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

Operation of the international service

List of possible supplementary telephone services which may be offered to subscribers

ITU-T E.300-series Recommendations – Supplement 1

(Formerly CCITT Recommendations)

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Supplement 1 to ITU-T E.300-series Recommendations

List of possible supplementary telephone services which may be offered to subscribers

Summary

This supplement lists the different supplementary services that were foreseen in 1988 for ISDN networks.

Source

Suplement 1 was approved in Melbourne (1988) and originally published in Blue Book, Fascicle II.2.

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FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T 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 World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSC Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

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

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Supplement 1 to ITU-T E.300-series Recommendations

List of possible supplementary telephone services which may be offered to subscribers

The descriptions given here are considered provisional and require further study.

Numbers in parentheses following the designation of most services refer to the CEPT handbook [1] where detailed operational requirements are given.

1 Supplementary services which might have implications for the international service

§§ 1.1 to 1.11 refer to services which might be standardized and which do not require technical studies.

1.1 **absent subscriber service** (4.1)

F: service des abonnés absents

S: servicio de abonado ausente

1) *Definition*

The possibility for a subscriber who cannot answer his calls, because he is absent, to divert these calls to:

– a manual answering service,

– another subscriber's number or

– an announcement.

2) *Description*

A subscriber who knows he will be absent from his telephone can instruct the exchange to divert his incoming calls to:

– a manual answering service,

– another subscriber's number or

– an announcement giving appropriate information.

Some forms of the service are available to subscribers without a preliminary agreement with the Administration, but other forms require such an agreement. An indication that the service is in operation should be given to the diverting subscriber. Outgoing calls are available normally.

3) *Remarks*

CCITT should undertake studies on:

– indications given to calling and called subscriber;

– additional charges if any when diverting the call to a distant number.

4) *Market data*

Generally considered of medium interest. Terminating equipment providing diversion to announcements in widespread use in some countries.

5) *General operational requirements*

If diverting a call lengthens the post-dialling delay experienced by a caller, it may be necessary to advise the caller that his call is being diverted.

If diverting a call would result in the caller having to pay additional charges, a warning should be given to the caller before the call is diverted.

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To minimize complaints from called subscribers and callers for wrongly programmed call transfers, some check should be provided.

Difficulties may arise if a subscriber receiving diverted calls diverts them again to yet another number.

Some subscribers may, instead of using an absent subscriber service, use answering machines on their own premises. Some Administrations may also decide to provide such facilities at the exchange. The degree of sophistication provided may vary considerably. Some may only give a fixed announcement common to all customers using the service, others may allow messages to be recorded. Which type is used and to what extent may vary from one country to another according to the technological or social situation.

A large majority of customers will accept a reply by a recorded announcement as a satisfactory alternative to an operator.

Certain categories of subscribers (e.g. doctors) have special requirements and prefer a service especially adapted to their professional field. This may be a manual answering service provided by the Administration, or by a private agency or special arrangements for diversion to other numbers.

Calls should only be diverted if the resulting standards of transmission are adequate.

When the service is activated the special dial tone may be given to the controlling subscriber.

6) *Charging principles*

1.2 **do not disturb service** (5.1)

F: service "ne pas déranger"

S: servicio "no molestar"

1) *Definition*

The possibility for a subscriber, who does not wish to answer his telephone during a period of time, to divert incoming calls.

2) *Description*

Do not disturb services are used by subscribers that do not wish to be disturbed by incoming calls for a certain period of time. They can request that incoming calls are diverted to an operator, an answering machine in the exchange, or another telephone number.

The diversion can be switched on and off by an operator (manual) or by the subscriber himself (automatic).

3) *Remarks*

4) *Market data*

A little market information is available but it is considered to be of medium interest only. Nevertheless this is a service which should be available to customers.

5) *General operational requirements*

It is in the interest of the Administration if calling subscribers can leave messages and be informed:

– of the reason for call diversion

– when the number can be reached again

– where more information can be obtained.

In this way incoming calls are answered and can be charged and ineffective new attempts are avoided.

Automatic deactivation is desirable because no indication is given to the called subscriber when incoming calls arrive.

Administrations should provide an attractive form of do not disturb service in order to avoid undesirable subscriber forms of the service.

The time during which a do not disturb service can be activated should be limited.

The automatic forms of the service are preferred.

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Outgoing calls should normally be possible.

When the service is activated a special dial tone may be given for outgoing calls reminding the service holder of the special condition of his line.

If during a period when the facility is in operation, the renter requires to know whether a message has been left, a special code may be allocated for this purpose, or a password agreed with the exchange may be used.

6) *Charging principles*

Charging principles should be in accordance with Recommendation E.232.

1.3 **diversion if number busy service** (6.3)

F: service de transfert d'appel en cas de numéro occupé

S: servicio de transferencia de llamadas en caso de línea ocupada (transferencia por ocupación)

1) *Definition*

The possibility for a subscriber who cannot receive calls, because his number is busy, to have these calls diverted.

2) *Description*

A subscriber who does not wish incoming calls to his number to be unsuccessful because he is busy speaking, can instruct the exchange to immediately divert his incoming calls to either a manual answering service, or another subscriber's number.

Some forms of service are available to subscribers without prearrangement with the Administration but other forms require prearrangement. The other subscriber's number may be one number, one number of a predetermined group or the first available number in a sequence.

3) *Remarks*

CCITT should undertake studies on:

– indication given to calling and called subscriber;

– additional charges, if any, when diversion is to a distant subscriber number.

