

# **DESCRIPTION & JUSTIFICATION INTERSTATE ACCESS TARIFF REVISIONS**

Effective April 16, 2015

## **Introduction**

The Chillicothe Telephone Company (Chillicothe) submits the accompanying access tariff revisions to its Interstate Access Tariff No. 1. The purpose of this filing is to adjust the special access channel termination demand for the DS3 circuits and rebalance the rates for all of the special access channel termination services.

A description of each charge and the associated justification (including statements of cost and rate development which are in accordance with Section 61.38 of the Commission's Rules), which support the information contained in this filing, is provided below. Exhibit I is the Revenue Price Out using effective demand and rates, as well as prospective demand and rates. The shift in rates is revenue neutral and the special access revenue requirement remains at \$1,702,923.

## **Description & Justification**

### ***Channel Termination Recurring Rates***

Chillicothe is experiencing a larger number of DS3 disconnects than projected in the July 1, 2014 annual access tariff filing. Interexchange carriers are disconnecting high capacity circuits and moving the traffic to towers via their own fiber facilities or other telecommunications companies' facilities. Chillicothe over-forecasted the high capacity DS3 channel termination demand for the annual tariff filing and is seeking to rebalance its special access rates.

Chillicothe proposes decreasing its high capacity DS3 channel termination demand from 20 to 11. Chillicothe's DS3 demand is currently at 13 and 2 additional disconnects are pending. See Exhibit IV for the history of actual to forecast demand for the 2014-2015 tariff period. Chillicothe will use its unit investment study to rebalance its special access channel termination rates.

A unit investment study identifies the average equipment needed to provide each special access service type including voice grade, digital data, high capacity DS1 and high capacity DS3. Each piece of equipment cost is multiplied by a factor if one circuit does not use 100% of the

equipment. This results in a “typical unloaded investment” value for each piece of equipment. The unloaded investment is totaled for each service type. The unloaded investment by service type is multiplied by the service demand to calculate a weighted investment. Each service type’s weighted investment is divided by the total special access weighted investment to calculate a factor which is multiplied by the annual special access revenue requirement.

Essentially, the base equipment cost and demand for each service type is used to allocate the interstate special access revenue requirement to the individual special accesses services. The special access service type revenue requirement is divided by the service demand to calculate monthly rates. This type of analysis is performed separately for the channel termination, channel mileage termination, and channel mileage facility revenue requirements. This tariff filing will require the channel termination analysis.

Chillicothe amended its unit investment study template to adjusted DS3 demand from 20 to 11. Exhibit II details the revised unit investment study and identifies the proposed rates by service type. Exhibit III is the original unit investment study used for the 2014-2015 tariff filing.

Exhibit I is the Revenue Price Out using effective demand and rates, as well as prospective demand and rates. The shift in rates is revenue neutral and the special access revenue requirement remains at \$1,702,923.

## REVENUE PRICE OUT

Access Element	2014-2015		Prospective Monthly	Prospective Rate	Effective Rate	Prospective Revenue	Effective Revenue	Prospective Revenue	Total
	Effective Demand	Original Monthly							
	[A]=input	[B]=[A]/12	[C]=input	[D]=[C]/12	[E]=Tariff Sheets	[F]=Exhibit III	[G]=[A]*[E]	[H]=[C]*[F]	[I]=[H]-[G]
CT-2W	72	6	72	6	75.97	87.18	\$ 5,470	\$ 6,277	\$ 807
CT-4W	24	2	24	2	87.67	\$100.61	\$ 2,104	\$ 2,415	\$ 311
CT-DDS (56K)	312	26	312	26	101.39	\$116.35	\$ 31,633	\$ 36,302	\$ 4,669
CT-HC (T1)	5,784	482	5,784	482	203.50	\$233.53	\$ 1,177,025	\$ 1,350,743	\$ 173,718
CT-HF (DS3)	240	20	132	11	2,027.88	\$2,327.18	\$ 486,691	\$ 307,187	\$ (179,504)
							\$ 1,702,923	\$ 1,702,923	\$ -

