INTERNATIONAL TELECOMMUNICATION UNION

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STANDARDIZATION SECTOR
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SERIES H: TRANSMISSION OF NON-TELEPHONE SIGNALS

Characteristics of data signals

Transmission of wide-spectrum signals (data, etc.) over wideband supergroup links

ITU-T Recommendation H.53

Extract of **Red Book Fascicle III.4 (1984)**

NOTES

1 ITU-T Recommendation H.53 was published in Fascicle III.4 of the *Red Book*. This file is an extract from the *Red Book*. While the presentation and layout of the text might be slightly different from the *Red Book* version, the contents of the file are identical to the *Red 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 H.53

TRANSMISSION OF WIDE-SPECTRUM SIGNALS (DATA, ETC.) OVER WIDEBAND SUPERGROUP LINKS

(Mar del Plata, 1968; amended at Geneva, 1972, 1976 and 1980)

Links meeting the provisions of Recommendation H.15 should be used.

1 Power level

1.1 The mean power level of the wideband signal over the range 312-552 kHz should not exceed $-15 + 10 \log_{10} 60 = +3$ dBm0.

1.2 In order to limit cross-modulation effects in wideband systems, the power level of any individual spectral component in the band 312-552 kHz should not exceed –10 dBm0, except for spectral components which are at multiples of 4 kHz, (see the Recommendation cited in [1]).

With regard to its effect on non-telephone type signals, a discrete component is defined as a signal of sinusoidal form with a minimum duration of about 100 ms.

1.3 In addition to § 1.2 above, the energy spectrum transmitted in the neighbourhood of the pilot frequencies should be limited in accordance with the Recommendation cited in [2].

2 Limitation of the power spectrum outside the band 312-552 kHz

The power level produced by the terminal equipment connected to the wideband supergroup link shall not exceed –73 dBm0p in any 4-kHz band outside the range 304-560 kHz.

If the terminal equipment itself does not meet these conditions, an additional filter must be applied before the point of connection to the leased supergroup link.

References

[1] CCITT Recommendation *Overall recommendations relating to carrier-transmission systems*, Vol. III, Rec. G.221, § 2.2.

[2] CCITT Recommendation *Pilots on groups, supergroups, etc.*, Vol. III, Rec. G.241, § 7.