



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

E.125

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

**SPECIFICATIONS FOR MEASURING
EQUIPMENT**

**EQUIPMENT FOR THE MEASUREMENT
OF DIGITAL AND ANALOGUE/DIGITAL
PARAMETERS**

**INQUIRIES AMONG USERS OF THE
INTERNATIONAL TELEPHONE SERVICE**

ITU-T Recommendation E.125

(Extract from the *Red Book*)

NOTES

1 ITU-T Recommendation E.125 was published in Fascicle II.2 of the *Red Book*. This file is an extract from the *Red Book*. While the presentation and layout of the text might be slightly different from the *Red Book* version, the contents of the file are identical to the *Red 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.125

INQUIRIES AMONG USERS OF THE INTERNATIONAL TELEPHONE SERVICE

Preamble

1 One method of measuring telephone service quality is to conduct inquiries among users to ascertain their opinions of and actual experience with various aspects of the service they use. These inquiries are usually made by means of questionnaires, which are designed to determine the basic sources of user difficulty which may arise when making a call. The difficulty could be the means of obtaining the dialling information, setting up the call and any subsequent aspect, e.g. transmission quality.

To permit comparison and studies of the findings of these inquiries at the international level, it is considered desirable that all countries should use the same types of questionnaire.

2 It is therefore recommended that the following two types of questionnaire should be used:

- a) questionnaire for national subscribers dialling international calls (see Annex A),
- b) questionnaire for visitors from other countries dialling national or international calls (see Annex B).

It is intended that the questionnaires will be completed by staff specially instructed for the interview and not by the telephone user being interviewed. To ensure that this practice will be followed, together with others designed to secure uniformity of use, notes on the intended use are associated with the questionnaires.

The Questionnaire for Foreign Visitors has been arranged so that it can be used for either *national* or *international* calls. It has been specifically related to the *last call* made by the visitor in order to obtain reasonably precise information; only the last few questions relate to the more general or cumulative experience of the telephone user. This does not preclude the use of the form for obtaining the same information on a general experience basis providing the interviewer is suitably instructed and completed questionnaires are annotated in a distinct manner and separated from the *last call* questionnaires.

As the main object of the questionnaires is to provide data which can be compared on an international basis, and used to resolve human factor difficulties, the questions asked will not completely meet the service and marketing department requirements of all Administrations. Administrations are asked to accept this limitation and to use the questionnaires as presented.

Experience in using the Questionnaire for National Subscribers has shown that it is difficult to be highly selective in the choice of class of subjects, e.g. residential/business, frequent user/infrequent user. Generally, however, for the purpose of study of user behaviour and difficulties a cross section of results is most useful *as long as very small samples of any one class of user are avoided*. When an Administration is able to stage a survey with roughly the same number of residential and business users (say a minimum of 200 each), a sufficiently representative breakdown of frequent/infrequent users usually follows without special steps being taken. Care must however be taken with the business section of this sample to balance the interviews reasonably well between PBX operators and extension users.

The Questionnaire is designed to cover all these circumstances save for situations where a person sets up a call for another person and does not participate in the subsequent conversation. In such cases the action to be taken by the interviewer is as shown in the "Notes on the Intended Use of Questionnaires". Similar action may be needed when the Questionnaire for Foreign Visitors is used. If the incidence of such cases is large (say greater than 10%) then Administrations may need to selectively increase the size of the main sample if they wish to obtain a reasonable balance between the number of interviews on the different classes listed above, i.e. residential/ business, etc.

Separation and identification of the results for different classes, including the more unusual form where one person sets up the call and another person talks, will be covered in the processing of survey results.

3 Notes on the intended use of Questionnaires follow the list of actual Questionnaires.

4 When an Administration contemplates using, or starts to use, one of these Questionnaires, it should notify the CCITT Secretariat, which in turn will notify the appropriate Rapporteur. The Rapporteur will assist the Administration concerned as necessary and will prepare a contribution on the basis of the results, incorporating corresponding results from other Administrations, if appropriate.

