SECTION NO. 15

15. Interface Groups, Transmission Specifications and Channel Interfaces

15.1 Local Transport Interface Groups

Interface Group 1 is provided with Type C Transmission Specifications, and Interface Groups 2 through 10 are provided with Type A or B Transmission Specifications, depending on the Feature Group and whether the Access Service is routed directly or through an access tandem. All Interface Groups are provided with Data Transmission Parameters.

Only certain premises interfaces are available at the customer designated premises. The premises interfaces associated with the Interface Groups may vary among Feature Groups. The various premises interfaces which are available with the Interface Groups, and the Feature Groups with which they may be used, are set forth in 15.1.1 following.

15.1.1 Interface Group 1

Interface Group 1, except as set forth in the following, provides two-wire voice frequency transmission at the point of termination at the customer's premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

Interface Group 1 is not provided in association with FGC and FGD when the first point of switching is an access tandem. In addition, Interface Group 1 is not provided in association with FGB, FGC or FGD when the first point of switching provides only four-wire terminations.

The transmission path between the point of termination at the customer designated premises and the first point of switching may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.2 Interface Group 2

Interface Group 2 provides four-wire voice frequency transmission at the point of termination at the customer designated premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

The transmission path between the point of termination at the customer designated premises and the first point of switching may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

15.1.3 Interface Group 3

Interface Group 3 provides group level analog transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals between the frequencies of 60 to 108 kHz, with the capability to channelize up to 12 voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Group are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex equipment to derive 12 transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with individual transmission path SF supervisory signaling.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.4 Interface Group 4

Interface Group 4 provides supergroup level analog transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals between the frequencies of 312 to 552 kHz, with the capability to channelize up to 60 voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Group are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex and channel bank equipment to derive 60 transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with individual transmission path SF supervisory signaling.

15.1.5 Interface Group 5

Interface Group 5 provides mastergroup level analog transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals between the frequencies of 564 to 3084 kHz, with the capability to channelize up to 600 voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Group are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex and channel bank equipment to derive 600 transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with individual transmission path SF supervisory signaling.

15.1.6 Interface Group 6

Interface Group 6 provides DS1 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 1.544 Mbps, with the capability to channelize up to 24 voice frequency transmission paths.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.6 Interface Group 6 (Cont'd)

Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive 24 transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, a DS1 signal in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

15.1.7 Interface Group 7

Interface Group 7 provides DS1C level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 3.152 Mbps, with the capability to channelize up to 48 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive up to 48 voice frequency transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, DS1 signals in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

15.1.8 Interface Group 8

Interface Group 8 provides DS2 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 6.312 Mbps, with the capability to channelize up to 96 voice frequency transmission paths.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.8 Interface Group 8 (Cont'd)

Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment in its office to derive up to 96 transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching, or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, DS1 signals in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

15.1.9 Interface Group 9

Interface Group 9 provides DS3 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 44.736 Mbps, with the capability to channelize up to 672 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive up to 672 transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching, or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, DS1 signals in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.10 Interface Group 10

Interface Group 10 provides DS4 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 274.176 Mbps, with the capability to channelize up to 4032 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive up to 4032 transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, DS1 signals in D3/D4 format. The interface is provided with individual transmission path bit stream supervisory signaling.

15.1.11 Available Premises Interface Codes

Following is a matrix showing, for each Interface Group, which premises interface codes are available as a function of the Telephone Company switch supervisory signaling and Feature Group. For explanations of these codes, see the Glossary of Channel Interface Codes in 15.3 following.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.11 Available Premises Interface Codes (Cont'd)

Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	Feature Group A	B	C	D
1	LO	2LS2		X		
	LO	2LS3		X		
	GO	2GS2		X		
	GO	2GS3		X		
	LO, GO,	2DX3		X		
	LO, GO,	4EA3-E	X			
	LO, GO	4EA3-M	X			
	LO, GO	6EB3-E	X			
	LO, GO	6EB3-M	X			
	RV, EA, EB, EC	2DX3		X	X	X
	RV, EA, EB, EC	4EA3-E		X	X	X
	RV, EA, EB, EC	4EA3-M		X	X	X
	RV, EA, EB, EC	6EB3-E		X	X	X
	RV, EA, EB, EC	6EB3-M		X	X	X
	EA, EB, EC	6EC3			X	X
	RV	2RV3-0		X	X	X
	RV	2RV3-T		X	X	X
	SS7	2NO2			X	X
2	LO, GO	4SF2		X		
	LO, GO	4SF3		X		
	LO	4LS2		X		
	LO	4LS3		X		
	LO	6LS2		X		
	GO	4GS2		X		
	GO	4GS3		X		
	GO	6GS2		X		
	LO, GO	4DX2		X		
	LO, GO	4DX3		X		
	LO, GO	6EA2-E	X			
	LO, GO	6EA2-M	X			
	LO, GO	8EB2-E	X			
	LO, GO	8EB2-M	X			
	LO, GO	6EX2-B	X			

