



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**E.184**

**TELEPHONE NETWORK AND ISDN**

**OPERATION, NUMBERING, ROUTING  
AND MOBILE SERVICE**

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**INDICATIONS TO USERS OF ISDN  
TERMINALS**

**ITU-T Recommendation E.184**

(Extract from the *Blue Book*)

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## NOTES

1 ITU-T Recommendation E.184 was published in Fascicle II.2 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 E.184**

### **INDICATIONS TO USERS OF ISDN TERMINALS**

#### **1 Introduction**

1.1 Recommendations E.180 to E.184 deal with tones and other indications to users of the telephone service. This Recommendation covers the related but perhaps different requirements of the ISDN.

1.2 A person's ability to learn, distinguish between, and remember different tones representing abstract conditions is limited (to about four to six tones). Users are frequently confused by unfamiliar tones encountered through travel or international communication. Section 2 of this Recommendation advises against the use of new tones in order to avoid introducing user difficulties.

1.3 Where indications originate from a network (as proposed to a distant terminal), two situations may exist between the origin of the indications and the user of an ISDN terminal:

- a) ISDN signalling is used throughout
- b) In-band signalling is used in some parts of the connection.

1.4 Considering that information is sent to an ISDN terminal on a D-channel, and that the terminal may transform it into perceptible form, choices exist as to<sup>1)</sup> the most appropriate way of passing indications on to the user (e.g., by means of a display or by tones).

#### **2 Indications in an all-ISDN communication path**

2.1 It is recommended that no new tone (i.e., tones not in use in the PSTN) be generated by an ISDN terminal.

2.2 Tones are recommended where an auditory method other than "speech" or announcements is chosen as the method for a terminal to translate received D-channel ISDN information for a user. Such tones should be those used in the PSTN in the country where the terminal is situated (Recommendation E.180).

2.3 It is recommended that where a terminal translates ISDN signalling to tones, such tones should be used with meanings analogous to their meanings in the PSTN.

2.4 It is recommended that the use of tones should be restricted to indicating the functions equivalent to the tones used in the PSTN and listed in Recommendation E.182, § A.2. In some cases, notably dial tone, ringing tone, and busy tone, these tones may be the best indicators even when other methods can be provided by a terminal.

#### **3 Indications when ISDN is interworking with another network**

Given that no tone recognition is likely to be provided by any network element for translating a tone into an ISDN signal for relaying to a terminal, it is recommended that any audible indication arising from a non-ISDN network be passed through an auditory channel to the ISDN terminal.

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<sup>1)</sup> The desirability of translating various ISDN indications, the situations governing such choices, and the relationships of these to terminal capability (particularly display capability), are subjects for further study.