INTERNATIONAL TELECOMMUNICATION UNION

ITU-T G.152

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

TRANSMISSION SYSTEMS AND MEDIA

GENERAL CHARACTERISTICS OF INTERNATIONAL TELEPHONE CIRCUITS AND NATIONAL EXTENSION CIRCUITS

CHARACTERISTICS APPROPRIATE TO LONG-DISTANCE CIRCUITS OF A LENGTH NOT EXCEEDING 2500 km

ITU-T Recommendation G.152

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation G.152 was published in Fascicle III.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.

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Recommendation G.152

CHARACTERISTICS APPROPRIATE TO LONG-DISTANCE CIRCUITS OF A LENGTH NOT EXCEEDING 2500 km

(Geneva, 1964; amended at Mar del Plata, 1968 and Geneva, 1972 and 1980)

This Recommendation applies to all modern international circuits not more than 2500 km in length. It also applies to national trunk circuits in an average-size country, and which may be used in the 4-wire chain of an international connection.

It is understood that, should an extension circuit more than 2500-km long be used in a large country, it will have to meet all the recommendations applicable to an international circuit of the same length.

1 Circuits on land or submarine cable systems or on line-of-sight radio-relay systems

The circuits in question are mostly set up in cable or radio-relay link carrier systems, such that the noise objectives of Recommendation G.222 [1] are applicable to a circuit with the same make-up as the hypothetical reference circuit 2500-km long.

A consequence of Recommendation G.222 [1] is that, for a circuit L-km long ($L \leq 2500$ km), the circuit performance objective for the mean psophometric noise power during any hour should be of the order of 4 L picowatts, excluding very short circuits and those with a very complicated composition, this latter case being dealt with in Recommendation G.226 [2].

2 Circuits on tropospheric-scatter radio-relay systems

The CCIR has defined a hypothetical reference circuit and fixed circuit performance objectives in its Recommendations 396 [3] and 397 [4] respectively.

3 Circuits on open-wire carrier systems

The Recommendation cited in [5] contains relevant noise objectives.

Note - Recommendation M.580 [6] deals with noise objectives for maintenancepurposes. See Note 1 of Recommendation G.143, § 1.1.

References

[1] CCITT Recommendation *Noise objectives for design of carrier-transmission systems of 2500 km*, Vol. III, Rec. G.222.

[2] CCITT Recommendation *Noise on a real link*, Vol. III, Rec. G.226.

[3] CCIR Recommendation *Hypothetical reference circuit for trans-horizon radio-relay systems for telephony using frequency-division multiplex*, Vol. IX, Rec. 396, ITU, Geneva, 1986.

[4] CCIR Recommendation *Allowable noise power in the hypothetical reference circuit of trans-horizon radio-relay systems for telephony usingfrequency-division multiplex*, Vol. IX, Rec. 397, ITU, Geneva, 1986.

[5] CCITT Recommendation *General characteristics of systems providing 12 carrier telephone circuits on an open-wire pair*, Vol. III, Rec. G.31 1, § 8.

[6] CCITT Recommendation *Setting-up and lining-up an international circuit for public telephony*, Vol. IV, Rec. M.580.