INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.30

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

GENERAL RECOMMENDATIONS ON TELEPHONE SWITCHING AND SIGNALLING

INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING

IMPROVING THE RELIABILITY OF CONTACTS IN SPEECH CIRCUITS

ITU-T Recommendation Q.30

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.30 was published in Fascicle VI.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 Q.30

IMPROVING THE RELIABILITY OF CONTACTS IN SPEECH CIRCUITS

The following methods can be used for improving the reliability of contacts in speech circuits:

a) use of precious metals such as platinum, palladium, gold, silver, or alloys of these metals. If, for one reason or another, it is not desired to "wet" the contacts, or if enough contact pressure cannot be provided, it is preferable to use the metals or alloys mentioned above, with the exception of pure silver;

b) use of high contact pressure;

c) double contacts;

d) lubrication (with suitable oils) of certain non-precious metal contacts in the case of sliding contacts;

e) direct current "wetting" of contacts, care being taken to avoid the introduction of noise due to transients when the contacts are made or broken;

f) air filtration or other protective measures to avoid dust;

g) the maintenance of suitable humidity;

h) the use of protective covers;

i) protection against fumes, vapours and gases;

j) avoidance of the use, near contacts, of materials likely to be detrimentral to the contacts.

When voice-frequency signals are sent over a transmission path, as it is not possible to use direct current wetting for the voice-frequency signal transmitting contacts due to the surges which occur on closing and opening the contact, it is preferable to use static modulators with rectifier elements.