



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

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STANDARDIZATION SECTOR
OF ITU

G.921

DIGITAL SECTIONS AND DIGITAL LINE SYSTEMS

DIGITAL SECTIONS BASED ON THE 2048 kbit/s HIERARCHY

ITU-T Recommendation G.921

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation G.921 was published in Fascicle III.5 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 G.921

DIGITAL SECTIONS BASED ON THE 2048 kbit/s HIERARCHY

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

1 Characteristics of digital sections

1.1 General features

1.1.1 Bit rate

The digital sections based on the 2048 kbit/s hierarchy should be able to transmit signals at the nominal bit rates with their corresponding tolerances as indicated in Table 1/G.921.

TABLE 1/G.921

Tolerances on transmitted signals

Nominal bit rate (kbit/s)	2048	8448	34 368	139 264
Tolerance (ppm)	50	30	20	15

Note - The 2048 kbit/s digital sections may be operating synchronously or plesiochronously within the same environment.

1.1.2 Special properties

The digital sections based on the 2048 kbit/s hierarchy should be bit sequence independent.

1.2 Characteristics of interfaces

The digital interfaces should comply with Recommendation G.703.

1.3 Performance standards

The performance requirements (e.g. errors, jitter and availability) are specified in terms of a Hypothetical Reference Digital Section (HRDS). Such a model is defined in Recommendation G.801.

1.3.1 Error performance

Depending on the various applications in the different parts of a connection as specified in Recommendation G.821, different section quality classes have been defined in Table 2/G.921.

1.3.2 Jitter

To ensure that the maximum network limit of jitter (see § 2 of Recommendation G.823) is not exceeded within a digital network it is necessary to control the jitter contributed by transmission systems.