The Secretariat can supply versions of either Questionnaire in English, French, or Spanish where necessary. Administrations will be informed of any modifications to procedures, etc., approved since the publication of the most recent issue of the Recommendation.

In the case of Annex A (national subscribers dialling international calls), a program for computer analysis of data collected from the survey has been developed by the ITU. It is recommended that data be processed by this program through the CCITT Secretariat. To simplify this processing, Administrations are requested to provide the data in a standardized punched card form; the Secretariat will provide the necessary guidelines for punching the cards, together with a list of the appropriate country codes. Normally, the results of computer analysis will be sent both to the Administration concerned and to the Rapporteur. (It has been agreed that the individual countries of origin or destination of the calls treated in surveys will be named in contributions, but that anonymity will be preserved through the use of codes in the event of publication in official CCITT documents, such as the CCITT Book.

For Annex B (visitors from other countries dialling national or international calls), analysis has not yet been programmed for the computer. Administrations should consult with the Rapporteur on the method of analysis and the presentation of results.

Note – The data arising from replies to certain questions in these forms are also essential to the work of Study Group XII (Assessment of service transmission quality).

ANNEX A

(to Recommendation E.125)

INQUIRIES AMONGST USERS

Questionnaire for national subscribers dialling international calls

(For details of use, see associated notes following the two questionnaires)

Originating Country Special code (2 digits)

1 2

Card Serial Number (4 digits)

3 4 5 6

Interviewed by Visit 1

Telephone 2 } 7

Code

1.0 Do you ever dial international calls to other countries yourself? YES NO

(If no) – ask why not and after answer terminate interview 1 2

NO with reason given } 8

Reason (specify) 3

(If yes) – proceed to questions below. ←

In regard to the last international call you dialled:

2.0 What country did you dial direct? Special code 2 digits

9 10

3.0 Can you give me the town or telephone number you dialled?

Insert information

a) Was the call to a private number? YES NO 1 2 11

b) Was the call to a company? (Business subscriber) 1 2 12

c) Did you dial direct to an extension in a PBX? 1 2 13

4.0 How long ago?

4.1 – less than 24 hours 1

4.2 – one to seven days 2 } 14

4.3 – more than seven days 3

5.0 Did you have any difficulty in obtaining the telephone number for this call? YES NO 1 2 15

5.1 Where did you get the number?

5.2 – official telephone directory 1

5.3 – special (pre-printed) telephone directory 2

5.4 – personal list 3

5.5 – letterhead 4

5.6 – information operator 5 } 16

5.7 – friends or business associates 6

5.8 – memory 7 } 17

5.9 – other (specify) 8 } 18

International prefix Country code Trunk code Subscriber number } 19

Code

6.0 Did you have any difficulty in knowing how to make the international call?

YES NO
1 2 20
If no, go to 7.0

(If yes) – What difficulty?

- 6.1 – knowing the procedure for making a call 1 21
- 6.2 – knowing the international prefix 1 22
- 6.3 – knowing the country code 1 23
- 6.4 – knowing the trunk code 1 24
- 6.5 – knowing whether the addressee's number can be dialled 1 25
- 6.6 – trunk prefix wrongly included 1 26
- 6.7 – other (specify) ← 1 27

7.0 a) Did you have to dial the international number more than once?

YES NO
1 2 28
If no, go to 8.0

(If yes) – Why?

- 7.1 Could not understand or was unsure of the tone or voice announcement received 1 29
(If this item is marked, proceed to 7.7 below)
- 7.2 – dialled incorrectly 1 30
- 7.3 – busy tone ; engaged 1 31
- 7.4 – no reply ; no answer 1 32
- 7.5 – heard nothing after dialling (for seconds) 1 33
- 7.6 – other (specify) ← 1 34

(If any of items 7.2 - 7.6 are marked, omit 7.7 - 7.18 and go to 7.19)

7.7 b) Did you hear:

- 7.8 – a tone? 1
- 7.9 – a voice announcement? 2 41
- 7.10 – both? 3

7.11 c) Did the tone and/or announcement come in

- 7.12 – during dialling? 1
- 7.13 – after dialling? 2 42

7.14 d) Could you describe the tone or tell me what the announcement said?

