

**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 for Price Cap Local Exchange Carriers)	WC Docket No. 05-25
)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services)	RM-10593

COMMENTS OF INTELIGENT

Inteligent, Inc. (“Inteligent”), by its undersigned counsel, respectfully submits the following comments on certain issues identified in the *Tariff Investigation Order and Further Notice of Proposed Rulemaking* released in the above-captioned docket on May 2, 2016 (FCC 16-54) (the “FNPRM”).

Although Inteligent has an interest in many of the topics raised in the *FNPRM*, it focuses these comments on the reform of price cap regulation of multiplexing services, a topic that heretofore has received little specific attention. As shown below, the current price cap regime does not provide adequate (or any) incentive for incumbent LECs to pass through cost savings on multiplexing to BDS customers. The Commission should establish a new price cap service category for multiplexing, and require major price reductions in this category to remedy the grotesque overpricing of this bottleneck service element.

I. Background

Under the current price cap rules, the special access service basket is a “catch-all” collection of all interstate communications services offered by incumbent LECs that are not components of circuit-switched access or interexchange service. Thus, it includes “channel terminations” or last-mile circuits, connecting an end-user’s or carrier’s premises to the ILEC’s central office, for dedicated and packet-switched services; interoffice transport, which provides connections between and among multiple central offices for connections between end-points served by different offices; and a variety of related services and functions, including multiplexing.

“Multiplexing” is the network function by which multiple analog or digital signals are combined into one signal over a single network channel, and “demultiplexing” is the function by which the combined signal is broken out into its original components.¹ Commonly, in the provision of BDS, up to 24 voice-grade signals may be multiplexed onto a DS-1 circuit, and up to 28 DS-1 signals may be multiplexed onto a DS-3 circuit. Both multiplexing and demultiplexing are typically performed by an electronic device called a multiplexer, or “mux,” located inside an ILEC central office at which circuits are terminated.

The cost of multiplexing consists almost entirely of recovering the cost of the mux equipment, plus the recurring cost of electricity and allocated overhead. (The installation and configuration of the mux is a one-time cost typically covered by a non-recurring charge.) Significantly, the cost of mux equipment has declined precipitously over the past 20 years, as the result of trends seen in the electronics industry generally throughout that period. A mux that cost

¹ See, e.g., *ATIS Telecom Glossary 2011* (“Multiplexing”), available at <http://www.atis.org/glossary/definition.aspx?id=3793>.

\$20,000 in 1996 may be replaced today by an equivalent piece of equipment costing as little as \$500. The equipment is smaller in size and consumes less power than its 1996 forebear.

Despite this enormous reduction in cost, however, ILEC rates for multiplexing services are essentially the same today as they were in 1996. AT&T's ILEC subsidiaries in the Midwest, for example, charge anywhere from \$420 to \$865 *per month* for DS3 to DS1 multiplexing, depending on location and term commitment.² Even at the lowest rate, AT&T could recover its entire investment in a \$500 mux in a little over one month, with all future months' billings representing nearly pure profit. Verizon's charges for DS3 to DS1 multiplexing in New York and Massachusetts range from \$710.26 to \$800.51 per month.³ Thus, Verizon can recover its entire investment in a new multiplexer in about three weeks.

Obviously, no one would purchase this service from an ILEC at these prices if they had a choice, but there are situations where there is no practical alternative to using the ILEC's multiplexing. Inteliquent operates its own transport network and, in most cases, provisions its own circuit and its own muxes. Inteliquent has also been able to use third-party facilities for interconnection to ILEC central offices in many locations. In some cases, however, Inteliquent has to purchase DS-3 special access transport from the ILEC, primarily for transit to the ILEC's affiliate.⁴ Notwithstanding the availability of non-ILEC transport in many cases, Inteliquent (or the third-party provider) cannot provision its own muxes at the ILEC central office where the transport circuit terminates unless it also collocates at that office, which can be cost-prohibitive given the volume of ILEC central offices to which Inteliquent connects. Because Inteliquent uses

² Ameritech Operating Companies, Tariff F.C.C. No. 2, 31st Revised Page 414.

³ Verizon Telephone Companies, Tariff F.C.C. No. 11, 5th Revised Page 30-129.

⁴ The wireless affiliates of the ILECs typically, although not universally, require that Inteliquent deliver transit traffic to their switches via the ILEC network "in-region," even though they accept direct connections from Inteliquent in areas where the ILEC is not their affiliate.

DS-3 transport for interconnection to the local switching network and the ILECs will accept such interconnection only at the DS-1 level, Inteliquent must use ILEC multiplexing service to convert the DS-3 circuits to DS-1s.

