LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Services Interfaces and Transmission Specifications

7.1 Contains LTTS Options (which are comprised of Interface Groups, Supervisory Signaling, Entry Switch Receive Level and Local Transport Termination) and transmission Specifications.

7.1 LTTS

Ten Interface Groups are provided for terminating the Transport Facility at the customer's switch. Each Interface Group provides a specified premises interface (e.g., two-wire, four-wire, DS1, etc.).

As a result of the customer's LTTS order and the type of Telephone Company transport facilities serving the customer designated premises, the need for signaling conversions or two-wire to four-wire conversions, or the need to terminate digital or high frequency facilities in channel bank equipment may require that Telephone Company equipment be placed at the customer designated premises. For example, if a voice frequency interface is ordered by the customer and the Telephone Company facilities serving the customer designated premises are digital, then the Telephone Company channel bank equipment must be placed at the customer designated premises in order to provide the voice frequency interface ordered by the customer.

7.1.1 Local Transport Interface Groups

Interface Groups are combinations of technical parameters which describe the Telephone Company handoff at the point of termination at the customer switch. The technical specifications concerning the available interface groups are set forth in (A) though (D) following.
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

Interface Group 1 and Group 3 through Group 5 are not available with LTTS. Interface Groups 2 and Groups 6 through 10 are provided with Type A or B Transmission Specifications, as set forth respectively in 7.1.2(E) and (F) following, depending on whether LTTS 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 switch.
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

(A) Interface Group 1

Interface Group 1 is not available with LTTS.

(B) 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 customer's serving wire center 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. Such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

(C) Interface Group 3 through Group 5

Interface Group 3 through Group 5 are not available with LTTS.
7. Local Transport and Termination Services Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

(D) Interface Groups 6 through 10

Interface Groups 6 through 10 provide digital transmission at the point of termination at the customer designated premises. The various interfaces are capable of transmitting electrical signals at the nominal bit rates illustrated following, with the capability to channelize 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 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, a DS1 signal(s) in D3/D4 format.

The interfaces are provided with individual transmission path bit stream supervisory signaling.

<table>
<thead>
<tr>
<th>Interface group Identification No.</th>
<th>Nominal Bit Rate (Mbps)</th>
<th>Digital Hierarchy Level</th>
<th>Max No. of Channelized Voice Freq. Trans. Paths</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1.544</td>
<td>DS1</td>
<td>24</td>
</tr>
<tr>
<td>7</td>
<td>3.152</td>
<td>DS1C</td>
<td>48</td>
</tr>
<tr>
<td>8</td>
<td>6.312</td>
<td>DS2</td>
<td>96</td>
</tr>
<tr>
<td>9</td>
<td>44.736</td>
<td>DS3</td>
<td>672</td>
</tr>
<tr>
<td>10</td>
<td>274.176</td>
<td>DS4</td>
<td>4032</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002  Effective: January 24, 2002


By: Agris Pavlovskis, President  Lansing, Michigan
LOCAL TRANSPORT AND TERMINATION SERVICE

7. Local Transport and Termination Services Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

(E) Local Transport Optional Features

Where transmission facilities permit, the Telephone Company will, at the option of the customer, provide the following features associated with Local Transport.

When the 64 Clear Channel Capability optional feature is installed on an existing facility, the addition will be treated as a discontinuance and start of service and all associated nonrecurring charges will apply.

- Supervisory Signaling

Supervisory Signaling allows the customer to order an optional supervisory signaling arrangement for each transmission path provided where the transmission parameters permit, and where signaling conversion is required by the customer to meet its signaling capability.
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Services Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

(F) Local Transport Optional Features (Cont'd)

- 64 Clear Channel Capability

64 Clear Channel Capability allows the customer to transport voice or data signals over a 64 kbps channel with no constraints on the quantity or sequence of ones and zero bits. This option employs the Bipolar 8 Zero Suppression (B8ZS) technique to permit customers to use the full 64 Kbps bandwidth of a DS0 channel. It is only available in suitably equipped electronic end offices as identified in NATIONAL EXCHANGE CARRIER ASSOCIATION, TARIFF No. 4. 64 Clear Channel Capability, as described in Technical Reference GR-334-CORE, is available with Interface Groups 6 and 9 for Signaling System 7 (SS7) signaling.