No
Comment comment
← 1 2 43

7.15 e) What did you decide to do when you heard that tone and/or voice announcement?

- 7.16 – dialled again 1
- 7.17 – called the operator 2 44
- 7.18 – other (specify) ← 3

If marked go to 8.0

7.19 f) How long did you wait before dialling again?

- 7.20 – less than one minute 1
- 7.21 – one to five minutes 2 45
- 7.22 – more than five minutes 3

Code

8.0 Did the person who answered use a language you did not understand?

YES NO
1 2 46 ←

(If yes) – What did you do about it?

- 8.1 – disconnected and dialled the operator 1
- 8.2 – flashed the operator 2
- 8.3 – dialled again later 3
- 8.4 – other (specify) ← 4

9.0 In addition to setting-up the call did you converse over the connection?

If reply is "yes" then ask:

Which of these four words comes closest to describing the quality of the connection during conversation?

- 9.1 – excellent 1
- 9.2 – good 2
- 9.3 – fair 3
- 9.4 – poor 4

If reply to 9.0 is "no" go to 11.0

10.0 Did you or the person you were talking to have any difficulty in talking or hearing over that connection?

YES NO
1 2 49

(If answer is "yes") probe for nature of difficulty, but without suggesting possible types of difficulty, and copy down answers verbatim: e.g. "Could you describe the difficulty a little more?"

.....
.....

At end of interview, categorize the answers in terms of the items below:

- 10.1 – low volume 1 50
- 10.2 – noise or hum 1 51
- 10.3 – distortion 1 52
- 10.4 – variations in level, cutting on and off 1 53
- 10.5 – crosstalk 1 54
- 10.6 – echo 1 55
- 10.7 – complete cut off 1 56
- 10.8 – other (specify) ← 1 57

Could you give the following additional information

11.0 What type of telephone set did you use for that call?

- 11.1 – rotary dial 1 58
- 11.2 – push button 1 59
- 11.3 – repertory dialler (type) 1 60
- 11.4 – coin box 1 61
- 11.5 – loud-speaking telephone 1 62

Code

12.0 *Approximately how many international calls do you make per month?*

- 12.1 – 1 or less
- 12.2 – 2 to 5
- 12.3 – 6 to 10
- 12.4 – 11 or more

1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>

63

13.0 *How many different countries did you call during the preceding month?*

2 digits

<input type="text"/>	<input type="text"/>
----------------------	----------------------

64 65

(Insert leading zero if number less than 10)

13.1 *Approximately how many different international numbers do you call?*

- 13.2 – 1 to 5
- 13.3 – 6 to 10
- 13.4 – 11 to 19
- 13.5 – 20 or more

1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>

66

14.0 *Are there any other comments you would like to make about international subscriber dialling?*

(Specify)

		No
		Comment comment
← 1	<input type="text"/>	2 <input type="text"/> 67

15.0 *What do you find most difficult in dialling international calls?*

(Specify)

← 1	<input type="text"/>	2 <input type="text"/> 68
-----	----------------------	---------------------------

16.0 *Are you:*

16.1 a) *a business subscriber?*

(If yes) Are you primarily:

16.2 – *the person mainly responsible for telecommunications in your firm?*

16.3 – *the PBX operator?*

16.4 – *a secretary?*

16.5 – *an extension user? (other than 16.2 or 16.4)*

1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>

70

16.6 b) *a residential subscriber?*

		YES	NO
1	<input type="text"/>	2	<input type="text"/> 71

16.7 c) *other user? (Specify)*

		No
		Comment comment
← 1	<input type="text"/>	2 <input type="text"/> 72

ANNEX B

(to Recommendation E.125)

INQUIRIES AMONGST USERS

Questionnaire for visitors from other countries dialling national or international calls

(For details of use see associated notes following the questionnaire)

Originating country Special code (3 digits)
1 2 3

Card serial number (4 digits)
4 5 6 7

Code

1.0 *In which country do you live?*
Special code 3 digits
8 9 10

1.1 *In which country do you make most of your telephone calls?*
11 12 13

2.0 *Have you visited our country before?* YES NO
 1 2 14
 If no, go to 3.0

How many times?