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.11 Available Premises Interface Codes (Cont'd)

Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	Feature Group A	B	C	D
2 (Cont'd)	RV, EA, EB, EC	4SF2		X	X	X
	RV, EA, EB, EC	4SF3		X		
	RV, EA, EB, EC	4DX2		X	X	X
	RV, EA, EB, EC	4DX3		X		
	RV, EA, EB, EC	6DX2			X	
	RV, EA, EB, EC	6EA2-E		X	X	X
	RV, EA, EB, EC	6EA2-M		X	X	X
	RV, EA, EB, EC	8EB2-E		X	X	X
	RV, EA, EB, EC	8EB2-M		X	X	X
	EA, EB, EC	8EC2-M			X	X
	RV	4RV2-O		X	X	X
	RV	4RV2-T		X	X	X
	RV	4RV3-O		X	X	
	RV	4RV3-T		X	X	
	SS7	4NO2			X	X
3	LO, GO	4AH5-B	X			
	RV, EA, EB, EC	4AH5-B		X	X	X
	SS7	4AH5-B			X	X
4	LO, GO	4AH6-C	X			
	RV, EA, EB, EC	4AH6-C		X	X	X
	SS7	4AH6-C			X	X
5	LO, GO	4AH6-D	X			
	RV, EA, EB, EC	4AH6-D		X	X	X
	SS7	4AH6-D			X	X
6	LO, GO	4DS9-15	X			
	LO, GO	4DS9-15L	X			
	RV, EA, EB, EC	4DS9-15		X	X	X
	RV, EA, EB, EC	4DS9-15L		X	X	X
	SS7	4DS9-15			X	X
7	LO, GO	4DS9-31	X			
	RV, EA, EB, EC	4DS9-31		X	X	X
	LO, GO	4DS9-31L	X			
	RV, EA, EB, EC	4DS9-31L		X	X	X
	SS7	4DS9-31			X	X

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.11 Available Premises Interface Codes (Cont'd)

Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	Feature Group A	B	C	D
8	LO, GO	4DS0-63	X			
	LO, GO	4DS0-63L	X			
	RV, EA, EB, EC	4DS0-63		X	X	X
	RV, EA, EB, EC	4DS0-63L		X	X	X
	SS7	4DSO-63			X	X
9	LO, GO	4DS6-44	X			
	LO, GO	4DS6-44L	X			
	RV, EA, EB, EC	4DS6-44		X	X	X
	RV, EA, EB, EC	4DS6-44L		X	X	X
	SS7	4DS6-44			X	X
10	LO, GO	4DS6-27	X			
	LO, GO	4DS6-27L	X			
	RV, EA, EB, EC	4DS6-27		X	X	X
	RV, EA, EB, EC	4DS6-27L		X	X	X
	SS7	4DS6-27			X	X

15.1.12 Supervisory Signaling

- For Interface Groups 1 and 2

  DX Supervisory Signaling,
  E&M Type I Supervisory Signaling,
  E&M Type II Supervisory Signaling, or
  E&M Type III Supervisory Signaling

- For Interface Group 2

  SF Supervisory Signaling, or
  Tandem Supervisory Signaling

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.1 Local Transport Interface Groups (Cont'd)

15.1.12 Available Premises Interface Codes (Cont'd)

- For Interface Groups 6 through 10

These Interface Groups may, at the option of the customer, be provided with individual transmission path SF supervisory signaling where such signaling is available in Telephone Company central offices. Generally such signaling is available only where the entry switch provides an analog, i.e., non digital, interface to the transport termination. The optional Supervisory Signaling arrangements are not available in combination with the SS7 optional feature as described in 6.8.2 (c)(2) preceding.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service

15.2.1 Standard Transmission Specifications

Following are descriptions of the three Standard Transmission Specifications available with Switched Access Service Feature Groups and the two Standard Transmission Specifications for WATS Access Lines. The specific applications in terms of the Feature Groups and Interface Groups with which the Feature Group Standard Transmission Specifications are provided are set forth in 15.2.1(A) and 15.2.1(B) following.

(A) Type A Transmission Specifications

Type A Transmission Specifications is provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is + 2.0 dB

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -1.0 dB to +3.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

Route Miles	C-Message Noise
less than 50	32 dBrnCO
51 to 100	34 dBrnCO
101 to 200	37 dBrnCO
201 to 400	40 dBrnCO
401 to 1000	42 dBrnCO

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.1 Standard Transmission Specifications (Cont'd)

(A) Type A Transmission Specifications (Cont'd)

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBmO holding tone, is less than or equal to 45 dBrnCO.

