INTERNATIONAL TELECOMMUNICATION UNION

ITU-T R.122

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

TELEGRAPHY

TELEGRAPH TRANSMISSION

SUMMARY OF TRANSMISSION PLANS FOR RATES UP TO 300 BAUDS

ITU-T Recommendation R.122

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation R.122 was published in Fascicle VII.1 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Recommendation R.122

SUMMARY OF TRANSMISSION PLANS FOR RATES UP TO 300 BAUDS

(Melbourne, 1988)

The CCITT,

considering

(a) that this Recommendation summarizes the distortion limits to be used in formulating transmission plans for connections working at rates up to 300 bauds;

(b) that User Classes of Services 1 and 2 in Recommendation X.1 should be taken into account;

(c) that the rates and codes given in Recommendation R.101 should be taken into account;

(d) that Recommendations R.20, R.50, R.57, R.58, R.120, R.121 and S.3 should be taken into account,

unanimously declares the view

In planning international point-to-point and switched telegraph communications, Administrations should use the following as a guide. The individual recommendations referred to should be taken into account.

Note 1 – Most of the figures given were derived using the laws of addition of distortion appropriate to analogue transmission equipment MCVFT, however were another law is known to apply TDM, then the appropriate law of addition should be used (see Recommendation R.11).

Note 2 – Most of the figures given relate to start-stop distortion but some, R.20, R.120 and R.58 for trunk distortion, relate to isochronous distortion. As a first approximation, isochronous and start-stop distortion may be considered to be equivalent for small values. However the individual Recommendations should be taken into account in each case.

In the following examples:

T is the customers terminal,

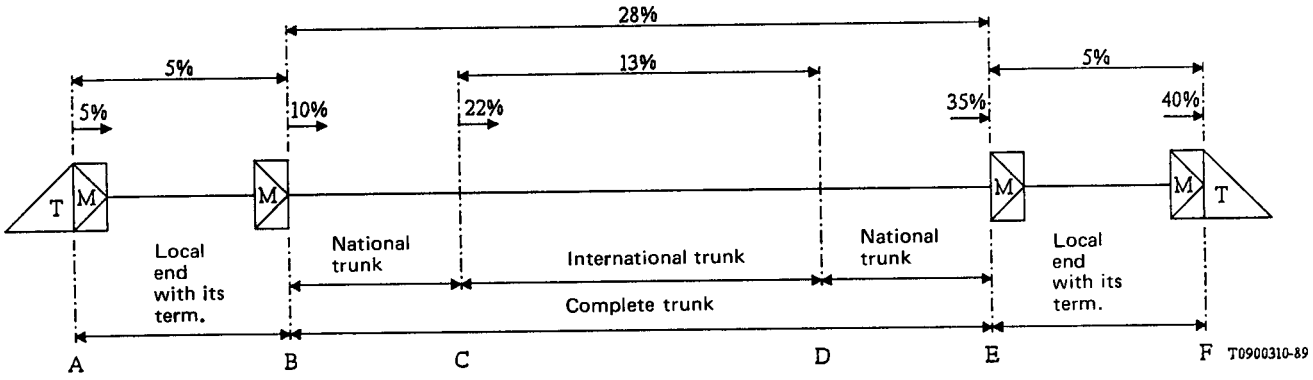
M is a modem to Recommendation R.20,

 represents the transmit distortion from the given point,

 represents the margin at the given point,

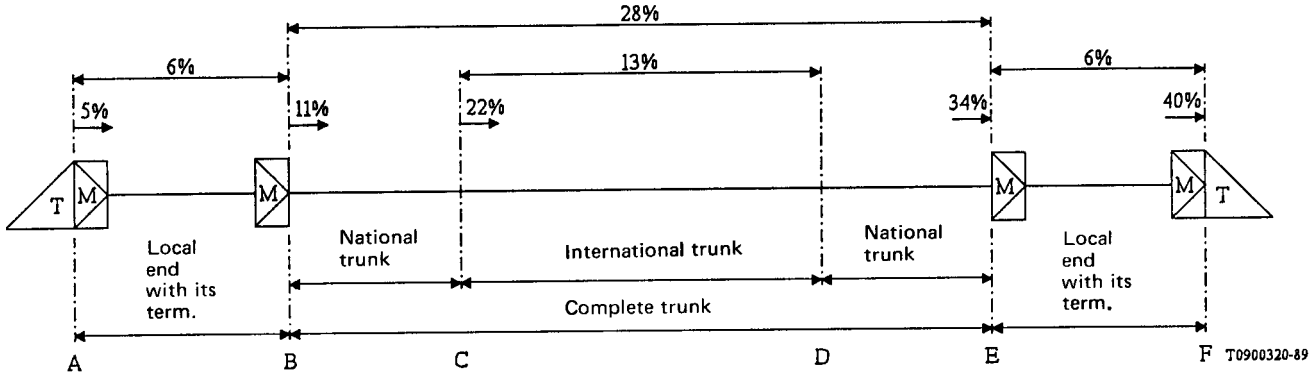
 represents the distortion introduced between the given points.

Example for 50 bauds



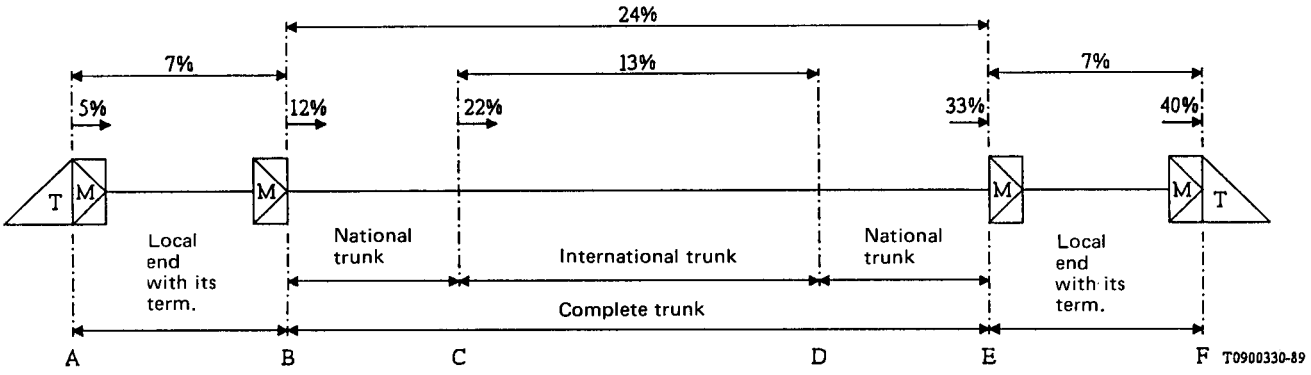
A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3) (NB 12% in Rec. R.57)
C Transmit distortion at exit from national network (Rec. R.58 and Rec. R.121)
C-D International trunk distortion (Rec. R.58 and Rec. R.121)
E Margin of local end (Rec. S.3) (NB 30% in Rec. R.57 point 1 d))
B-E Distortion of complete trunk (Rec. R.50 and Rec. R.57)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 75 bauds



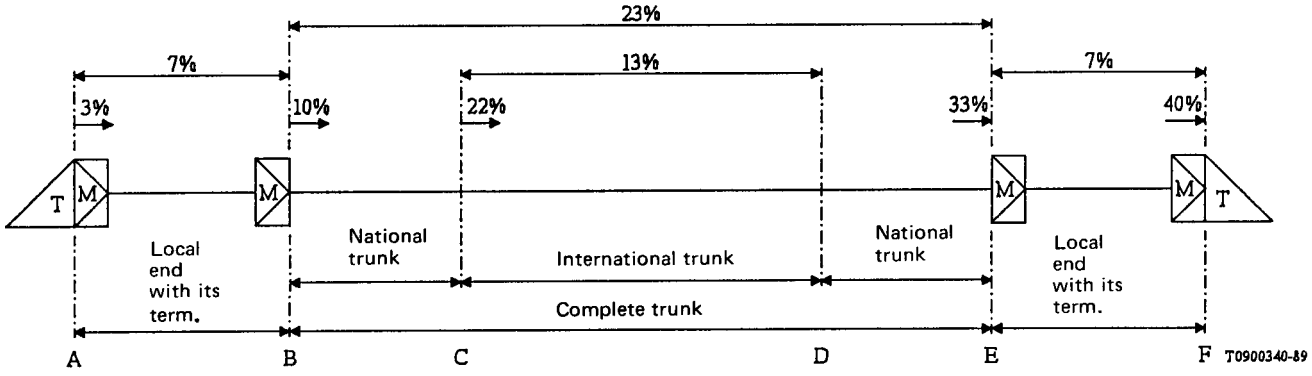
A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Distortion of complete trunk (Rec. R.120)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 100 bauds