## EXHIBIT II

### UNIT INVESTMENT STUDY – WITH PROSPECTIVE DEMAND

Type of Service	Typical Unloaded Investment	2014-2015 Monthly Demand	Average Miles (BIP *Miles)	Monthly Demand Miles	Weighted Rate Relations	Weighted Factor	Original Test Year RRQ	Rate Per Year	Rate per Month	Proof
[A]	[B]=Records	[C]=Input	[D]	[E]	[F]=[B]*[C]	[G]=[F]/Total [F]	[H]=[G]* Total [H]	[I]=[H]/[C]	[J]=[I]/12	[K]=[J]*[C]*12
<b>Channel Termination Rate</b>										
Voice Grade 2 Wire										
Total	\$647.22	6	na	na	\$3,883	0.37%	\$6,277	\$ 1,046.15	\$ 87.18	\$ 6,277
Voice Grade 4 Wire										
Total	\$746.94	2	na	na	\$1,494	0.14%	\$2,415	\$ 1,207.33	\$100.61	\$ 2,415
Digital Data										
Total	\$863.81	26	na	na	\$22,459	2.13%	\$36,302	\$ 1,396.23	\$116.35	\$ 36,302
HI CAP DS1										
Total	\$1,733.74	482	na	na	\$835,665	79.32%	\$1,350,743	\$ 2,802.37	\$233.53	\$1,350,743
HI CAP DS3										
Total	\$17,277.07	11	na	na	\$190,048	18.04%	\$307,187	\$27,926.12	\$2,327.18	\$ 307,187
Total										
Checksum					\$1,053,548		\$1,702,923			\$1,702,923

#### Source and Calculations

- [A] Per tariffed services
- [B] The amount of investment item used by one service type circuit. For example, a card may handle more than one circuit, so a factor is developed to reflect a usage of one. Investment costs are per vendor quotes or continuing property records.
- [C] Estimated demand is forecast circuits based on historical data.
- [D] Not applicable for channel termination billing.
- [E] Not applicable for channel termination billing.
- [F] Demand multiplied times the investment cost for one circuit.
- [G] Distribution of total weighted rate relations.
- [H] The total revenue requirement for the respective Part 69 access element is allocated to individual service types by applying the individual weighting factors in column G.
- [I] Annual revenue requirement divided by demand.
- [J] Annual amount divided by 12.

# EXHIBIT III

## UNIT INVESTMENT STUDY – WITH EFFECTIVE DEMAND

Type of Service	Typical Unloaded Investment	2014-2015 Monthly Demand	Average Miles (BIP *Miles)	Monthly Demand Miles	Weighted Rate Relations	Weighted Factor	Original Test Year RRQ	Rate Per Year	Rate per Month	Proof
[A]	[B]=Records	[C]=Input	[D]	[E]	[F]=[B]*[C]	[G]=[F]/Total [F]	[H]=[G]* Total [H]	[I]=[H]/[C]	[J]=[I]/12	[K]=[J]*[C]*12
<b>Channel Termination Rate</b>										
Voice Grade 2 Wire										
Total	\$647.22	6	na	na	\$3,883	0.32%	\$5,470	\$ 911.60	\$ 75.97	\$ 5,470
Voice Grade 4 Wire										
Total	\$746.94	2	na	na	\$1,494	0.12%	\$2,104	\$ 1,052.05	\$87.67	\$ 2,104
Digital Data										
Total	\$863.81	26	na	na	\$22,459	1.86%	\$31,633	\$ 1,216.66	\$101.39	\$ 31,633
HI CAP DS1										
Total	\$1,733.74	482	na	na	\$835,665	69.12%	\$1,177,025	\$ 2,441.96	\$203.50	\$1,177,025
HI CAP DS3										
Total	\$17,277.07	20	na	na	\$345,541	28.58%	\$486,691	\$24,334.57	\$2,027.88	\$ 486,691
Total										
Checks					\$1,209,042		\$1,702,923			\$1,702,923
sum							\$1,702,923			\$1,702,923

### Source and Calculations

- [A] Per tariffed services
- [B] The amount of investment item used by one service type circuit. For example, a card may handle more than one circuit, so a factor is developed to reflect a usage of one.
- Investment costs are per vendor quotes or continuing property records.
- [C] Estimated demand is forecast circuits based on historical data.
- [D] Not applicable for channel termination billing.
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- [F] Demand multiplied times the investment cost for one circuit.
- [G] Distribution of total weighted rate relations.
- [H] The total revenue requirement for the respective Part 69 access element is allocated to individual service types by applying the individual weighting factors in column G.
- [I] Annual revenue requirement divided by demand.
- [J] Annual amount divided by 12.

# EXHIBIT IV

## HISTORICAL CHANGE IN DEMAND

### HIGH CAPACITY DS3 – CHANNEL TERMININATION CIRCUITS

	Original Filed Demand	Historical and Expected Demand	Change in Demand
Jul-14	20	18	(2)
Aug-14	20	18	(2)
Sep-14	20	18	(2)
Oct-14	20	18	(2)
Nov-14	20	20	-
Dec-14	20	16	(4)
Jan-15	20	16	(4)
Feb-15	20	13	(7)
Mar-15	20	13	(7)
Apr-15	20	13	(7)
May-15	20	11	(9)
Jun-15	20	11	(9)