(5) Echo Control

Echo Control, identified as Equal Level Echo Path Loss, and expressed as Echo Return Loss and Singing Return Loss, is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	Echo Return Loss	Singing Return Loss
POT to Access Tandem	21 dB	14 dB
POT to End Office		
- Direct	N/A	N/A
- Via Access Tandem	16 dB	11 dB

(6) Standard Return Loss

Standard Return Loss expressed as Echo Return Loss and Singing Return Loss on two-wire ports of a four-wire point of termination shall be equal to or greater than:

Echo Return Loss	Singing Return Loss
5 dB	2.5 dB

(B) Type B Transmission Specifications

Type B Transmission Specifications are provided with the following parameters:

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.1 Standard Transmission Specifications (Cont'd)

(B) Type B Transmission Specifications (Cont'd)

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is + 2.5 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +4.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

	C-Message Noise*	
Route Miles	Type B1	Type B2
less than 50	32 dBrnCO	35 dBrnCO
51 to 100	33 dBrnCO	37 dBrnCO
101 to 200	35 dBrnCO	40 dBrnCO
201 to 400	37 dBrnCO	43 dBrnCO
401 to 1000	39 dBrnCO	45 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBm0 holding tone is less than or equal to 47 dBrnCO.

* For Feature Groups C and D only Type B2 will be provided. For Feature Groups A and B, Type B1 or B2 will be provided.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.1 Standard Transmission Specifications (Cont'd)

(B) Type B Transmission Specifications (Cont'd)

(5) Echo Control

Echo Control, identified as Impedance Balance for FGA and FGB and Equal Level Echo Path Loss for FGC and FGD, and expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. The ERL and SRL also differ by Feature Group, type of termination, and type of transmission path. They are greater than or equal to the following:

	Echo Return Loss	Singing Return Loss
POT to Access Tandem		
- Terminated in 4-Wire trunk	21 dB	14 dB
- Terminated in 2-Wire trunk	16 dB	11 dB
POT to End Office		
- Direct	16 dB	11 dB
- Via Access Tandem		
. For FGB access	8 dB	4 dB
. For FGC access (Effective 4-Wire transmission path at end office)	16 dB	11 dB
. For FGC access (Effective 2-Wire transmission path at end office)	13 dB	6 dB

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.1 Standard Transmission Specifications (Cont'd)

(B) Type B Transmission Specifications (Cont'd)

(6) Standard Return Loss

Standard Return Loss, expressed as Echo Return Loss and Singing Return Loss, on two-wire ports of a four-wire point of termination shall be equal to or greater than:

Echo Return Loss	Singing Return Loss
5 dB	2.5 dB

(C) Type C Transmission Specifications

Type C Transmission Specifications are provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is + 3.0 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +5.5 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.1 Standard Transmission Specifications (Cont'd)

(C) Type C Transmission Specifications (Cont'd)

(3) C-Message Noise (Cont'd)

Route Miles	C-Message Noise* Type C1	Type C2
less than 50	32 dBrnCO	38 dBrnCO
51 to 100	33 dBrnCO	39 dBrnCO
101 to 200	35 dBrnCO	41 dBrnCO
201 to 400	37 dBrnCO	43 dBrnCO
401 to 1000	39 dBrnCO	45 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBm0 holding tone is less than or equal to 47 dBrnCO.

(5) Echo Control

Echo Control, identified as Return Loss and expressed as Echo Return Loss and Singing Return Loss is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	Echo Return Loss	Singing Return Loss
POT to Access Tandem	13 dB	6 dB
POT to End Office		
- Direct	13 dB	6 dB
- Via Access Tandem (for FGB only)	8 dB	4 dB

* For Feature Groups C and D only Type C2 will be provided. For Feature Groups A and B, Type C1 or C2 will be provided.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.2 Data Transmission Parameters

Two types of Data Transmission Parameters, i.e., Type DA and Type DB, are provided for the Feature Group arrangements. The specific applications in terms of the Feature Groups with which they are provided are set forth in 15.2.2(A) and 15.2.2(B) following. Following are descriptions of each.

(A) Data Transmission Parameters Type DA

(1) Signal to C-Notched Noise Ratio

The Signal to C-Notched Noise Ratio is equal to or greater than 33 dB.