II. Price Cap Reforms Are Needed to Impose Meaningful Constraints on ILEC Multiplexing Charges

As the above discussion demonstrates, price cap regulation has failed to give the ILECs any incentive to pass through reductions in multiplexing costs to their BDS customers. Under rate-of-return regulation, ILECs would have been required to perform periodic cost studies, and the reduction in the cost of mux equipment would necessarily have resulted in corresponding reductions in service prices. Price cap regulation severed the link between costs and prices. Instead, the inflation index and productivity factor together served as a proxy for costs; if the overall price cap index went down in a given year, ILECs had to reduce their prices by a similar percentage, *on average*. But, except as constrained by Service Band Indexes, these price changes did not have to bear any relationship to the cost of a particular service or function. To take a simple example, if a particular service category contains services A and B, each priced initially at \$100 with equal demand, and the price cap index requires a 10% reduction, the ILEC could comply either by reducing the price of A and B by 10% each; by reducing the price of A by 20% and leaving B unchanged; or by reducing the price of B by 20% and leaving A unchanged. Changes in the *costs* of providing services A and B do not enter into the calculations at all. For example, even if the cost of B were declining and the cost of A were increasing, the ILEC could choose to reduce only the price of A.

The Commission introduced service categories and subcategories, and their corresponding Service Band Indexes (SBIs), into price cap regulation to put some constraints on the ILECs' ability to cross-subsidize by reducing the price of more competitive services and increasing the

price of less competitive ones, while still remaining within the overall price caps. *FNPRM*, para. 394. In the case of special access, however, the service categories are broad groupings of services based largely on bandwidth. *Id.*, n.896. Multiplexing is contained within the “high capacity special access” category, and the DS1 and DS3 subcategories as applicable, but in each case it comprises only a small percentage of the overall revenues in those categories and subcategories. Thus, ILECs can make changes in other rate elements, such as channel terminations and transport, and leave multiplexing rates unchanged without exceeding the limits imposed by the SBIs. Moreover, the SBIs for DS1 and DS3 provide ILECs with *upward* pricing flexibility, which is hardly needed for a functionality for which the underlying cost has been plummeting.

Therefore, Inteliquent proposes that the Commission adopt the following specific reforms to the price cap rules to remedy the extreme overpricing of multiplexing services —

1. Add a service subcategory for multiplexing to 47 CFR § 61.42(e)(3)(iii). *See FNPRM*, para. 396. This subcategory should include all rate elements related to multiplexing or demultiplexing high-capacity BDS, including DS1-to-voice grade and DS3-to-DS1 multiplexing.
2. Amend 47 CFR § 61.47(e) to establish an upper price band for multiplexing category of (a) negative twenty percent (–20%) for tariff filings during the years 2017 through 2021, inclusive, as a catch-up for past cost declines not reflected in current pricing;⁵ and (b) zero percent (0%) for tariff filings in all subsequent

⁵ Inteliquent proposes that ILECs should be required to reduce multiplexing rates, on average, by 20% relative to the prices of other elements in the overall special access basket (or any new basket the Commission may establish as part of this proceeding). If the Commission imposes an X-factor or other adjustment that requires reductions in overall special access prices, the additional adjustment for multiplexing should be applied multiplicatively. For example, if the required downward adjustment in the overall basket price index is 15% in the first year, then the

years. *See FNPRM*, para. 400. This would result in a cumulative price reduction of approximately 67%, relative to the special access basket as a whole, over the first five years, after which ILECs would be prevented from increasing multiplexing rates relative to other BDS rate elements.

Specific proposed rule amendments are appended hereto as Attachment A.

III. Conclusion

The Commission should prevent ILECs from charging excessive rates for multiplexing services, by adopting the rule amendments proposed by Inteliquent herein.

Respectfully submitted,

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upper pricing limit for multiplexing should be $(1.0 - 0.15) \times (1.0 - 0.20) = 0.68$, or 68% of the previous year's price index for that subcategory.

ATTACHMENT A

Inteliquent Proposed Rule Amendments

Section 61.42 (Price cap baskets and service categories). Subsection (e), paragraph (3) should be amended as follows:

(3) The special access basket shall contain special access services as the Commission shall permit or require, including the following service categories and subcategories:

(i) Voice grade special access, WATS special access, metallic special access, and telegraph special access services;

(ii) Audio and video services;

(iii) High capacity special access, and DDS services, including the following service subcategories:

(A) DS1 special access services; ~~and~~

(B) DS3 special access services; and

(C) Multiplexing services;

(iv) Wideband data and wideband analog services.

Section 61.47 (Adjustments to the SBI; pricing bands). Subsection (e) should be amended by adding the following new paragraph (3):

(3) Zero percent (except as provided below):

(i) Multiplexing Subservice (special access basket); *provided*, however, that for tariff filings during calendar years 2017 through 2021, inclusive, the upper pricing band for this subcategory shall be negative 20 percent.