4) *Market data*

5) *General operational requirements*

As services permit the completion of calls which would otherwise have met busy conditions, increased revenue and a better use of the available equipment may result.

Services may be of value for a subscriber whose line or lines are occasionally overloaded.

In conventional switching systems it is not possible to change the routing of a call in the switching network itself. It is therefore necessary in those circumstances to divert it from the diverting number. If limitations of transmission or charging justify it, it may be necessary to refuse a diversion request to a nominated number too far from the diverting exchange, and possibly divert the call to the operator, or a recorded announcement.

While a service is activated under subscriber's control it may be desirable to return a warning indication to the diverting termination.

The number to which the incoming call is diverted need not belong to the controlling subscriber.

It may be necessary to advise the caller that his call is being diverted if the post-dialling delay is lengthened by diversion.

From the Administration's point of view use of a service should not be allowed to perpetuate the unsatisfactory situation where a subscriber has basically an inadequate incoming traffic capacity.

An appropriate indication should be returned to the caller if diversion causes call charges greater than those that would have applied if the call had been connected normally to the diverting number.

6) *Charging principles*

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1.4 **customer dialled operator assisted call**

F: communication établie par l'abonné et assistée par une opératrice

S: asistencia de operadora en comunicaciones establecidas por el abonado

1) *Definition*

With prior indication from a subscriber, an operator may be associated with an automatically dialled call at the appropriate stage to determine if the wanted person is available.

The subscriber gives this indication as part of his call set-up procedure

Implementation requires special equipment in the long-distance switching equipment and associated operator positions.

2) *Description*

3) *Remarks*

4) *Market data*

Of low interest to customers. However, some Administrations are introducing this service to increase operator productivity.

5) *General operational requirements*

6) *Charging principles*

1.5 **freephone service** (7.5)

F: service "libre-appel"

S: servicio de cobro revertido automático

1) *Definition*

A subscriber can be allocated a special (freephone) number and the charge for all calls to this number are paid by him instead of by the callers.

2) *Description*

Subscribers who wish to pay for calls made to them can rent a special freephone number. Calls made to this freephone number are routed either to the subscriber's existing telephone number or on to access lines specifically provided for the purpose of receiving freephone calls.

3) *Remarks*

A freephone service can be provided across international boundaries. CCITT recommendations regarding billing and accounting arrangements may be required.

Where an international freephone service is provided i.e. where callers in one country can, by dialling a freephone number in that country, gain access to a destination address (service provider) in another country, international requirements dictate that the called number must return an answer signal over the international network to the freephone network of the originating country.

Many networks are protected by a "time-out" where calls are cleared if the answer signal is not received within a pre-determined time. Depending on the arrangements by which freephone service is provided the "time-out" condition may need to be removed from the part of the network between the caller and the equipment offering the basic freephone facility in his country. Basic freephone facilities can be provided by a freephone exchange or network of exchanges to provide freephone number translation and call routing, absorption of answer billing/accounting information and network management statistics. These facilities may be provided as an integral part of modern digital networks.

Freephone subscribers may place particular value on numbers which are easy to remember. However, this may entail the allocation of hypothetical numbers and the provision of translation facilities which may only prove economic when sited at nodal centres.

4) *Market data*

Already exists in some countries and is becoming increasingly popular.

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5) *General operational requirements*

The freephone number format should be consistent with the national number format of the country. The freephone code should be standard for the whole of the country (e.g. 800 in USA) and where possible the same code should be used to provide national and international freephone service.

Network management arrangements should pay particular attention to the need to prevent congestion in the network, particularly in relation to applications involving response to television quiz games or advertising campaigns, etc.

Subscribers should be required to rent adequate access lines to meet demand and minimize ineffective attempts. The freephone service is liable to misuse and subscribers should be warned of this liability and expect to bear any resulting call charges. Regards should be made to the limitation of payphones in the various systems.

6) *Charging principles*

6.1) National charging arrangements will depend on the limitations of the arrangements used to provide the freephone facilities. A single freephone centre may for example use path of entry to determine the area from which the call originated and charge accordingly.

A freephone network may determine charging on the basis of distance between the node at which the freephone call enters the network and the node in which the freephone service is connected. There are other alternatives.

6.2) International charging arrangements require a method of billing a service provider in another country and may also require special accounting arrangements. There are 3 basic methods:

a) The originating Administration provides the destination Administration with the billing information relating to freephone calls to service providers in the destination country. The destination Administration would then bill the service provider for call charges and account the calls as if they were originated in the destination country, (a procedure similar to the billing and accounting of collect calls). A special accounting rate might be required to reimburse the country of origin for the cost of providing the freephone facility.

b) The originating Administration would require the service provider in the destination country to provide a legal representative in the country of origin to which the bill for call charges could be sent. The calls would be accounted as ordinary outgoing ȿinternational direct dialling (IDD) calls.

c) The originating Administration would send the bill directly to the service provider's address in the destination country. The calls will be accounted as ordinary IDD calls.

1.6 **wide area telephone service** (7.6)

F: service téléphonique à l'intérieur d'une zone déterminée

S: servicio telefónico concertado en grandes zonas

1) *Definition*

For a flat rate charge, a subscriber may make an unlimited number of calls within a prescribed area from a particular telephone termination without the registration of call charges.

2) *Description*

3) *Remarks*

4) *Market data*

Already exists and very popular in some countries. Appears to be of interest also in other countries.

5) *General operational requirements*

6) *Charging principles*

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