INTERNATIONAL TELECOMMUNICATION UNION

ITU-T S.12

TELECOMMUNICATION
STANDARDIZATION SECTOR
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TELEGRAPHY

ALPHABETICAL TELEGRAPH TERMINAL EQUIPMENT

CONDITIONS THAT MUST BE SATISFIED BY SYNCHRONOUS SYSTEMS OPERATING IN CONNECTION WITH STANDARD 50-BAUD TELEPRINTER CIRCUITS

ITU-T Recommendation S.12

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation S.12 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 S.12

CONDITIONS THAT MUST BE SATISFIED BY SYNCHRONOUS SYSTEMS OPERATING IN CONNECTION WITH STANDARD 50-BAUD TELEPRINTER CIRCUITS

(former CCIT Recommendation C.23, Geneva, 1956;
amended at New Delhi, 1960 and Geneva, 1980)

The CCITT,

considering, on the one hand,

(a) that the receiving portion of the sending end of the synchronous system can be linked to a start-stop receiver operating at the nominal modulation rate of 50 bauds,

unanimously declares the view

(1) that the receiving portion of the sending end of the synchronous system shall satisfy the conditions laid down for 50-baud operation in §§ 1.6 and 3.1 of Recommendation S.3, being understood that start-stop signals would be received from a source complying with §§ 1.1, 1.2 and 1.3 of Recommendation S.3;

considering, on the other hand,

(b) that the retransmitting portion of the receiving end of the synchronous system can be linked to a start-stop transmitter having special characteristics, because of the high speed stability of synchronous systems;

unanimously declares the view

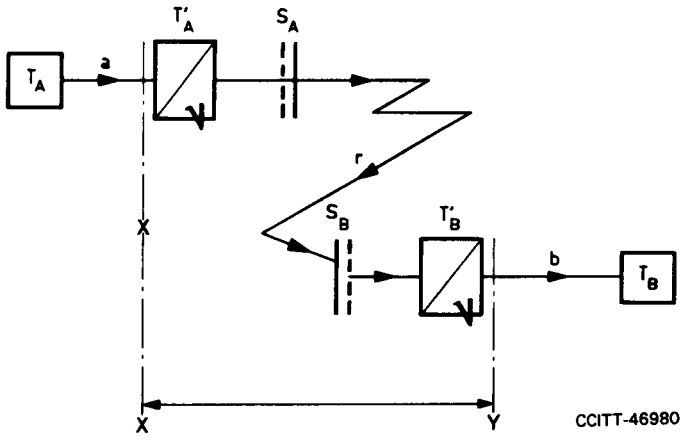
(2) that the start-stop signals provided by the retransmitting portion of the receiving termination of the synchronous system shall have the following characteristics:

a) nominal modulation rate, 50-bauds;

b) gross start-stop distortion of the signals, less than 5%;

c) interval between the beginning of successive start elements, $145\frac{5}{6}$ milliseconds with a tolerance of $\pm 1/10^6$.

Note – For a better understanding of the Recommendation, the general arrangement of a communication system involving transmission over a synchronous channel is shown in Figure 1/S.12.



In this diagram:

T_A and T_B are start-stop teleprinters.

T'_A and T'_B are repeaters with or without storage.

a and b represent the networks connecting teleprinters T_A and T_B to the repeaters T'_A and T'_B. These networks may comprise any number of channels in tandem, relays or regenerative repeaters.

S_A and S_B are the distributors of the synchronous system, the complexity of which it is not necessary to state.

r denotes a synchronous radiotelegraph channel.

It is agreed that, for the study of this question, the synchronous system includes all the equipment shown between lines X and Y on the diagram.

The input and output of the synchronous system are thus directly connected to the start-stop networks.

FIGURE 1/S.12

Synchronous system