(2) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is:

	604 to 2804 Hz
less than 50 route miles	500 microseconds
equal to or greater than 50 route miles	900 microseconds

	1004 to 2404 Hz
less than 50 route miles	200 microseconds
equal to or greater than 50 route miles	400 microseconds

(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 65 dBrnCO threshold in 15 minutes is no more than 15 counts.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.2 Data Transmission Parameters (Cont'd)

(A) Data Transmission Parameters Type DA (Cont'd)

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2)	33 dB
Third Order (R3)	37 dB

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 5o peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

(B) Data Transmission Parameters Type DB

(1) Signal to C-Notched Noise Ratio

The signal to C-Notched Noise Ratio is equal to or greater than 30 dB.

(2) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is:

	604 to 2804 Hz
less than 50 route miles	800 microseconds
equal to or greater than 50 route miles	1000 microseconds

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.2 Transmission Specifications Switched Access Service (Cont'd)

15.2.2 Data Transmission Parameters (Cont'd)

(B) Data Transmission Parameters Type DB (Cont'd)

(2) Envelope Delay Distortion (Cont'd)

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is: (Cont'd)

	1004 to 2404 Hz
less than 50 route miles	320 microseconds
equal to or greater than 50 route miles	500 microseconds

(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 67 dBrnCO threshold in 15 minutes is no more than 15 counts.

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2)	31 dB
Third Order (R3)	34 dB

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 7o peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

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15. Interface Groups, Transmission Specifications and Channel Interfaces-(Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes

This section explains the Channel Interface codes and Network Channel codes that the customer must specify when ordering Special Access Service. Included is an example which explains the specific characters of the code, a glossary of Channel Interface codes, impedance levels, Network Channel codes and compatible Channel Interfaces.

Example: If the customer specifies a NT Network Channel Code and a 2DC8-3 Channel Interface at the customer's premises, the following is being requested:

NT = Metallic Channel with a Predefined Technical Specification Package (1)
2 = Number of physical wires at customer premises
DC = Facility interface for direct current or voltage
8 = Variable impedance level
3 = Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)

15.3.1 Glossary of Channel Interface Codes and Options

Code	Option	Definition
AB	-	accepts 20 Hz ringing signal at customer's point of termination
AC	-	accepts 20 Hz ringing signal at customer's end user's point of termination
CT	-	Centrex Tie Trunk Termination
DA	-	data stream in VF frequency band at customer's end user's point of termination
DB	-	data stream in VF frequency band at customer's point of termination
	- 10	VF for TG1 and TG2
	- 43	VF for 43 Telegraph Carrier type signals, TG1 and TG2

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.1 Glossary of Channel Interface Codes and Options (Cont'd)

Code	Option	Definition
DC	-	direct current or voltage
	- 1	monitoring interface with series RC combination (McCulloh format)
	- 2	Telephone Company energized alarm channel
	- 3	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)
DD	-	DATAPHONE Select-A-Station (and TABS) interface at customer's point of termination
DE	-	DATAPHONE Select-A-Station (and TABS) interface at the customer's end user's point of termination
DS	-	digital hierarchy interface
	- 15	1.544 Mbps (DS1) format per PUB 41451 plus D4
	- 15E	8-bit PCM encoded in one 64 kbps of the DS1 signal
	- 15F	8-bit PCM encoded in two 64 kbps of the DS1 signal
	- 15G	8-bit PCM encoded in three 64 kbps of the DS1 signal
	- 15H	14/11-bit PCM encoded in six 64 kbps of the DS1 signal
	- 15J	1.544 Mbps format per PUB 41451
	- 15K	1.544 Mbps format per PUB 41451 plus extended framing format
	- 15L	1.544 Mbps (DS1) with SF signaling
	- 27	274.176 Mbps (DS4)
	- 27L	274.176 Mbps (DS4) with SF signaling
	- 31	3.152 Mbps (DS1C)
	- 31L	3.152 Mbps (DS1C) with SF signaling
	- 44	44.736 Mbps (DS3)
	- 44L	44.736 Mbps (DS3) with SF signaling
	- 63	6.312 Mbps (DS2)
	- 63L	6.312 Mbps (DS2) with SF signaling

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.1 Glossary of Channel Interface Codes and Options (Cont'd)

Code	Option	Definition
DU	-	digital access interface
	- 24	2.4 kbps
	- 48	4.8 kbps
	- 56	56.0 kbps
	- 96	9.6 kbps
	- A	1.544 Mbps format per PUB 41451
	- B	1.544 Mbps format per PUB 41451 plus D4
	- C	1.544 Mbps format per PUB 41451 plus extended farming format
DX	-	duplex signaling interface at customer's point of termination
DY	-	duplex signaling interface at customer's end user's point of termination
EA	- E	Type I E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EA	- M	Type I E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EB	- E	Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EB	- M	Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EC	-	Type III E&M signaling at customer POT
EX	- A	tandem channel unit signaling for loop start or ground start and customer supplies open end (dial tone, etc.) functions.
EX	- B	tandem channel unit signaling for loop start or ground start and customer supplies closed end (dial pulsing, etc.) functions.
GO	-	ground start loop signaling - open end function by customer or customer's end user
GS	-	ground start loop signaling - closed end function by customer or customer's end user
IA	-	E.I.A. (25 pin RS-232)
LA	-	end user loop start loop signaling - Type A OPS registered port open end
LB	-	end user loop start loop signaling - Type B OPS registered port open end

