INTERNATIONAL TELECOMMUNICATION UNION

CCITT

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

E.424

(10/92)

TELEPHONE NETWORK AND ISDN

QUALITY OF SERVICE
NETWORK MANAGEMENT AND TRAFFIC ENGINEERING

TEST CALLS

Recommendation E.424

FOREWORD

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

Recommendation E.424 was revised by Study Group II and was approved under the Resolution No. 2 procedure on the 30th October 1992.

CCITT NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

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Recommendation E.424

TEST CALLS

(revised 1992)

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 call*[1)]

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.

To aid the effectiveness of test calls type 3, the provision of a 1040 Hz to similar answering device in national networks is recommended.

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;

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

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.

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 1/E.424.)

TABLE 1/E.424

Results of test calls

International outgoing exchange: ..... Type of test call

Circuit group: ..... Type 1[a)] / Type 2[a)] / Type 3[a)]

Service { semi-automatic[a)] / automatic[a)] } Sub-to-Sub[a)]

Period from ..... to .....

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	. . . . . .	. . .	. . . . . .	. . .
Test carried out		. . .		100
Test procedure followed (apparatus used, destination of calls, etc.)				

a) Delete whichever is inapplicable.