

Recommendation R.100

Replace § 2 and onwards by the following:

"2. Digital Path Link

2.1 64 kbit/s international digital transmission circuits are realized by PCM time slots or via TDMA satellite systems. SCPC (Single Channel Per Carrier) satellite systems provide 56 kbit/s channels. Primary groups 60 - 108 kHz in conjunction with V.36 [4] modems may also be used.

2.2 64 kbit/s TDM link

2.2.1 Recommendation R.111, section 1 defines the telegraph TDM systems at 64 kbit/s.

2.2.2 Recommendations X.50 [5] and X.51 [6] set out the parameters of envelope interleaving TDM systems at 64 kbit/s, which provide 0.6, 2.4, 4.8 and 9.6 kbit/s tributary data channels. These data channels can be used to transfer the aggregate signals of TDM systems at 0.6 kbit/s (Recommendation R.103),

2.4 kbit/s (Recommendations R.101, R.105, R.112 and R.111, § 2), 4.8 kbit/s (Recommendations R.102 and R.111, § 2) and 9.6 kbit/s (Recommendation R.111, § 2).

2.3 56 kbit/s TDM links are realized using envelope interleaving TDM systems which are defined in Recommendations X.55 [7] and X.56 [8]. These systems provide the same tributary channels as in 2.2.2.

2.4 Figure 1/R.100 shows a typical multiplex hierarchy.

* The R.103 remote multiplexer may be connected to an R.101, R.112 or an R.102 multiplexer. In this example, the eight remote link channels are included in the 46 channels of the R.101 multiplexer.

FIGURE 1/R.100

Typical multiplex hierarchy

2.5 The capacities of 50 baud channels of 64 and 56 kbit/s TDM systems are shown in Table 2/R.100.

TABLE 2/R.100

50 baud channel capacities of homogeneous TDM systems

Recommendation No. of TDM systems	maximum No. of 50 baud channels	
	transparent	non-transparent
R.111, § 1 (64 kbit/s)	240	-
X.50 (64 kbit/s) 20 x R.101 (2.4 kbit/s)	-	920
X.51 (64 kbit/s) 20 x R.112 (2.4 kbit/s)	300	920

X.55 (56 kbit/s)							
or	10 x R.102 (4.8 kbit/s)	300	920				
X.56 (56 kbit/s)							
	20 x R.111, § 2 (2.4 kbit/s)	160	-				
	10 x R.111, § 2 (4.8 kbit/s)	160	-				
	5 x R.111, § 2 (9.6 kbit/s)	160	-				
	20 x R.105 (2.4 kbit/s)	-	5120 (Note)				
	80 x R.103 (0.6 kbit/s)	-	640				

Note - Virtual channels.

2.6 The characteristics of 64 and 56 kbit/s digital circuit interfaces are described in Recommendations G.703 [9] and V.36 [4].

REFERENCES

- [1] CCITT Recommendation - 9600 bits per second modem standardized for use on point-to-point 4-wire leased telephone-type circuits, Recommendation V.29.
- [2] CCITT Recommendation - Transmission requirements of international voice-frequency telegraph links (at 50, 100 and 200 bauds), Recommendation H.22.
- [3] CCITT Recommendation - Performance characteristics of PCM channels between 4-wire interfaces at audio frequencies, Recommendation G.712.
- [4] CCITT Recommendation - Modems for synchronous data transmission using 60-108 kHz group band circuits, Recommendation V.36.
- [5] CCITT Recommendation - Fundamental parameters of a multiplexing scheme for the international interface between synchronous data networks, Recommendation X.50.
- [6] CCITT Recommendation - Fundamental parameters of a multiplexing scheme for the international interface between synchronous data networks using 10-bit envelope structure, Recommendation X.51.
- [7] CCITT Recommendation - Interface between synchronous data networks using a 6+2 envelope structure and single channel per carrier (SCPC) satellite channels, Recommendation X.55.
- [8] CCITT Recommendation - Interface between synchronous data networks using an 8+2 envelope structure and single channel per carrier (SCPC) satellite channels, Recommendation X.56.

[9] CCITT Recommendation - Physical/electrical characteristics of hierarchical digital interfaces, Recommendation G.703."

Recommendation R.101

1. Add the following note to Table 4/R.101 (The existing note becomes "Note 1"):

"Note 2 - The allocation of 50-baud channel 16 for maintenance purpose cancels the possibility to set up 100-baud channel 16 and 200-baud channel 04."

2. Add the following note to Table 5/R.101 (The existing note becomes "Note 1"):

"Note 2 - The allocation of 50-baud channel 24 for maintenance purpose cancels the possibility to set up 75-baud channel 24 and 150-baud channel 08."

3. Replace the word "numbering" for "allocation" in the headings of Tables 3/R.101, 4/R.101 and 5/R.101.

4. Add the following to point 11.1:

"The implementation of this optional measurement should be such that the error rate on the synchronizing bits is supervised continuously and an alarm is issued when a preselected limit has been reached.

The alarm limits should be at least one faulty bit every 10^3 , 10^4 or 10^5 bits."