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.1 Glossary of Channel Interface Codes and Options (Cont'd)

Code	Option	Definition
LC	-	end user loop start loop signaling - Type C OPS registered port open end
LO	-	loop start loop signaling - open end function by customer or customer's end user
LR	-	20 Hz automatic ringdown interface at customer with Telephone Company provided PLAR
LS	-	loop start loop signaling - closed end function by customer or customer's end user
NO	-	no signaling interface, transmission only
PG	-	program transmission - no dc signaling
	- 1	nominal frequency from 50 to 15000 Hz
	- 3	nominal frequency from 200 to 3500 Hz
	- 5	nominal frequency from 100 to 5000 Hz
	- 8	nominal frequency from 50 to 8000 Hz
PR		protective relaying*
RV	- 0	reverse battery signaling, one way operation, originate by customer
	- T	reverse battery signaling, one way operation, terminate function by customer or customer's end user
SF	-	single frequency signaling with VF band at either customer POT or customer's end user POT
TF	-	telephotograph interface
TT	-	telegraph/teletypewriter interface at either customer POT or customer's end user POT
	- 2	20.0 milliamperes
	- 3	3.0 milliamperes
	- 6	62.5 milliamperes
TV	-	television interface
	- 1	combined (diplexed) video and one audio signal
	- 2	combined (diplexed) video and two audio signals
	- 5	video plus one (or two) audio 5 kHz signal(s) or one (or two) two wire
	- 15	video plus one (or two) audio 15 kHz signal(s)

* Available only for the transmission of audio tone protective relaying signals used in the protection of electric power systems during fault conditions.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.2 Impedance

The nominal reference impedance with which the channel will be terminated for the purpose of evaluating transmission performance:

Value (ohms)	Code(s)
110	0
150	1
600	2
900	3+
135	5
75	6
124	7
Variable	8
100	9

\+ For those interface codes with a 4-wire transmission path at the customer designated POT, rather than a standard 900 ohm impedance the code (3) denotes a customer provided transmission equipment termination.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.3 Digital Hierarchy Channel Interface Codes (4DS)

Customers selecting the multiplexed four-wire DSX-1 or higher facility interface option at the customer designated premises will be requested to provide subsequent system and channel assignment data. The various digital bit rates in the digital hierarchy employ the channel interface code 4DS8, 4DS0 or 4DS6 plus the speed options indicated below:

Interface Code and Speed Option	Nominal Bit Rate (Mbps)	Digital Hierarchy Level
4DS8-15	1.544	DS1
4DS8-31	3.152	DS1C
4DS0-63	6.312	DS2
4DS6-44	44.736	DS3
4DS6-27	274.176	DS4

15.3.4 Service Designator/Network Channel Code Conversion Table

The purpose of this table is to show the relationship between the service designator codes (e.g. VGC, MT2, etc.) and the network channel codes that are used for:

Service Designator Code	Network Channel Code
MTC	NQ
MT1	NT
MT2	NU
MT3	NV
TGC	NQ
TG1	NW
TG2	NY
VGC	LQ
VGW	SE
VG1	LB
VG2	LC

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.4 Service Designator/Network Channel Code Conversion Table (Cont'd)

Service Designator Code	Network Channel Code
VG3	LD
VG4	LE
VG5	LF
VG6	LG
VG7	LH
VG8	LJ
VG9	LK
VG10	LN
VG11	LP
VG12	LR
APC	PQ
AP1	PE
AP2	PF
AP3	PJ
AP4	PK
TVC	TQ
TV1	TV
TV2	TW
DA1	XA
DA2	XB
DA3	XG
DA4	XH
HCO	HS
HC1	HC
HC1C	HD
HC2	HE
HC3	HF
HC4	HG

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces

The following tables show the channel interface codes (CIs) which are compatible:

(A) Metallic

Compatible CIs	
2DC8-1	2DC8-2
2DC8-3	2DC8-3
4DS8-*	2DC8-1
4DS8-*	2DC8-2

(B) Telegraph Grade

Compatible CIs		Compatible CIs	
2DB2-10	10IA8	4DB2-10	10IA8
	2TT2-2		2TT2-2
	4TT2-2		4TT2-2
2DB2-43+	10IA8	4DB2-43+	10IA8
	2TT2-2		2TT2-6
	2TT2-6		4TT2-2
	4TT2-2		
		4DS8-*	10IA8
2TT2-2	2TT2-2	2TT2-2	
			2TT2-6
2TT2-3	2TT2-2	4TT2-2	
	4TT2-2		4TT2-6
2TT2-6	2TT2-6	4TT2-2	
	4TT2-6		
		4TT2-6	2TT2-6

* See 15.3.3 preceding for explanation.
\+ Supplemental Channel Assignment information required.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade

Compatible CIs		Compatible CIs		Compatible CIs	
2AB2	2AC	2DB2	2DA2	2LR2	2LR2
2AB3	2AC2	2DB3	2DA2	2LR3	2LR2
2CT3	2DY2	2DX3	2LA2	2LS	2GS
	4DS8*		2LB2		2LS
	4DX2		2LC2		4GS
	4DX3		2LO3		4LS
	4DY2		2LS2		
	4EA2-E		2LS3	2LS2	2LA2
	4EA2-M				2LB2
	4SF2	2GO2	2GS2		2LC2
	4SF3		2GS3		
	6DX2			2LS3	2LA2
	6DY2	2GO3	2GS2		2LB2
	6DY3		2GS3		2LC2
	6EA2-E				
	6EA2-M	2GS	2GS	2N02	2DA2
	6EB2-E		2LS		2NO2
	6EB2-M		4GS		
	6EB3-E		4LS	2N03	2N02
	8EB2-E				2PR2
	8EB2-M	2LO2	2LS2		
	8EC2		2LS3	2TF3	2TF2
	9DY2				
	9DY3	2L03	2LS2		
	9EA2		2LS3		
	9EA3				

* See 15.3.3 preceding for explanation.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

	Compatible CIs
4AB2	2AC2
	4AB2
	4AC2
	4SF2
4AB3	2AC2
	4AC2
	4SF2
4AC2	2AC2
	4AC2

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs	
4DA2	4DA2
4DB2	2DA2
	2NO2
	2PR2
	4DA2
	4DB2
	4NO2
	4PR2
	6DA2
4DD3	2DE2
	4DE2

Compatible CIs	
4DS8-*	2AC2
	2DA2
	2DY2
	2GO2
	2GO3
	2GS2
	2GS3
	2LA2
	2LB2
	2LC2
	2LO2
	2LO3
	2LR2
	2LS2
	2LS3
	2NO2
	2PR2
	2RV2-T
	2TF2
	4AC2
	4DA2
	4DE2
	4DX2
	4DX3
	4DY2
	4EA2-E
	4EA2-M

Compatible CIs	
4DS8-*	4DG2
	4LR2
	4LS2
	4NO2
	4PR2
	4RV2-T
	4SF2
	4SF3
	4TF2
	6DA2
	6DY2
	6DY3
	6EA2-E
	6EA2-M
	6EB2-E
	6EB2-M
	6GS2
	6LS2
	8EB2-E
	8EB2-M
	9DY2
	9DY3
	9EA2
	9EA3

* See 15.3.3 preceding for explanation.

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15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible	CIs	Compatible	CIs	Compatible	CIs
4DX2	2DY2	4DX2	8EB2-E	4DX3	6DY2
	2LA2		8EB2-M		6DY3
	2LB2		9DY2		6EA2-E
	2LC2		9DY3		6EA2-M
	2LO3		9EA2		6EB2-E
	2LS2		9EA3		6EB2-M
	2LS3				6LS2
	2RV2-T	4DX3	2DY2		8EB2-E
	4DX2		2LA2		8EB2-M
	4DY2		2LB2		9DY2
	4EA2-E		2LC2		9DY3
	4EA2-M		2LO3		9EA2
	4LS2		2LS2		9EA3
	4RV2-T		2LS3		
	4SF2		2RV2-T	4DY2	2DY2
	4SF3		4DX2		4DY2
	6DY2		4DX3		
	6DY3		4DY2		
	6EA2-E		4EA2-E		
	6EA2-M		4EA2-M		
	6EB2-E		4LS2		
	6EB2-M		4RV2-T		
	6LS2		4SF2		
			4SF3		

