

ITEM
503

Inter-Exchange (IX) Digital Channels

ITEM
503.1

Service Description

Inter-Exchange (IX) Digital Channels are furnished between Rate Centres of the Company or between Rate Centres of the Company and other Rate Centres or international border crossing points in Canada for the digital transmission of information.

IX Digital Channels are forborne from regulation, pursuant to Telecom Decision CRTC 97-20, when provided on the cross-sections identified in Item 508, Forbearance of Interexchange Private Line Services.

Effective February 10, 2023, DS-0 IX Channels are no longer available for new installations, moves, additions or changes while DS-1 IX Channels are no longer available for new customers, except when used for interconnection pursuant to a Master Agreement for Local Interconnection between the Customer and the Company, or for connection between the Customer’s point of presence and the Company’s network for the purposes of obtaining any of the Company’s interconnection services (toll, local, wireless and transiting services) set out in Telecom Decision CRTC 2008-17, Appendix, Category (e); or for the purposes of connecting to a Central Office co-location space established pursuant to the Company's tariffs.

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Definitions

For the purposes of this Tariff item:

"*Channel Measurement*" is the mileage charge for IX Digital Channels and is based on the V&H Distance Formula between Rate Centers in which the customer's Canadian service points are located. For a channel provided between a Company's Rate Centre and a Rate Centre in the United States, the charge for the Company's portion is computed to the appropriate point of connection with the United States facilities at the international boundary which results in the lowest combined monthly charge including the Canadian and the United States portion.

"*Cross-section*" refers to the DS-0, DS-1 and DS-3 channels furnished between Company Rate Centres or between a Company Rate Centre and an international border crossing point in Canada.

"*Inter-Exchange (IX) Channels*" refers to the digital facilities required to connect Rate Centres or an international border crossing point in Canada.

"*Rate Centre*" designates Company exchanges for purposes of calculating mileage charges.

"*Route Diversity*" is provided, where facilities exist, when a Customer requests an additional channel between the same two locations and requires that the channel follows a different route than the first channel.

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ITEM 503.1 **Definitions (continued)**

"V and H Distance Formula": N

Mileage between Rate Centres or Rate Centres and international border crossing points in Canada, is measured using a vertical (V) and horizontal (H) coordinate system. The V - H system consists of a series of coordinates which represent a theoretical grid of vertical and horizontal lines covering Canada and the United States. The spacing between adjacent lines is about 1670 feet and represents a distance of one coordinate unit.

A V coordinate and an H coordinate are computed for each Rate Centre from its latitude and longitude location, by use of appropriate map-projection equations. A pair of V - H coordinates locates a Rate Center, for determining airline distances, at the intersection of the vertical and horizontal grid lines so designated; it also designates the centre of a square having each side about 1670 feet long and an area of about one-tenth of a square mile. The rate distance between any two rate centres is the airline distance between the points designated by the V - H coordinates of the respective Rate Centres.

Such distance is the square root of one-tenth the sum of the square of the difference between the V coordinates and the square of the difference between the H coordinates. Any remaining fraction of a mile is carried to the next mile. The formula is as follows:

$$\text{Rate distance} = \sqrt{.1((V1 - V2)^2 + (H1 - H2)^2)}$$

where V1 is the larger of the V coordinates and H1 is the larger of the H coordinates.

ITEM 503.2 **Conditions of Service** M

1. The Company shall determine the Rate Centres where service will be provided. C
2. Service is provided at the Company's discretion between Rate Centres, depending on the availability of suitable facilities and equipment. |
3. Digital Channels may be connected to other Company services or with the services and/or facilities of other carriers. |
4. IX Digital Channels are available under a Customer Volume Pricing Plan (CVPP) as specified in Item 504. Discounts are based on the term and the minimum monthly billing commitment. IX Digital Channels are also available on a one-month non-contracted basis. |
5. Route Diversity, where available, may be provided on request to ensure that specified groups of channels in a cross-section are maintained on separate facility structures. M

M – moved from pages 503-1 and 503-2.

