



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

K.26

PROTECTION AGAINST INTERFERENCE

**PROTECTION OF TELECOMMUNICATION
LINES AGAINST HARMFUL EFFECTS FROM
ELECTRIC POWER AND ELECTRIFIED
RAILWAY LINES**

ITU-T Recommendation K.26

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation K.26 was published in Volume IX 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 K.26

PROTECTION OF TELECOMMUNICATION LINES AGAINST HARMFUL EFFECTS FROM ELECTRIC POWER AND ELECTRIFIED RAILWAY LINES

(Melbourne, 1988)

The CCITT draws attention to the need for adequate and reliable protection to be given to telecommunication facilities to guard them against danger and disturbance arising from nearby electric power or electrified railway lines. The danger and disturbance can arise due to conductive, capacitive or inductive coupling between the systems, and the safety of people using or working on telecommunication installations needs to be assured.

To meet this need, the CCITT has issued the *Directives concerning the protection of telecommunication lines against harmful effects from electric power and electrified railway lines*, Geneva, 1988, which provide guidance in estimating possible overvoltages or overcurrents and recommending limiting values for these conditions. The *Directives* also give advice on methods used to measure overvoltages, overcurrents and relevant parameters, on protective devices and on protection methods and safety precautions.

The *Directives* (1988 edition) consist of nine volumes listed below:

- Volume I - Design, construction and operational principles of telecommunication, power and electrified railway facilities
- Volume II - Calculating induced voltages and currents in practical cases
- Volume III - Capacitive, inductive and conductive coupling: physical theory and calculation methods
- Volume IV - Inducing currents and voltages in power transmission and distribution systems
- Volume V - Inducing currents and voltages in power transmission and distribution systems.
- Volume VI - Danger and disturbance
- Volume VII - Protective measures and safety precautions
- Volume VIII - Protective devices
- Volume IX - Test and measuring apparatus and methods.

These volumes have been established by the CCITT in close cooperation with the International Conference on Large High Voltage Electric Systems (CIGRE) and the International Union of Railways (UIC).

The CCITT recommends that, when telecommunication installations are expected to be affected by nearby power or electrified railway lines, Administrations will find it in their own interest to observe the methods given in the *Directives* (1988 edition).

The *Directives* (1988 edition) replace the *Directives concerning the protection of telecommunication lines against harmful effects from electricity lines*, (Geneva, 1963, amended and supplemented in 1965, 1974, 1978 and 1982).