INTERNATIONAL TELECOMMUNICATION UNION

ITU-T R.43

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

TELEGRAPHY

TELEGRAPH TRANSMISSION

SIMULTANEOUS COMMUNICATION BY TELEPHONE AND TELEGRAPH ON A TELEPHONE - TYPE CIRCUIT

ITU-T Recommendation R.43

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation R.43 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.43

SIMULTANEOUS COMMUNICATION BY TELEPHONE AND TELEGRAPH ON A TELEPHONE-TYPE CIRCUIT

(former CCIT Recommendation B.50, Geneva, 1956; amended at Geneva, 1964 and 1980)

The CCITT,

considering

(a) that the use of a leased telephone-type circuit for simultaneous communication by telephone and telegraph is envisaged in Recommendations D.1 [1] and H.32 [2];

(b) that the CCITT has indicated conditions under which the simultaneous use of telephone-type circuits for telephony and telegraphy is technically tolerable;

(c) that standardization of the characteristics of equipment permitting simultaneous use of a telephone-type circuit for telephony and telegraphy is not justified, but that it is necessary to limit the power of the signals transmitted and to avoid the use of frequencies that will interfere with any telephone signalling equipment that may remain connected to the telephone-type circuit;

(d) that new demands for the allocation of particular frequencies for special purposes frequently arise and the number of frequencies used for any one purpose should not be unnecessarily extended;

(e) that the systems described below may be useful when the more modern systems advocated in Recommendation H.34 [3] are not feasible;

unanimously declares the view

(1) that in the case of the simultaneous use of a telephone-type circuit for telephony and telegraphy, the resulting maximum permissible 1-minute mean power loading shall not exceed 50 µW0 (i.e. –13 dBm0);

(2) that where frequency division multiplexing is employed, the general principle concerning the allocation of level to each type of service should be that the allowable mean signal power is proportional to the bandwidth assigned. This case is considered in more detail in Recommendation H.34 [3], resulting in the aggregate power of the telegraph signals being set a level not exceeding 10 µW0 (i.e. approximately –20 dBm0);

(3) that there should not be more than three circuits of this type in a frequency-division multiplexed group of 12 telephone-type circuits and that the number of circuits of this type set up on a wideband carrier system should not exceed the number of supergroups in the system;

(4) that the telegraph signals transmitted must not interfere with any signalling equipment that may remain connected to the telephone-type circuit,

and notes

that some Administrations have permitted the use, for simultaneous telephony and telegraphy of the frequencies 1680 Hz and 1860 Hz both for amplitude and for frequency modulation.

Note – If circuits equipped in accordance with the present Recommendation are used in a private network, it will be impossible to use push-button telephone sets or multifrequency signalling (e.g. Signalling System R2) in the network.

References

[1] CCITT Recommendation *General principles for the lease of international (continental and intercontinental) private leased telecommunication circuits*, Rec. D.1.

[2] CCITT Recommendation *Simultaneous communication by telephony and telegraphy on a telephone-type circuit*, Rec. H.32.

[3] CCITT Recommendation *Subdivision of the frequency band of a telephone-type circuit between telegraphy and other services*, Rec. H.34.