2.1 - once 15
 2.2 - 2 to 5 times 15
 2.3 - more than 5 times 15

3.0 *Do you understand our languages?*

3.1 - well 16
 3.2 - fair 16
 3.3 - not at all 16

4.0 *Did you yourself dial any telephone calls in this country?* YES NO
 1 2 17
 If yes, go to 5.0

(If no), ask *why not* and terminate interview, indicate reason below.

4.1 - did not know how to make a call 18
 4.2 - no need to make a call 18
 4.3 - my calls were placed by somebody else 18
 4.4 - other reasons (specify) 18

5.0 *Was this visit the first time you had experience with this country's telephone system?* YES NO
 1 2 19

6.0 *Approximately how many calls did you dial during this visit?*

	<i>National</i>		<i>Inter-national</i>	
6.1 - 1	<input type="checkbox"/>		<input type="checkbox"/>	
6.2 - 2 to 5	<input type="checkbox"/>	20	<input type="checkbox"/>	21
6.3 - 6 or more	<input type="checkbox"/>		<input type="checkbox"/>	

Code

	National	Inter- national	
7.0	Was the last call you dialled a national or international call?	1 <input type="checkbox"/> 2 <input type="checkbox"/>	22
7.1	(If international) – To which country did you make the call? (Specify)	Special code 3 digits <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 23 24 25	
7.2	How long ago is it since you made this call?		
7.3	– less than 24 hours	1 <input type="checkbox"/>	} 26
7.4	– one to seven days	2 <input type="checkbox"/>	
7.5	– more than seven days	3 <input type="checkbox"/>	
8.0	Where did you get the number?		
8.1	– official telephone directory	1 <input type="checkbox"/>	} 27
8.2	– special (pre-printed) telephone directory	2 <input type="checkbox"/>	
8.3	– personal list	3 <input type="checkbox"/>	
8.4	– letterhead	4 <input type="checkbox"/>	
8.5	– information operator	5 <input type="checkbox"/>	
8.6	– friends or business associates	6 <input type="checkbox"/>	
8.7	– memory	7 <input type="checkbox"/>	
8.8	– other (specify)	8 <input type="checkbox"/>	
9.0	Did you have any difficulty in knowing how to make a call? (If yes) – What difficulty?		YES NO 1 <input type="checkbox"/> 2 <input type="checkbox"/> 28 If no, go to 10.0
9.1	– knowing the procedure for making the call (Go to 9.5 if the call is national)	1 <input type="checkbox"/>	29
9.2	– knowing the international prefix	1 <input type="checkbox"/>	30
9.3	– knowing the country code	1 <input type="checkbox"/>	31
9.4	– trunk prefix wrongly included	1 <input type="checkbox"/>	32
9.5	– knowing the trunk code	1 <input type="checkbox"/>	33
9.6	– knowing whether the addressee's number can be dialled	1 <input type="checkbox"/>	34
9.7	– obtaining information for addressee's number	1 <input type="checkbox"/>	35
9.8	– other (specify)	1 <input type="checkbox"/>	36
10.0	a) Did you have to dial the number more than once? (If yes) – Why?		YES NO 1 <input type="checkbox"/> 2 <input type="checkbox"/> 37 If no, go to 11.0
10.1	– could not understand or was unsure of the tone or voice announcement received.	1 <input type="checkbox"/>	38
	(If this item is marked proceed to 10.7 below.)		
10.2	– dialled incorrectly	1 <input type="checkbox"/>	39
10.3	– busy tone ; engaged	1 <input type="checkbox"/>	40
10.4	– no reply ; no answer	1 <input type="checkbox"/>	41
10.5	– heard nothing after dialling (for seconds)	1 <input type="checkbox"/>	42
10.6	– other (specify)	1 <input type="checkbox"/>	43

Code

(If any of items 10.2 - 10.6 are marked, omit 10.7 - 10.18 and go to 11.0)

10.7 b) Did you hear:

- 10.8 - a tone? 1
- 10.9 - a voice announcement? 2 } 50
- 10.10 - both? 3

10.11 c) Did the tone and/or announcement come in:

- 10.12 - during dialling? 1
- 10.13 - after dialling? 2 } 51

10.14 d) Could you describe the tone or tell me what the announcement said?