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15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs		Compatible CIs		Compatible CIs	
4EA2-E	2DY2	4EA3-E	2DY2	4GO2	2GO2
	4DY2		4DY2		2GO3
	4EA2-E		4EA2-E		2GS2
	4EA2-M		4EA2-M		2GS3
	4SF2		4SF2		4GS2
	6DY2		6DY2		4SF2
	6DY3		6DY3		6GS2
	6EB2-E		6EA2-E		
	6EB2-M		6EA2-M	4GO3	2GO2
	8EB2-E		6EB2-E		2GS2
	8EB2-M		6EB2-M		2GS3
	9DY2		8EB2-E		4GS2
	9DY3		8EB2-M		4SF2
			9DY2		6GS2
4EA2-M	2DY2		9DY3		
	4DY2		9EA2		
	4EA2-M		9EA3	4GS	2GS
	4SF2				2LS
	6DY2				4GS
	6DY3				4LS
	6EB2-E				
	6EB2-M				
	8EB2-E				
	8EB2-M				
	9DY2				
	9DY3				

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15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs		Compatible CIs		Compatible CIs	
4LO2	2LS2	4LS3	2LA2	4SF2	2LO3
	2LS3		2LB2		2LR2
	4LS2		2LC2		2LS2
	4SF2		2LO2		2LS3
	6LS2		2LO3		2RV2-T
			4SF2		4AC2
4LO3	2LS2				4DY2
	2LS3	4NO2	2DA2		4LS2
	4LS2		2DE2		4RV2-T
	4SF2		2NO2		4SF2
	6LS2		4DA2		6DY2
			4DE2		6DY3
4LR2	2LR2		4NO2		6GS2
	4LR2		6DA2		9DY2
	4SF2				9DY3
		4RV2-0	2RV2-T		
4LR3	2LR2		4RV2-T	4SF3	2DY2
	4LR2		4SF2		2GO3
	4SF2				2GS2
					2GS3
4LS	2GS	4SF2	2AC2		2LA2
	2LS		2DY2		2LB2
	4GS		2GS2		2LC2
	4LS		2GS3		2LO3
			2LA2		2LR2
4LS2	2LA2		2LB2		
	2LB2		2LC2		
	2LC2				
	2L02				
	2L03				

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15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs		Compatible CIs		Compatible CIs	
4SF3	2LS2	6DA	4DAZ	6DV3	2DY2
	2LS3		6DA2		4DY2
	2RV2-T				6DY2
	4DY2	6DX2	2DY2		6DY3
	4EA2-E		4DY2		
	4EA2-M		4EA2-E	6EA2-E	2AC2
	4GS2				
	4LR2		4EA2-M		2DY2
	4LS2		4SF2		2LA2
	4RV2-T		6DY2		2LB2
	4SF2		6DY3		2LC2
	4SF3		6EA2-E		2LO3
	6DY2		6EA2-M		2LS2
	6DY3		6EB2-E	2LS3	
	6EB2-E		6EB2-M		2RV2-T
	6EB2-M		8EB2-E	4AC2	
	6GS2		8EB2-M		4DY2
	6LS2		9DY2		4EA2-E
	9DY2		9DY3		4EA2-M
	9DY3		9EA2		4LS2
	9EA2		9EA3		4RV2-T
	9EA3				4SF2
		6DY2	2DY2		4SF3
4TF2	2TF2		4DY2		6DY2
	4TF2		6DY2		6DY3
					6EA2-E
					6EA2-M

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15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs		Compatible CIs		Compatible CIs	
6EA2-E	6EB2-E	6EA2-M	6DY2	6EB3-E	2DY2
	6EB2-M		6DY3		4DY2
	6LS2		6EA2-M		4EA2-E
	8EB2-E		6EB2-E	4EA2-M	
	8EB2-M		6EB2-M		4SF2
	9DY2		6LS2		6DY2
	9DY3		8EB2-E	6DY3	
			8EB2-M		6EA2-E
6EA2-M	2AC2		9DY2		6EA2-M
	2DY2		9DY3		8EB2-E
	2LA2				8EB2-M
	2LB2	6EB2-E	2DY2		9DY2
	2LC2		4DY2		9DY3
	2LO3		4SF2		9EA2
	2LS2		6DY2		9EA3
	2LS3		6DY3		
	2RV2-T		6EB2-E	6EX2-A	2GS2
	4AC2		6EB2-M		2GS3
	4DY2		9DY2		2LS2
	4EA2-E		9DY3		2LS3
	4EA2-M				4GS2
	4LS2	6EB2-M	2DY2		4LS2
	4RV2-T		4DY2		4SF2
	4SF2		4SF2		6GS2
	4SF3		6DY2		6LS2
			6DY3		
			6EB2-M		
			9DY2		
			9DY3		

