphasis added).

¹³ To be sure, R&E network arrangements could not be considered BIAS because they are not “mass market” services “marketed and sold on a standardized basis.” *In the Matter of Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, ¶¶ 187-89 (2015). In fact, the Commission explicitly excluded from the definition of BIAS virtual private network services and Internet backbone services, noting the “Commission has historically distinguished these services from ‘mass market’ services and ... they do not provide the capability to receive data from all or substantially all Internet endpoints.” *Id.* ¶ 189 (internal citations omitted). Thus, the *Open Internet Order* cannot be used as support in asserting that all BDS are similarly common carrier services, because BIAS is defined in such a way as to only include mass-market services.

¹⁴ *FNPRM*, ¶ 257.

by-case basis.”¹⁵ In the case of specialized R&E network arrangements, the Commission should not consider such services as BDS.

Moreover, it cannot be the case that the Commission is silently repudiating decades of precedent recognizing that private carriage and common carriage are mutually distinct regulatory classifications. The Commission could not make such a sweeping change to the regulatory structure without providing affected parties notice and the opportunity to comment, consistent with the Administrative Procedures Act.¹⁶ Indeed, the definition of “telecommunications service” in the Telecommunications Act of 1996 requires a finding that a carrier must be offering telecommunications “for a fee directly to the public, or to such classes of users as to be effectively available directly to the public” in order to be treated as a common carrier.¹⁷ The Commission itself has held that this definition “recognizes the distinction between common carrier offerings that are provided to the public ... and private services.”¹⁸ Thus, Internet2 and EDUCAUSE assume that the Commission is not overlooking the jurisdictional limitations contained in the Communications Act of 1934, as amended, (“Communications Act”) and decades of precedent recognizing that the Commission cannot regulate private carriers as

¹⁵ *Bright House Networks, LLC, et al. v. Verizon California, Inc., et al.*, File No. EB-08-MD-002, Memorandum Opinion and Order, 23 FCC Rcd 10704, 10717-19, paras. 37-40 (2008), *aff'd sub nom. Verizon Cal., Inc. v. FCC*, 555 F.3d 270, 275-76 (D.C. Cir. 2009).

¹⁶ See Comments of the National Cable & Telecommunications Association at 15 (filed June 28, 2016).

¹⁷ 47 U.S.C. § 153(53).

¹⁸ *Virgin Islands Tel. Corp. v. FCC*, 198 F.3d 921, 926 (1999) (internal quotes omitted, citing H.R. Conf. Rep. No. 104-458, at 115).

common carriers.¹⁹

Further, the proposed definition of BDS has a very low floor in terms of Mbps (certainly by R&E standards) but no ceiling. By analogy, this would be akin to proposing to regulate, and classify as the same service, all modes of transportation reaching speeds of at least 15 mph. While both Segway and SpaceX products would fall under this definition, no one would assert that these companies are competing in the same product market. In a similar vein, the Commission should modify its definition of BDS to exclude R&E networks and their specialized, ultra high-capacity and distinctive services.

In the context of CALEA, the Commission held that if R&E networks

are engaged in the provision of facilities-based private broadband networks or intranets that enable members to communicate with one another and/or retrieve information from shared data libraries **not available to the general public**, these networks appear to be **private networks** for purposes of CALEA.... We therefore make clear that **providers of these networks are not included as “telecommunications carriers”** under the SRP with respect to these networks.²⁰

Thus, as a threshold jurisdictional matter, the proposed definition of BDS is facially overbroad because it could sweep in private R&E network services that the Commission has already recognized as not constituting telecommunications services.

In short, the definition of BDS proposed by the Commission is imprecise and could be read as capturing many services that are outside the scope of this proceeding. Internet2 and

¹⁹ See *Midwest Video Corp.*, 440 U.S. at 701; see also *Cellco Partnership v. FCC*, 700 F.3d 534, 547 (D.C. Cir. 2012) (“If a carrier is forced to offer service indiscriminately and on general terms, then that carrier is being relegated to common carrier status.”); see also *Cellco Partnership v. FCC*, 700 F.3d 534, 547 (D.C. Cir. 2012) (“If a carrier is forced to offer service indiscriminately and on general terms, then that carrier is being relegated to common carrier status.”); *NorLight Request for Declaratory Ruling*, Declaratory Ruling, 2 FCC Rcd 132 ¶ 6 (1987) (accord private carrier treatment to proposed “backbone” service entailing the transmission of “long-haul, intercity and regional communications”).

²⁰ *In the Matter of Commc 'ns Assistance for Law Enforcement Act and Broadband Access and Services*, 20 FCC Rcd. 14989, ¶ 36 n.100 (2005) (emphasis added).

EDUCAUSE therefore respectfully ask that the Commission revise the definition of BDS consistent with these comments to clarify that it does not apply to private networks, such as those operated by Internet2 and its state and regional R&E networking partners. Any other approach could have the unintended consequence of hindering the missions of R&E networks in the U.S.

II. THERE IS NO POLICY JUSTIFICATION FOR REGULATING R&E NETWORKS AS BUSINESS DATA SERVICES

As detailed above, the Internet2 Network and the networks of its state and regional R&E partners are highly specialized networking arrangements that are quantitatively and qualitatively distinct from the ILEC special access services at the core of this proceeding. These networks are equally unrelated to the competitive business data services also at issue in the *FNPRM*. Indeed, the Commission recognizes that there are different markets for data services, noting that “[a]lthough fit for many customer purposes, best efforts do not meet the requirements of all BDS purchasers, **nor is it offered by sellers as a product intended for all customers.**”²¹ The same is particularly true for R&E networks, as they are designed and operated only for a limited number of users and engineered and managed to those users’ specific needs. Internet2 and EDUCAUSE therefore respectfully request that the Commission recognize that the services provided by R&E networks are distinct from BDS.