(Specify)

No
Comment comment
← 1 2 52

10.15 e) What did you decide to do when you heard that tone signal and/or voice announcement?

- 10.16 - dialled again 1
- 10.17 - called operator 2 } 53
- 10.18 - other (specify) ← 3

11.0 When the call was established, did the person who answered use a language you did not understand?

YES NO
1 2 54
If no, go to 12.0

(If yes) - What did you do about it?

- 11.1 - disconnected and called the operator 1
- 11.2 - flashed the operator 2 } 55
- 11.3 - dialled again later 3
- 11.4 - other (specify) ← 4

12.0 In addition to setting-up the call did you converse over the connection?

If reply is "yes" then ask:

Which of these four words comes closest to describing the quality of the connection during conversation?

- 12.1 - excellent 1
- 12.2 - good 2 } 56
- 12.3 - fair 3
- 12.4 - poor 4

If reply to 12.0 is "no" go to 14.0.

13.0 Did you or the person you were talking to have any difficulty in talking or hearing over that connection?

YES NO
1 2 57

Code

(If answer is "yes") probe for the nature of difficulty, but without suggesting possible types of difficulty and copy down answers verbatim: e.g. "Could you describe the difficulty a little more?"

At end of interview, categorize the answers in terms of the items below:

- 13.1 – low volume 1 58
- 13.2 – noise or hum 1 59
- 13.3 – distortion 1 60
- 13.4 – variations in level, cutting on and off 1 61
- 13.5 – crosstalk 1 62
- 13.6 – echo 1 63
- 13.7 – complete cut off 1 64
- 13.8 – other (specify) ← 1 65

→ 14.0 Have you used a coin telephone in our country?

YES NO
1 2 66

14.1 (If yes) Did you have any difficulty in knowing how to use it?

1 2 67

(If yes, probe non-directively to determine the nature of the difficulty.)

No
Comment comment

(Specify) ← 1 2 68

15.0 Have you used our directory to look up a number or for information on the use of the telephone?

YES NO
1 2 69

15.1 (If yes) Did you have any difficulty finding what you wanted?

1 2 70

(If yes, probe non-directively to determine the nature of the difficulty.)

No
Comment comment

(Specify) ← 1 2 71

16.0 Are there any other comments or suggestions you would like to make about the telephone service in this country?

16.1 – In general? (Specify) ← 1 2 72

16.2 – Based on your first few calls? (Specify) ← 1 2 73

NOTES ON INTENDED USE OF QUESTIONNAIRES

(Recommendation E.125)

1 General

These notes apply to both types of questionnaire, i.e.:

- a) Questionnaire for national subscribers dialling international calls.
- b) Questionnaire for visitors from other countries dialling national or international calls.

Both questionnaires have been designed for face-to-face interviews or for interview by telephone. *They are not a suitable form* to be passed direct to a telephone user by hand or by post for them to fill in personally.

2 Use of questionnaires

With the above in mind the following points should be adhered to in order that valid comparisons may be made at an international level.

2.1 The interviews will need to be conducted by a trained interviewer capable of clearly understanding the various technical terms used in the items in order to categorize the interviewee's replies, which may be very simply or vaguely expressed. In certain questions he or she may need to probe for clarity without suggesting or prompting answers.

2.2 In the event of the questionnaire having to be translated *for use by the interviewer* into languages other than English, French or Spanish, i.e. the languages in which the CCITT Secretariat issues copies of the questionnaires, care must be exercised to avoid any change of meaning of the questions.

2.3 In conducting the interview, the order of questions and the precise wording should be followed, i.e. the interviewer should avoid re-expressing a question in his own words.

2.4 It is intended that *only the questions in italics* should be asked by the interviewer. The items in lower case type are to be used by the interviewer to categorize the answers.