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15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs		Compatible CIs		Compatible CIs	
6EX2-B	2GO3	8EB2-E	2AC2	8EB2-M	2AC2
	2LA2		2DY2		2DY2
	2LB2		2LA2		2LA2
	2LC2		2LB2		2LB2
	2LO2		2LC2		2LC2
	2LO3		2LO3		2LO3
	2LR2		2LS2		2LS2
	4LR2		2LS3		2LS3
	4SF2		2RV2-T		2RV2-T
			4AC2		4AC2
6GO2	2GO2		4DY2		4DY2
	2GS2		4LS2		4LS2
	2GS3		4RV2-T		4RV2-T
	4GS2		4SF2		4SF2
	4SF2		4SF3		4SF3
	6GS2		6DY2		6DY2
			6DY3		6DY3
6LO2	2LS2		6EB2-E	6EB2-E	
	2LS3		6EB2-M		6EB2-M
	4LS2		6LS2		6LS2
	4SF2		8EB2-E	8EB2-M	
	6LS2		8EB2-M		9DY2
			9DY2		9DY3
6LS2	2LA2		9DY3		
	2LB2				
	2LC2				
	2LO2				
	2LO3				
	4SF2				

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15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(C) Voice Grade (Cont'd)

Compatible CIs		Compatible CIs		Compatible CIs	
8EC2	2DY2	9DY2	2DY2	9EA3	2DY2
	4DY2		4DY2		4DY2
	4EA2-E		6DY2		4EA2-E
	4EA2-M		6DY3		4EA2-M
	4SF2		9DY2		6DY2
	6DY2				6DY3
	6DY3	9DY3	2DY2		6EA2-E
	6EA2-E		4DY2		6EA2-M
	6EA2-M		6DY2		6EB2-E
	6EB2-E		6DY3		6EB2-M
	6EB2-M		9DY2		8EB2-E
	8EB2-E		9DY3		8EB2-M
	8EB2-M				9DY2
	9DY2	9EA2	2DY2		9DY3
	9DY3		4DY2		9EA3
	9EA2		4EA2-E		
	9EA3		4EA2-M		
			6DY2		
			6DY3		
			6EA2-E		
			6EA2-M		
			6EB2-E		
			6EB2-M		
			8EB2-E		
			8EB2-M		
			9DY2		
			9DY3		
			9EA2		
			9EA3		

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SECTION NO. 15

15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

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SECTION NO. 15

15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(E) Video

Compatible CIs		Compatible CIs	
2TV6-1	4TV6-15 4TV7-15	4TV7-5	4TV6-5 4TV7-5
2TV6-2	6TV6-15 6TV7-15	4TV7-15	4TV6-15 4TV7-15
2TV7-1	4TV6-15 4TV7-15	6TV6-5	6TV6-5 6TV7-5
2TV7-2	6TV6-15 6TV7-15	6TV6-15	6TV6-15 6TV7-15
4TV6-5	4TV6-5 6TV7-5 4TV7-5	6TV6-5	 6TV7-5
4TV6-15	4TV6-15 4TV7-15	6TV7-15	6TV6-15 6TV7-15

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SECTION NO. 15

15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(H) Digital Data

Compatible CIs	Compatible CIs	Compatible CIs	Compatible CIs	Compatible CIs	Compatible CIs
4DS8-15	4DS8-15+	4DU5-24	4DU5-24	6DU5-24	6DU5-24
	4DU5-24				
	4DU5-48	4DU5-48	4DU5-48	6DU5-48	6DU5-48
	4DU5-56				
	4DU5-96	4DU5-96	4DU5-96	6DU5-56	6DU5-56
	6DU5-24				
	6DU5-48	4DU8-56	4DU5-56	6DU5-96	6DU5-96
	6DU5-96				

\+ Available only as a cross connect of two digital channels at appropriate digital speeds at a Telephone Company hub.

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SECTION NO. 15

15. Interface Groups, Transmission Specifications and Channel Interfaces (Cont'd)

15.3 Special Access Channel Interface and Network Channel Codes (Cont'd)

15.3.5 Compatible Channel Interfaces (Cont'd)

(I) High Capacity

Compatible CIs		Compatible CIs	
4DS0-63	4DS0-63 4DU8-A,B or C 6DU8-A,B or C	4DS8-15J	4DU8-A 6DU8-A
		4DS8-15K	4DU8-B 4DU8-C 6DU8-B 6DU8-C
4DS6-27	4DS6-27 4DU8-A,B or C 6DU8-A,B or C		
4DS6-44	4DS6-44 4DU8-A,B or C 6DU8-A,B or C	4DS8-31	4DS8-31 4DU8-A,B or C 6DU8-A,B or C
4DS8-15	4DS8-15+ 4DU8-B 6DU8-8	4DU8-A,B or C	4DU8-A,B or C

\+ Available only as a cross connect of two individual channels of 1.544 Mbps facilities at a Telephone Company hub.

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