The Interface Groups, as described in (A) through (D) preceding, represent industry standard arrangements. Where transmission parameters permit, the customer may select the following optional signaling arrangements in place of the signaling arrangements standardly associated with the Interface Groups.

- For Interface Group 2
  - DX Supervisory Signaling,
  - E&M Type I Supervisory Signaling,
  - E&M Type II Supervisory Signaling, or
  - E&M Type III Supervisory Signaling
  - SF Supervisory Signaling, or Tandem Supervisory Signaling

- 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.
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

(E) Local Transport Optional Features (Cont'd)

Central offices. Generally such signaling is available only where the first point of switching provides an analog (i.e., non-digital) interface to the transport termination.

These optional Supervisory Signaling arrangements are not available in combination with the SS7 optional feature as described in 4.5.2(B)(2) preceding.

Additionally, in (F) following, there is a matrix of available Premises Interface Codes as a function of Interface Group A Telephone Company Switch Supervisory Signaling.

(F) Available Premises Interface Codes

Following is a matrix showing premises interface codes which are available for each Interface Group. Their availability is a function of the Telephone Company switch supervisory signaling and Feature Group.

<table>
<thead>
<tr>
<th>Premise Code</th>
<th>Option</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-</td>
<td>-15</td>
<td>1.544 Mbps (DS1) format per PUB 1451 plus D4</td>
</tr>
<tr>
<td></td>
<td>-15L</td>
<td>1.544 Mbps (DS1) with SF signaling</td>
</tr>
<tr>
<td></td>
<td>-27</td>
<td>274.176 Mbps (DS4)</td>
</tr>
<tr>
<td></td>
<td>-27L</td>
<td>274.176 Mbps (DS4) with SF signaling</td>
</tr>
<tr>
<td></td>
<td>-31</td>
<td>3.152 Mbps (DS1C)</td>
</tr>
<tr>
<td></td>
<td>-31L</td>
<td>3.152 Mbps (DS1C) with SF signaling</td>
</tr>
<tr>
<td></td>
<td>-44</td>
<td>44.736 Mbps (DS3)</td>
</tr>
<tr>
<td></td>
<td>-44L</td>
<td>44.736 Mbps (DS3) with SF signaling</td>
</tr>
<tr>
<td></td>
<td>-63</td>
<td>6.312 Mbps (DS2)</td>
</tr>
<tr>
<td></td>
<td>-63L</td>
<td>6.312 Mbps (DS2) with SF signaling</td>
</tr>
<tr>
<td>DX</td>
<td>-</td>
<td>duplex signaling interface at customer's point of termination</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002                                       Effective: January 24, 2002


By: Agris Pavlovskis, President                            Lansing, Michigan
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces
and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes (Cont'd)

Premise Interface Codes (Cont’d)

<table>
<thead>
<tr>
<th>Premise Code</th>
<th>Option</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>E</td>
<td>Type I E&amp;M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.</td>
</tr>
<tr>
<td>EA</td>
<td>M</td>
<td>Type I E&amp;M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.</td>
</tr>
<tr>
<td>EB</td>
<td>E</td>
<td>Type II E&amp;M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.</td>
</tr>
<tr>
<td>EB</td>
<td>M</td>
<td>Type II E&amp;M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.</td>
</tr>
<tr>
<td>EC</td>
<td></td>
<td>Type III E&amp;M signaling at customer POT</td>
</tr>
<tr>
<td>NO</td>
<td></td>
<td>no signaling interface, transmission only</td>
</tr>
<tr>
<td>RV</td>
<td>O</td>
<td>reverse battery signaling, one way operation, originate by customer</td>
</tr>
<tr>
<td>RV</td>
<td>T</td>
<td>reverse battery signaling, one way operation, terminate function by customer or customer's end user</td>
</tr>
<tr>
<td>SF</td>
<td></td>
<td>single frequency signaling with VF band at either customer POT or customer's end user POT</td>
</tr>
</tbody>
</table>

