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ITU-T

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STANDARDIZATION SECTOR
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E.421

TELEPHONE NETWORK AND ISDN

**QUALITY OF SERVICE, NETWORK MANAGEMENT
AND TRAFFIC ENGINEERING**

**SERVICE QUALITY OBSERVATIONS
ON A STATISTICAL BASIS**

ITU-T Recommendation E.421

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation E.421 was published in Fascicle II.3 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 E.421

SERVICE QUALITY OBSERVATIONS ON A STATISTICAL BASIS

1 Definitions

1.1 service observation

F: observation de la qualité de service

S: observación de la calidad del servicio

Monitoring to obtain a complete or partial assessment of the quality of telephone calls, excluding test calls.

1.2 manual observation

F: observation manuelle

S: observación manual

Monitoring of telephone calls by an observer without using any automatic data-recording machine.

1.3 automatic observation

F: observation automatique

S: observación automática

Monitoring of telephone calls without an observer.

1.4 semi-automatic observation

F: observation semi-automatique

S: observación semiautomática

Monitoring of telephone calls using equipment which records some data automatically. For example, equipment in which information, such as exchange being observed, number dialled by the subscriber, metering pulses and time of call, is recorded automatically on some means suitable for data processing. The observer merely has to key in a code indicating the condition observed.

2 Relative merits of manual, automatic and semi-automatic observations

2.1 The three methods mentioned above in §§ 1.2, 1.3 and 1.4 are not exclusive; for example, automatic observations may be used to supplement observations taken by an operator. It was considered in 1968 that the need for automatic observations would increase in view of the heavy cost associated with manual or semiautomatic observations on the rapidly expanding international network. It was also considered that automatic observations would not entirely supersede observations taken by an observer within the foreseeable future.

The relative merits of the three methods can be assessed as follows:

2.2 Manual observation

Provides all the data required in Tables 1/E.422 and 1/E.423.

Observations can be carried out with a minimum of equipment.

Observations can permit the detection of a number of abnormalities which cannot be detected automatically, e.g. very poor speech transmission (item 5.2 of Table 1/E.422), or difficulty with audible tones encountered in the international service (item 6.4 of Table 1/E.422).

2.3 Semi-automatic observation

Provides all the data required in Tables 1/E.422 and 1/E.423.

There is a saving in staffing costs compared with manual observation.