INTERNATIONAL TELECOMMUNICATION UNION

ITU-T E.423

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QUALITY OF SERVICE, NETWORK MANAGEMENT AND TRAFFIC ENGINEERING

OBSERVATIONS ON TRAFFIC SET UP BY OPERATORS

ITU-T Recommendation E.423

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation E.423 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.

Recommendation E.423

OBSERVATIONS ON TRAFFIC SET UP BY OPERATORS

1 Comments concerning the use of Table 1/E.423

1.1 This table summarizes observations relating to manual and semi-automatic outgoing traffic originated by operators. These observations will be made, if possible, during the whole call duration. Observations for the categories 1 to 7 may be omitted in case of semi-automatic service, if there is no problem regarding the efficiency of international circuits.

1.2 Administrations should, if possible, make a distinction between the different types of call, e.g. station-to-station, personal and collect calls; they should use a separate column for each under the heading "Type of call".

1.3 For collect calls, the times to be recorded will be those observed in the country where the call request was made.

1.4 It is recommended that these observations be spread over the whole day.

1.5 Each outgoing Administration will select the international circuit groups on which observations should be carried out.

1.6 In completing this table, reference should be made to the following explanations:

2 How to fill in Table 1/E.423 (Traffic observations determined by the operators)

Category 1 – This category should show the mean duration of calls observed which are successful and have been charged for ("effective" calls).

Category 2 – This category will show the mean *chargeable* duration of all effective calls observed.

Category 3 – This category will show, for each type of observed call, the average time per effective call during which the international circuit has been occupied for manœuvres or for call preparation.

This average should be based on the time during which the international circuit is held:

a) to obtain information concerning the called number;

b) to obtain information about routing and trunk codes;

c) to call operators, in the incoming international exchange;

d) to exchange information on how to set up the call;

e) to (or attempt to) obtain the called number even when it is engaged or does not reply;

f) to (or attempt to) obtain the called person (in personal calls);

g) between replacement of the receiver by the called person and release of the circuit;

h) because the operator is holding the circuit (whether she is on the line or not) and for any other reasons for which the circuit is engaged.

TABLE 1/E.423

Observations on traffic set up by operators

International outgoing exchange: . . . . . .

Circuit group: . . . . . .

Service { semi - automatic [a] / manual [a]

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

Category	Type of call [b]			
	Ordinary	Personal		
1. Mean call duration – in seconds				
2. Mean chargeable duration – in seconds				
3. Mean holding time of circuits for manoeuvres and preparation of calls – in seconds				
4. Number of effective calls observed				
5. Mean number of times the international circuit was seized per effective call				
6 Mean number of " attempts " per effective call				
7. Percentage of calls set up at the first " attempt "				

8. Time-to-answer by operators	Total number of calls answered and unanswered		Calls answered						Calls unanswered (abandoned calls)			
Operators:	Num-ber	Mean waiting time in seconds	under 15 seconds		in 15 to 30 seconds		after 30 seconds		within 30 seconds		after 30 seconds	
			No.	%	No.	%	No.	%	No.	%	No.	%
– incoming operator (code 11)												
– delay operator (code 12)												
– assistance operator												
– information operator												

9. Quality of transmission from the suscriber's viewpoint:	Number	%	10. Comments
– good			
– defective			
Total		100	

a) Delete whichever is inapplicable.
b) In accordance with § 1.2.

The times listed above, which exclude the conversation time, should be added together. This total should be divided by the number of effective calls observed during the period in question to obtain the value to be entered in Table 1/E.423.

Category 4 – The number of effective calls observed considered in category 1.

Category 5 – The mean number of times the international circuit was seized per effective call (see category 3). This number is usually obtained by meter recordings.

Category 6 – The mean number of *attempts* (as specifically defined hereafter from the operating point of view) to set up a call. Should the operator try several times to set up a call while continuously occupied on that call, all these operations must be considered as being one attempt. Similarly, if the operator makes several tries to set up a call and each time encounters a congestion or busy condition and if, after the last try, she informs the caller, only one attempt must be entered. Calls to information services or to obtain routing particulars, and all calls not directly related to the establishment of a call or to information required by the caller, should not be considered as attempts and should not be included.

The total number of attempts during the period of observation should be divided by the number of effective calls observed in the same period to obtain the mean number of attempts per call.

The total number of attempts is usually determined from markings or notations on call tickets.

Category 7 – The data for this category will be taken from all tickets prepared for the relation concerned, during the period of observation or a comparable period.

Category 8 – The mean waiting time for outgoing operators to receive an answer will be indicated in seconds. This average will include both answered and unanswered calls.

An outgoing operator waits on the circuit (waiting time) for the period:

a) until the incoming operator answers, or

b) until she abandons the attempt, should the incoming operator not answer.

Thus while mean waiting time relates to the outgoing operator it is also a measure of the performance of the incoming operators.

Category 9 – It will be difficult to obtain absolutely comparable results from all observers for this category. However, the observer should consider the quality of transmission from the subscribers' viewpoint, taking into account comments made in this respect by subscribers and the number of requests for conversation to be repeated.

Category 10 – This category should include any comments likely to explain the probable cause of difficulties frequently noted during the observations.

3 **Automatic observations of the time-to-answerby operators** (Comments concerning the use of Table 2/E.423)

3.1 This table summarizes observation of the time-to-answer by operators.

3.2 Administrations should make a distinction between the different types of incoming operators if the types of operators are distinguished by the selecting digits.

3.3 It is recommended that these observations be spread over the whole day.

3.4 Each outgoing Administration will select the international circuit groups on which observations should be carried out.

3.5 The time-to-answer of the assistance operator cannot be measured automatically.

3.6 In completing this table, reference should be made to the explanations in § 4.

4 **How to fill in Table 2/E.423** (Automatic observations of the time-to-answer by operators)

The mean waiting time for outgoing operators to receive an answer will be indicated in seconds. This average will include both answered and unanswered calls.

The mean waiting time is defined as the time interval between the instant the outgoing circuit is seized (the seizing signal is sent) and:

a) the instant the incoming operator answers, or

b) the instant the outgoing operator abandons the attempt (a clear-forward signal is sent).

TABLE 2/E.423

Automatic observations of the time-to-answer by operators

International outgoing exchange. . . ..

Circuit group. . . . .

Service: semi-automatic

Period from . . . . to . . . .

Time-to-answer by operators	Total number of calls answered and unanswered		Calls answered						Calls unanswered (abandoned calls)			
	Num-ber	Mean waiting time in seconds	under 15 seconds		in 15 to 30 seconds		after 30 seconds		within 30 seconds		after 30 seconds	
Operators:			Num-ber	%	Num-ber	%	Num-ber	%	Num -ber	%	Num-ber	%
– incoming operator												
– delay operator												
– information operator												