Available Premise Interface Codes

<table>
<thead>
<tr>
<th>Interface Group</th>
<th>Telephone Company Switch Supervisory Signaling</th>
<th>Premises Interface Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>RV, EA, EB, EC</td>
<td>4SF2</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>4DX2</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>6EA2-E</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>6EA2-M</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>8EB2-E</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>8EB2-M</td>
</tr>
<tr>
<td></td>
<td>EA, EB, EC</td>
<td>8EC2-M</td>
</tr>
<tr>
<td></td>
<td>RV</td>
<td>4RV2-O</td>
</tr>
<tr>
<td></td>
<td>RV</td>
<td>4RV2-T</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>4NO2</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002 Effective: January 24, 2002


By: Agris Pavlovskis, President Lansing, Michigan
### LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.1 Local Transport Interface Groups (Cont'd)

<table>
<thead>
<tr>
<th>Interface Group</th>
<th>Telephone Company</th>
<th>Premises Interface Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>RV, EA, EB, EC</td>
<td>4DS9-15</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>4DS9-15L</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>4DS9-15</td>
</tr>
<tr>
<td>7</td>
<td>RV, EA, EB, EC</td>
<td>4DS9-31</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>4DS9-31L</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>4DS9-31</td>
</tr>
<tr>
<td>8</td>
<td>RV, EA, EB, EC</td>
<td>4DS0-63</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>4DS0-63L</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>4DS0-63</td>
</tr>
<tr>
<td>9</td>
<td>RV, EA, EB, EC</td>
<td>4DS6-44</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>4DS6-44L</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>4DS6-44</td>
</tr>
<tr>
<td>10</td>
<td>RV, EA, EB, EC</td>
<td>4DS6-27</td>
</tr>
<tr>
<td></td>
<td>RV, EA, EB, EC</td>
<td>4DS6-27L</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>4DS6-27</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002  Effective: January 24, 2002


By: Agris Pavlovskis, President  Lansing, Michigan
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications

Descriptions of the transmission specifications available with each Interface Group selected by the customer, are set forth following. Descriptions of each of these Standard Transmission Parameters mentioned are set forth respectively in (B) through (D) and 7.1.3(A) and (B) following.
7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications (Cont'd)

(A) LTTS is provided with either Type A or Type B Transmission Specifications as follows:

- When routed to the end office Type B is provided.
- When routed to an access tandem only Type A is provided.
- Type A is provided on the transmission path from the access tandem to the end office.

Type A and Type B Transmission Specifications are provided with Interface Groups 2 and Group 6 through Group 10.

Type DB Data Transmission Parameters are provided for the transmission path between the customer designated premises and the end office when directly routed to the end office. Type DA Data Transmission Parameters are provided for the transmission path between the customer designated premises and the access tandem and between the access tandem and the end office when routed via an access tandem.

(B) 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.
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications (Cont'd)

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

(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:

<table>
<thead>
<tr>
<th>Route Miles</th>
<th>C-Message Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 50</td>
<td>32 dBnCO</td>
</tr>
<tr>
<td>51 to 100</td>
<td>34 dBnCO</td>
</tr>
<tr>
<td>101 to 200</td>
<td>37 dBnCO</td>
</tr>
<tr>
<td>201 to 400</td>
<td>40 dBnCO</td>
</tr>
<tr>
<td>401 to 1000</td>
<td>42 dBnCO</td>
</tr>
</tbody>
</table>

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dbmO holding tone, is less than or equal to 45 dBnCO.
7. Local Transport and Termination Interfaces
   and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications (Cont'd)

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

(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:

<table>
<thead>
<tr>
<th>Route</th>
<th>Echo Return Loss</th>
<th>Singing Return Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>-POT to Access Tandem</td>
<td>21 dB</td>
<td>14 dB</td>
</tr>
<tr>
<td>-POT to End Office -Direct</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>-Via Access Tandem</td>
<td>16 dB</td>
<td>11 dB</td>
</tr>
</tbody>
</table>

(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:

<table>
<thead>
<tr>
<th>Echo Return Loss</th>
<th>Singing Return Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 dB</td>
<td>2.5 dB</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002

Effective: January 24, 2002

Issued under the authority Public Act 179, dated December, 1991, as amended by
Public Act 216, dated November, 1995, as further amended by Public Act 295.