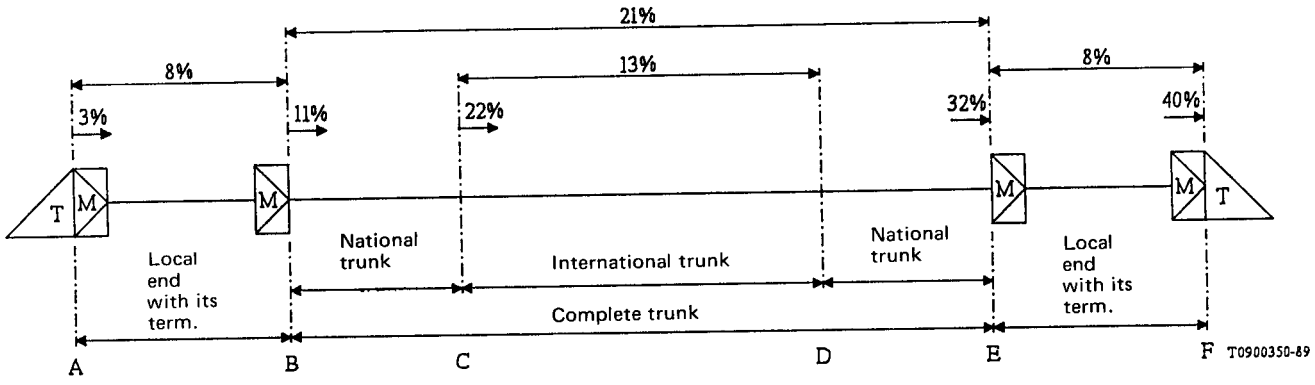
A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Distortion of complete trunk (Rec. R.120)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 110 bauds



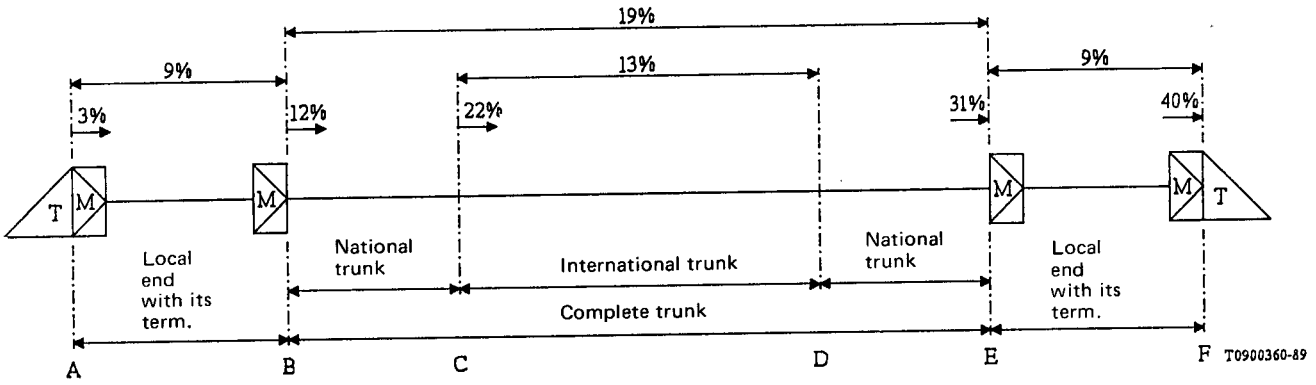
A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Calculated distortion of complete trunk (assuming arithmetic addition)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 134.5 bauds