As the Commission’s own summary of this nearly two-decades-long proceeding indicates, the Commission has never intended for the special access rules to apply to R&E networks. Instead, the “Commission has historically subjected the provision of BDS by incumbent LECs to rate regulation and tariffing requirements, i.e., dominant carrier safeguards.”²² Moreover, the Commission has never considered R&E networking arrangements to be part of even the competitive special access market, and the first inkling the non-profit R&E

²¹ *FNPRM*, ¶ 191 (emphasis added).

²² *Id.*, ¶ 16.

community had that it could potentially be subject to the rules under consideration was after becoming aware of the definition of BDS proposed in the *FNPRM*.²³

In addition to the fact that R&E networking arrangements are purpose built and engineered for specific R&E members, other characteristics that distinguish R&E networks from typical special access or enterprise broadband services include, but are not limited to, that services are provided on a non-profit basis to members, and that the services consist largely of specialized backbone services. Thus, any policy concerns that the Commission may have with for-profit ILECs abusing their market power over unrelated enterprise customers are simply inapposite when it comes to R&E network operators' non-profit arrangements with their own members.

Indeed, the Commission has previously held that specialized providers that offer service to their members pursuant to “a non-profit arrangement in which several users collectively use communication services and facilities provided by a carrier” “is not common carriage, and therefore, not subject to regulation under Title II of the Communications Act.”²⁴ The Commission expressly held that “the operation of an intermediary chartered as and providing service through a non-profit corporate entity is *prima facie* not common carriage ‘for hire’ within the meaning of the Act.”²⁵ There is no basis in the record to support reversing this longstanding policy and precedent, which does not appear to be a topic under consideration in any event. Thus, R&E networks cannot be regulated under the BDS framework under consideration for these reasons alone.

²³ *Id.*, ¶¶ 16-43.

²⁴ *AT&T Co. v. FCC*, 572 F.2d 17, 26 (2d Cir. 1978) (citing *In re Regulatory Policies Concerning Resale and Shared Use of Common Carrier Services and Facilities*, Report and Order, 60 F.C.C.2d 261, 316 (1976) (“*Resale and Shared Use Order*”)).

²⁵ *Id.* at ¶ 121.

Moreover, the Commission has consistently found the middle-mile and backbone marketplace to be competitive, obviating any independent justification for including such providers within the definition of BDS.²⁶ For instance, in approving the Verizon/MCI merger in 2005, the Commission explained that, “[b]ecause we conclude that the Internet backbone market is sufficiently competitive and will remain so post-merger, it follows that the prices and terms of interconnection in the market will also be competitive.”²⁷ The Commission reached the same conclusion in approving the SBC/AT&T transaction, noting that “interconnection between Internet backbone providers has never been subject to direct government regulation, and settlement-free peering and degradation-free transit arrangements have thrived.”²⁸

The Commission reaffirmed these findings in approving the more recent Global Crossing/Level 3 transaction, expressly rejecting arguments that the combined company would have an incentive to engage in anticompetitive transit and peering practices.²⁹ According to the Commission, any effort to engage in such practices would cause the entity to “lose customers to its remaining peers, because those entities would still enjoy ubiquitous Internet connectivity and, hence, would be more attractive to customers.”³⁰ With respect to Internet2 and R&E network operators like it, these same conclusions apply with even more force because as non-profits, they

²⁶ Importantly, the focus of this proceeding prior to the *FNPRM* was limited to connections to end users. Without any articulated reason or justification for expanding the scope of this proceeding, the Commission now proposes to define BDS as services that transport data between “two or more designated points,” without necessarily requiring that one of those points be to an end-user location. Thus, middle-mile and backbone services arguably could fall within this newly proposed definition unless another exception applies.

²⁷ *Verizon Commc 'ns Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd. 18433, ¶ 133 (2005).

²⁸ *SBC Commc 'ns Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd. 18290 ¶ 132 (2005).

²⁹ *Applications Filed by Global Crossing Limited and Level 3 Commc 'ns, Inc. for Consent to Transfer Control*, Memorandum Opinion and Order and Declaratory Ruling, 26 FCC Rcd. 14056 ¶ 27 (2001).

³⁰ *Id.*

have no incentive (or ability) to wield any market power, particularly in a market the Commission has deemed competitive.

The protections that the Commission envisions creating in this proceeding can be accomplished without the Commission potentially subjecting non-profit R&E network operators to the proposed rules, especially when they have absolutely no incentive to leverage non-existent market power to the detriment of their member-customers or community anchor institutions. Indeed, there is no policy rationale that could support viewing R&E networks as belonging to the same market as BDS and being treated the same for regulatory purposes. On the contrary, the country's R&E community would be worse off if the Commission painted with too broad a brush in this proceeding.

For example, Internet2 had to devote a tremendous amount of resources to the Commission's prior data collection requests in this docket, analyzing hundreds of individualized contracts to determine whether it had any reporting obligations, and ultimately finding none. For a non-profit organization with limited resources and staff, that was a tremendous burden that diverted attention away from expanding the reach of the Internet2 Network. Going forward, there is a substantial risk that Internet2 and its R&E networking partners' ability to develop networking solutions to meet their members' specific needs would be unnecessarily curtailed if they were brought into the BDS framework.

CONCLUSION

For all of the foregoing reasons, Internet2 and EDUCAUSE respectfully request that the Commission consider these Reply Comments and the comments of the larger R&E community in this proceeding and exclude non-profit R&E networks from the proposed regulations.

Respectfully submitted,

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