In certain questions the number of categories is specifically limited in order to avoid confusion on the part of the interviewer or for other reasons. In such cases a category shown as “-Other (specify)...” is provided for entry of the infrequent or unusual reply. Examples of replies which would be classified in this manner are:

- a) Under 7.0 (Annex A) or 10.0 (Annex B)

“I dialled correctly but reached a wrong number.”

- b) Under 10.0 (Annex A) or 13.0 (Annex B)

“We had a double connection” or “A third party was on the line.”

“The conversation was cut-off in one direction.”

“We experienced transmission delay within our conversation.”

“Our speech was clipped.”

“My own voice (speech) was loud in my telephone receiver.”

These latter forms of impairment are some of the many arising from propagation time, echo suppressors and local sidetone in unusually difficult circumstances, which cannot be individually listed on the questionnaires in view of the frequency of their occurrence.

2.5 When filling in the questionnaires, all answers should be indicated by a mark e.g. a cross in the box provided, and not by manuscript entries except where specifically asked for. Similarly, the interviewer must not use any of the numerical codes associated with the boxes on the questionnaires as an alternative to a simple mark, the numerical codes being provided for simplification of the subsequent coding of responses to questions.

Where manuscript entries are required, these should be written neatly and clearly, bearing in mind the possibility that a person unfamiliar with the language may have to read and translate them.

The following boxes should be left blank by the interviewer:

– *Annex A Questionnaires*

boxes 1 – 2 (special code¹⁾ for originating country), 3 – 6 (serial number) and 9 – 10 (special code¹⁾ of country dialled);

– *Annex B Questionnaires*

boxes 1 – 3 (special code¹⁾ for originating country), 4 – 7 (serial number) and 8 – 10, 11 – 13 and 23 – 25 (special codes¹⁾).

The boxes should be subsequently completed within the Administration by a responsible person (Coder) having access to the confidential list of special country codes¹⁾ and a single block of serial numbers to cover all the questionnaires which may originate from a number of interviewers. The confidential list of special country codes¹⁾, together with a set of “coding instructions”, may be obtained from the CCITT Secretariat.

2.6 As far as possible, all the questions should be asked; however, in the rare event of embarrassment occurring, for example with the use of Question 1.0 and 1.1 on the foreign visitor questionnaire (Annex B) these should be omitted.

Similarly, under Question 3.0 (Annex A), where the town or telephone number dialled is requested, unless Administrations need to consider the information for national purposes, the question could be omitted as the responses are not used in subsequent processing for CCITT purposes. Questions 3a, 3b and 3c should however still be asked.

2.7 If, under Question 7.0 (Annex A): “Did you have to dial the international number more than once?” a customer replies “Yes” and on being asked “Why?” he *draws specific attention* to the fact that he had to make several repeated attempts, the number of attempts should be specifically entered under 7.0 as follows:

... attempts, repeated during ... minutes. The subscriber *should not be asked* if he had to make more than one repeated attempt.

2.8 If, under Question 7.0 (Annex A) or 10.0 (Annex B) an interviewee in reply to the sub question “Why?” used the term “congestion tone” or “equipment engaged tone” this reply should be categorized under item 7.6 (Annex A) or 10.6 (Annex B) “-Other (specify)”. His attention should not be drawn to these terms, the distinction between them and the term “busy tone (subscriber engaged)” unless it is the practice in your Administration specifically to encourage subscribers to make such a distinction.

2.9 If, under Question 7 (Annex A) or 10.0 (Annex B), a response from the interviewee has to be categorized under item 7.5 (Annex A) or 10.5 (Annex B) – “heard nothing after dialling” he should be asked if he is able to *estimate for how long*. The information should be entered as follows:

7.5 (Annex A) or 10.5 (Annex B) – heard nothing after dialling (for . . . seconds).

The treatment of responses given under § 2.7 and § 2.9 above is detailed in the “coding instructions”. Gaps in the numbering scheme associated with the questionnaire “boxes”, and usually shown to the right of the boxes, account for codes reserved for this specific purpose.

¹⁾ For security reasons, these special codes differ from the country codes defined in Recommendation E.160.