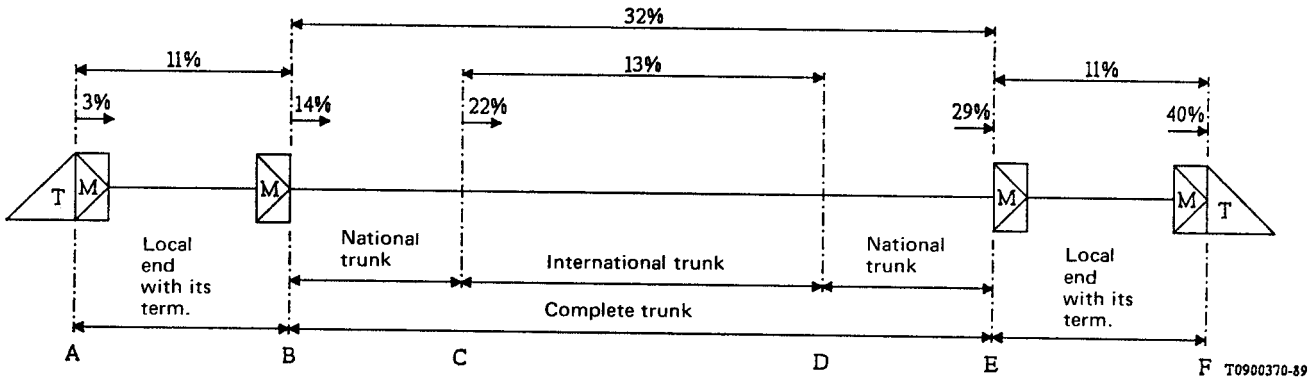
A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Calculated distortion of complete trunk (assuming arithmetic addition)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 150 bauds



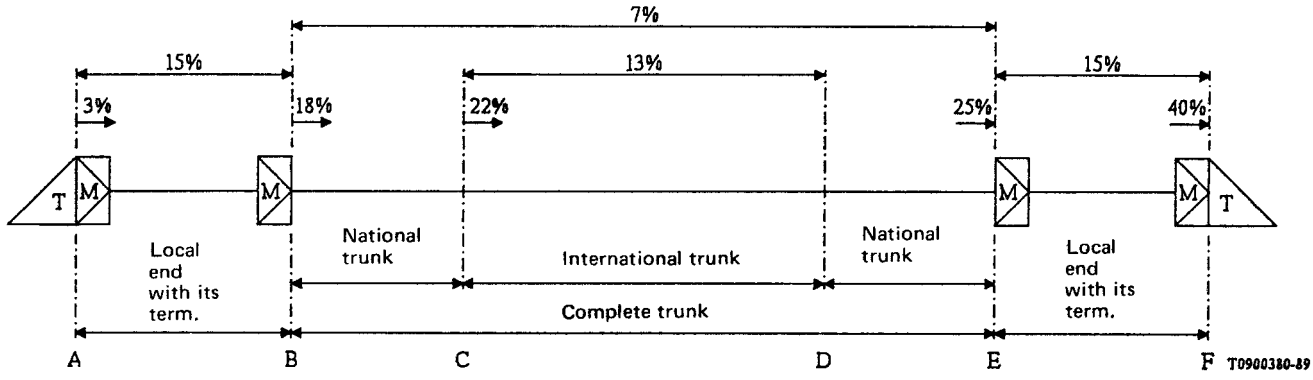
A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Calculated distortion of complete trunk (assuming arithmetic addition)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 200 bauds



A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Distortion of complete trunk (Rec. R.120)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B

Example for 300 bauds



A Terminal transmit distortion (Rec. S.3) (d.c.)
A-B Local end distortion (Rec. R.20)
B Transmit distortion from local end (Rec. S.3)
C Transmit distortion at exit from national network (Rec. R.121)
C-D International trunk distortion (Rec. R.121)
E Margin of local end (Rec. S.3)
B-E Calculated distortion of complete trunk (assuming arithmetic addition)
F Terminal margin (Rec. S.3) (d.c.)
E-F As A-B