



INTERNATIONAL TELECOMMUNICATION UNION

# ITU-T

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

## I.412

**INTEGRATED SERVICES DIGITAL  
NETWORK (ISDN)**

**ISDN USER-NETWORK INTERFACES**

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**ISDN USER-NETWORK INTERFACES  
INTERFACE STRUCTURES AND ACCESS  
CAPABILITIES**

**ITU-T Recommendation I.412**

(Extract from the *Blue Book*)

## NOTES

1 ITU-T Recommendation I.412 was published in Fascicle III.8 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 I.412

### ISDN USER-NETWORK INTERFACES INTERFACE STRUCTURES AND ACCESS CAPABILITIES

(Malaga-Torremolinos, 1984; amended at Melbourne, 1988)

#### 1 General

This Recommendation defines limited sets of both channel types and interface structures for ISDN user-network physical interfaces.

#### 2 Definitions

2.1 A channel represents a specified portion of the information-carrying capacity of an interface.

2.2 Channels are classified by channel types, which have common characteristics. Channel types are specified in § 3.

2.3 The channels are combined into interface structures, specified in § 4. An interface structure defines the maximum digital information-carrying capacity across a physical interface.

2.4 In an actual access arrangement some of the channels available across an ISDN user-networks physical interface, as defined in the applicable interface structure, may not be supported by the network. Some ISDN services will not require the full capacity of a B-channel; in those cases in which users require only such services, the access capability might be further reduced. The capability provided by those channels that are actually available for communication purposes, is referred to as the access capability provided through the interface.

#### 3 Channel types and their use

##### 3.1 B-channel

3.1.1 The B-channel is a 64 kbit/s channel accompanied by timing.

*Note* - The method for providing this timing is a subject of the individual interface Recommendations.

A B-channel is intended to carry a wide variety of user information streams. A distinguishing characteristic is that a B-channel does not carry signalling information for circuit switching by the ISDN. Signalling information used for circuit switching by the ISDN is carried over other types of channels, e.g. a D-channel.

3.1.2 User information streams may be carried on a B-channel on a dedicated, alternate (within one call or as separate calls), or simultaneous basis, consistent with the B-channel bit rate. The following are samples of user information streams:

- i) voice encoded at 64 kbit/s according to Recommendation G.711;
- ii) data information corresponding to circuit or packet-switching user classes of service at bit rates less than or equal to 64 kbit/s, according to Recommendation X.1;
- iii) wideband voice encoded at 64 kbit/s according to Recommendation G.722;
- iv) voice encoded at bit rates lower than 64 kbit/s alone, or combined with other digital information streams.

It is recognized that a B-channel may also be used to carry user information streams not covered by CCITT Recommendations.