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CCITT

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SERIES E: OVERALL NETWORK OPERATION,
TELEPHONE SERVICE, SERVICE OPERATION AND
HUMAN FACTORS

International telephone network management and
checking of service quality – Checking the quality of the
international telephone service

TEST CALLS

Reedition of CCITT Recommendation E.424 published in
Blue Book, Fascicle II.3 (1988)

NOTES

1 CCITT Recommendation E.424 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.

TEST CALLS

1 General

Test calls carried out manually or automatically to assess the functioning of international circuits of connections are of four types:

a) Type 1 test call

A test call conducted between two directly connected international centres to verify that the transmission and signalling on an international circuit of a given group are satisfactory.

b) Type 2 test call

A test call conducted between two international centres not directly connected to verify transit operational facilities of an intermediate international centre.

c) Type 3 test call

A test call from an international centre to a subscriber type number in the national network of the distant country, generally as a result of a particular kind of fault.

d) Subscriber-to-subscriber type test call¹

A subscriber-to-subscriber type test call is a test call from a test equipment having the characteristics of an average subscriber line in one national network to a similar equipment in the national network of a distant country.

Test calls types 1, 2, 3 and subscriber-to-subscriber test calls must not interfere with customer traffic. If, however, test calls contributing a significant load on a part of a network are to be made, prior advice should be given to the other Administration(s) concerned. Types 1 and 2 test calls for preventive maintenance should be conducted during light load periods. Types 1 and 2 test calls should be conducted as and when required for the investigation and clearance of faults.

Type 3 test calls should be conducted only after adequate testing has been done by means of type 1 or 2 test calls and after the distant Administration has made the necessary check in its national network. Type 3 test calls should be conducted during light load periods.

In order to find faults in last-choice equipment, circuit multiplication equipment or in-circuit multiplexing equipment, it may be necessary for tests to be carried out at the time when the traffic load approaches the full capacity of the route under test. The agreement of the distant network analysis point will be necessary before this test is carried out.

Subscriber-to-subscriber type test calls can be made by agreement of the network analysis point in the countries concerned.

Normally, unless there is a specific agreement between the Administrations concerned, subscriber-to-subscriber type test calls would be considered for fault location after:

- 1) verifying that there are no evident faults in the international switching centres involved that would cause the poor quality of service or subscriber complaint being investigated;
- 2) verifying that type 1 or type 2 test calls have been made on the international circuits that might have been involved;
- 3) verifying that there are no evident faults in the national network from the outgoing exchange to the international centre in the originating country;
- 4) verifying that there are no evident faults in the national network in the distant country, from the international centre to the called exchange.

When test calls are undertaken from the international centre to a subscriber number to verify that there are no evident faults in the national network, such calls should be routed through the international centre on the same path as a normal incoming international call. Using the test access facilities in the international centre could route calls via a different path thereby masking a fault.

¹ Recommendation M.1235 describes the use of automatic-to-subscriber test calls in more detail.

When subscriber-to-subscriber type test calls are made, the network analysis point in the two countries should consider such factors as:

- i) the expected nature of the fault;
- ii) international accounting agreements;
- iii) the need for making the test calls in the busy hour;
- iv) the possibility of causing or aggravating congestion at the time the calls are made.

The responding equipments used for subscriber-to-subscriber type test calls could be those used for maintenance of the national network.

2 Results of test calls (see Table I /E.424)

TABLE 1/E.424

Results of test calls

International outgoing exchange Type of test call.....
 Type 1^{a)}
 Circuit group Type 2^{a)}
 Service { semi – automatic^{a)} Type 3^{a)}
 { automatic^{a)}
 Period from to Sub-to-Sub^{a)}

Category	Number		Percentage	
	Subtotal	Total	Subtotal	Total
1. Satisfactory tests
2. Signalling and charging faults
2.1 Wrong number	
2.2 No tone, no answer	
2.3 Absence of a backward line signal	
2.4 Other faults	
3. Transmission faults
3.1 Conversation impossible	
3.2 Call overamplified or underamplified	
3.3 Noise.....	
3.4 Fading.....	
3.5 Crosstalk.....	
4. Congestion.....	
5. Other faults
Tests carried out		100
Tests procedure followed (apparatus used, destination of calls, etc.)				

^{a)} Detele whichever is inapplicable.

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**OVERALL NETWORK OPERATION, TELEPHONE SERVICE,
 SERVICE OPERATION AND HUMAN FACTORS**

OPERATION, NUMBERING, ROUTING AND MOBILE SERVICES

INTERNATIONAL OPERATION

Definitions	E.100–E.103
General provisions concerning Administrations	E.104–E.119
General provisions concerning users	E.120–E.139
Operation of international telephone services	E.140–E.159
Numbering plan of the international telephone service	E.160–E.169
International routing plan	E.170–E.179
Tones in national signalling systems	E.180–E.189
Numbering plan of the international telephone service	E.190–E.199
Maritime mobile service and public land mobile service	E.200–E.229

OPERATIONAL PROVISIONS RELATING TO CHARGING AND ACCOUNTING IN THE INTERNATIONAL TELEPHONE SERVICE

Charging in the international telephone service	E.230–E.249
Measuring and recording call durations for accounting purposes	E.260–E.269

UTILIZATION OF THE INTERNATIONAL TELEPHONE NETWORK FOR NON-TELEPHONY APPLICATIONS

General	E.300–E.319
Phototelegraphy	E.320–E.329

ISDN PROVISIONS CONCERNING USERS

International routing plan	E.350–E.399
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QUALITY OF SERVICE, NETWORK MANAGEMENT AND TRAFFIC ENGINEERING

NETWORK MANAGEMENT

International service statistics	E.400–E.409
International network management	E.410–E.419

Checking the quality of the international telephone service **E.420–E.489**

TRAFFIC ENGINEERING

Measurement and recording of traffic	E.490–E.505
Forecasting of traffic	E.506–E.509
Determination of the number of circuits in manual operation	E.510–E.519
Determination of the number of circuits in automatic and semi-automatic operation	E.520–E.539
Grade of service	E.540–E.599
Definitions	E.600–E.649
ISDN traffic engineering	E.700–E.749
Mobile network traffic engineering	E.750–E.799

QUALITY OF TELECOMMUNICATION SERVICES: CONCEPTS, MODELS, OBJECTIVES AND DEPENDABILITY PLANNING

Terms and definitions related to the quality of telecommunication services	E.800–E.809
Models for telecommunication services	E.810–E.844
Objectives for quality of service and related concepts of telecommunication services	E.845–E.859
Use of quality of service objectives for planning of telecommunication networks	E.860–E.879
Field data collection and evaluation on the performance of equipment, networks and services	E.880–E.899

ITU-T RECOMMENDATIONS SERIES

Series A	Organization of the work of the ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
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Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
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