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ITEM 503.2 **Conditions of Service - Continued**

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- 6. Total distance charges per IX Digital Channel are calculated by multiplying the mileage by the charge per mile for the appropriate distance band and adding the base charge for that band. C
- 7. The customer is solely responsible for the installation, operation and maintenance of customer provided terminal equipment. N
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- 8. Customer terminal equipment attached to the Company's network must be certified or connected through a certified network protection device in accordance with Tariff 1005 Item 200, or Tariff 18001 Item 110. |

ITEM 503.3 **Rates**

The Customer shall pay to the Company the following rates and charges for IX Digital Channels. Such rates and charges are in addition to any other rates and charges that may be applicable. C
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1. IX Digital Channels: C

The following IX Digital Channel rates apply between: |

- Rate Centres within the Company; |
- Rate Centres in different Incumbent Carriers including the Company; |
- A Rate Centre of the Company and a point of connection with an independent telephone company; and |
- A Rate Centre of the Company and an international border crossing point. |

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 503 **Inter-Exchange (IX) Digital Channels – Continued**

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 503.3 **Rates – Continued**

1. IX Digital Channels: - Continued

a. DS-0 Channels:

Rate Distance (miles)	Monthly Rate (Note 3)				Service Charge (Notes 1, 2)
	Base Charge		Charge Per Mile		
	Per DS-0 Channel	Maximum, each 24 DS-0s	Per DS-0 Channel	Maximum, each 24 DS-0s	
1 – 25	\$ 0.00	\$ 0.00	14.71	277.43	\$ 88.00
26 – 50	184.72	3,480.15	7.34	138.71	88.00
51 – 100	294.80	5,553.94	5.14	97.09	88.00
101 – 200	503.55	9,487.04	3.06	57.77	88.00
201 – 500	809.76	15,255.53	1.52	28.87	88.00
501 – 1000	1,055.21	19,879.87	1.03	19.61	88.00
Over 1000	1,791.59	33,752.91	0.29	5.69	88.00

b. DS-1 Channels:

Rate Distance (miles)	Monthly Rate, each channel (Note 4)				Service Charge (Notes 1, 2)
	Base Charge		Charge Per Mile		
	Per DS-1 Channel	Maximum, each 28 DS-1s	Per DS-1 Channel	Maximum, each 28 DS-1s	
1 – 25	\$ 0.00	\$ 0.00	\$ 188.93	\$ 1,047.15	\$ 1,270.50
26 – 50	2,340.71	13,134.64	93.31	523.57	1,270.50
51 – 100	3,735.53	19,055.92	65.31	333.20	1,270.50
101 – 200	7,018.94	42,313.31	42.74	257.80	1,270.50
201 – 500	10,260.70	68,041.56	19.43	128.88	1,270.50
501 – 1000	13,370.98	88,666.64	13.20	87.61	1,270.50
Over 1000	22,701.80	150,541.97	3.88	25.75	1,270.50

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Rates - Continued

1. IX Digital Channels: - Continued

c. DS-3 Channels:

Rate Distance (miles)	Monthly Rate, each channel		Service Charge (Note 2)
	Base Charge	Charge Per Mile	
1 – 25	\$ 0.00	\$ 843.30	\$ 3,300.00
26 – 50	10,577.66	421.65	3,300.00
51 – 100	16,880.82	295.16	3,300.00
101 – 200	26,213.68	159.71	3,300.00
201 – 500	42,152.65	79.85	3,300.00
501 – 1000	54,930.18	54.29	3,300.00
Over 1000	93,262.77	15.97	3,300.00

2. Diversity Charges:

	Monthly Rate	Service Charge
Each Cross-section	\$ 110.00	---

Note 1: The service charges apply to the discrete channels, not to the occupied capacity used for rating purposes.

Note 2: Service Charges do not apply when a Customer migrates from Managed Digital Private Line Service (Tariff 1005 Item 437 or Tariff 18001 Item 707) to IX Digital Channel Service.

Note 3: Each DS-0 IX Channel is charged individually per Cross-section until the Maximum is reached per each count of 24 DS-0 IX Channels. Effective February 10, 2023, DS-0 IX Channels are no longer available for new installations, moves, additions or changes, except when used for interconnection pursuant to a Master Agreement for Local Interconnection between the Customer and the Company, or for connection between the Customer's point of presence and the Company's network for the purposes of obtaining any of the Company's interconnection services (toll, local, wireless and transiting services) set out in Telecom Decision CRTC 2008-17, Appendix, Category (e); or for the purposes of connecting to a Central Office co-location space established pursuant to the Company's tariffs.

Note 4: Each DS-1 IX Channel is charged individually per Cross-section until the Maximum is reached per each count of 28 DS-1 IX Channels. A DS-1 IX Channel may also be comprised of 24 DS-0s on the same Cross-section. Effective February 10, 2023, DS-1 IX Channels are no longer available for new customers, except when used for interconnection pursuant to a Master Agreement for Local Interconnection between the Customer and the Company, or for connection between the Customer's point of presence and the Company's network for the purposes of obtaining any of the Company's interconnection services (toll, local, wireless and transiting services) set out in Telecom Decision CRTC 2008-17, Appendix, Category (e); or for the purposes of connecting to a Central Office co-location space established pursuant to the Company's tariffs.