By: Agris Pavlovskis, President
Lansing, Michigan
7. Local Transport and Termination Interfaces

and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications (Cont'd)

(F) Type B Transmission Specifications

Type B 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 + 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:

<table>
<thead>
<tr>
<th>Route Miles</th>
<th>C-Message Noise Type B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 50</td>
<td>35 dBrnCO</td>
</tr>
<tr>
<td>51 to 100</td>
<td>37 dBrnCO</td>
</tr>
<tr>
<td>101 to 200</td>
<td>40 dBrnCO</td>
</tr>
<tr>
<td>201 to 400</td>
<td>43 dBrnCO</td>
</tr>
<tr>
<td>401 to 1000</td>
<td>45 dBrnCO</td>
</tr>
</tbody>
</table>

4. C-Notch Noise

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

Issued: January 23, 2002
Effective: January 24, 2002


By: Agris Pavlovskis, President
Lansing, Michigan
ACCESS SERVICE

7. Access Service Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications (Cont'd)

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

(5) Echo Control

Echo Control, identified Equal Level Echo Loss 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 type of termination, and type of transmission path. They are greater than or equal to the following:

<table>
<thead>
<tr>
<th>Type of Termination</th>
<th>Echo Return Loss</th>
<th>Singing Return Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>POT to Access Tandem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Terminated in 4-Wire trunk</td>
<td>21 dB</td>
<td>15 dB</td>
</tr>
<tr>
<td>- Terminated in 2-Wire trunk</td>
<td>16 dB</td>
<td>11 dB</td>
</tr>
<tr>
<td>POT to End Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Direct</td>
<td>16 dB</td>
<td>11 dB</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002
Effective: January 24, 2002


By: Agris Pavlovskis, President Lansing, Michigan
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces
   and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.2 Standard Transmission Specifications (Cont'd)

(F) 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:

<table>
<thead>
<tr>
<th>Echo Return Loss</th>
<th>Singing Return Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 dB</td>
<td>2.5 dB</td>
</tr>
</tbody>
</table>

7.1.3 Data Transmission Parameters

Two types of Data Transmission Parameters, i.e., Type DA and Type DB, are provided for the LTTS arrangements. Type DB is provided when LTTS is directly routed to the end office. Type DA is only provided with LTTS and only when routed via an access tandem. 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.
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.3 Data Transmission Parameters Type DA (Cont'd)

(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.

(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
7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.3 Data Transmission Parameters

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

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 5° 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:

<table>
<thead>
<tr>
<th>Frequency Band</th>
<th>Less than 50 Route Miles</th>
<th>Equal to or Greater than 50 Route Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>604 to 2804 Hz</td>
<td>800 microseconds</td>
<td>1000 microseconds</td>
</tr>
<tr>
<td>1004 to 2404 Hz</td>
<td>320 microseconds</td>
<td>500 microseconds</td>
</tr>
</tbody>
</table>

Issued: January 23, 2002                                Effective: January 24, 2002


By: Agris Pavlovskis, President Lansing, Michigan
LOCAL TRANSPORT AND TERMINATION SERVICES

7. Local Transport and Termination Interfaces and Transmission Specifications (Cont'd)

7.1 LTTS (Cont'd)

7.1.3 Data Transmission Parameters

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

(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) inter-modulation Distortion products are equal to or greater than:

<table>
<thead>
<tr>
<th>Product</th>
<th>dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Order</td>
<td>31</td>
</tr>
<tr>
<td>Third Order</td>
<td>34</td>
</tr>
</tbody>
</table>

(5) Phase Jitter

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

(6) Frequency Shift

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

Issued: January 23, 2002  Effective: January 24, 2002


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