INTERNATIONAL TELECOMMUNICATION UNION

CCITT I.255.4

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

INTEGRATED SERVICES DIGITAL NETWORK (ISDN) GENERAL STRUCTURE AND SERVICE CAPABILITIES

PRIORITY SERVICE

Recommendation I.255.4

Geneva, 1990

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 I.255.4 was prepared by Study Group I and was approved under the Resolution No. 2 procedure on 2 July 1990.

CCITT NOTE

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

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PRIORITY SERVICE

1 Definition

The Priority service provides for preferential treatment in the network to calls originating from and/or addressed to certain numbers in the order of path selection.

2 Description

2.1 *General description*

This service provides preferential treatment in the network for calls:

a) originating from subscribers' lines. This is designated as A-priority; and/or

b) addressed to certain emergency numbers. This is designated as B-priority and concerns the order of path selection in the ISDN.

For A-priority, subscribers' lines are classified into two A-priority categories which are:

i) subscribers with first order priority (I) for all calls;

ii) subscribers with first order priority (II) on a per call basis.

Only one B-priority category is envisaged.

2.2 *Specific terminology*

The A-priority service meets the needs of a subscriber for whom it is necessary to have calls completed urgently at any time when the service is activated for his lines.

The B-priority service meets the needs of subscribers for calling specified emergency numbers. This service also meets the needs of Administrations, communities and other organizations which provide this service.

2.3 *Qualifications on the applicability to telecommunication services*

The Priority supplementary service is applicable to all telecommunication services.

3 Procedures

3.1 *Provision/withdrawal*

The provision of this service requires arrangements between the subscriber and the Administration.The service can also be established unilaterally by the Administration for administrative reasons. The subscriber has to inform the Administration if he wants this service with A- or B-priority.

The Administration can withdraw the service at the request of the subscriber or for administrative reasons.

3.2 *Normal procedures*

3.2.1 *Activation/deactivation/interrogation procedures*

Priority will be given to the subscriber by the Administration, which has full control of the registration.

All changes to priority information are made by the Administration.

After provision of the A-priority service, the subscriber may activate and deactivate the service by the use of a control procedure.

B-priority is activated upon provision.

3.2.2 *Invocation and operation*

When the service is provided for all calls, it will automatically be invoked by the network at the call set-up.

For a call based request, it will be invoked by the user using a service code as a part of a call set-up. For this service option, invocation is possible only for the calling terminal in A-priority, category II.

For calls to B-priority numbers, this service may automatically be invoked by the network depending on the address dialled, i.e. calls to fire, rescue and ambulance services.

Calls originating from subscribers' lines with the appropriate A-priority category will be treated as priority calls at the sending exchange as well as at the transit and the incoming exchange. This means that a priority call will have preferential access to all network units necessary for a call set-up. When a priority call meets congestion in the network the call is not released, but waits for the first line to be free.

This supplementary service does not give priority in accessing a busy subscriber. For this purpose other supplementary services may be used.

The preferential treatment of priority calls within the network should include the following functions:

– extended waiting time before time-out of network units;

– waiting for a line on the route to become free.

3.3 *Exceptional procedures*

When a priority call is requested within an Administration that has no agreement to provide this service, the call will proceed as for a normal call.

If the priority call is not connected due to congestion, the call will be cancelled after a time-out (e.g. five seconds).

(Further study required.)

3.4 *Alternate procedures*

None identified.

4 Network capabilities for charging

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information.

It shall be possible to charge the subscriber accurately for the service.

5 Interworking consideration

The service will be provided whenever there is an ISDN User Part (ISUP) available.

In networks where there is no ISUP available or where priority service is not offered, the priority call will be handled as a normal call.

If a B-priority call originates in a network that does not support the priority service, the priority will be assigned to the call upon entering the network supporting the priority service.

6 Interaction with other supplementary services

6.1 *Call Waiting*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.2 *Call Transfer*

Priority service is restricted only to A-B connections.

6.3 *Connected Line Identification Presentation (COLP)*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.4 *Connected Line Identification Restriction (COLR)*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.5 *Calling Line Identification Presentation (CLIP)*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.6 *Calling Line Identification Restriction (CLIR)*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.7 *Closed User Group*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.8 *Conference Calling*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.9 *Direct Dialling-In*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.10 *Diversion services*

Priority service is restricted to A-B connections.

6.11 *Line Hunting*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.12 *Three Party Service*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.13 *User-to-User Signalling*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.14 *Multiple Subscriber Number*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.15 *Call Hold*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.16 *Advice of Charge*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.17 *Multi-level precedence and preemption service (MLPP)*

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.18 *Priority service*

If at some point there is more than one priority connection waiting for service, "first in, first out" principle is to be followed.

7 Overall SDL diagram

The overall SDL Diagram is shown in Figures 1/I.255.4 and 2/I.255.4.

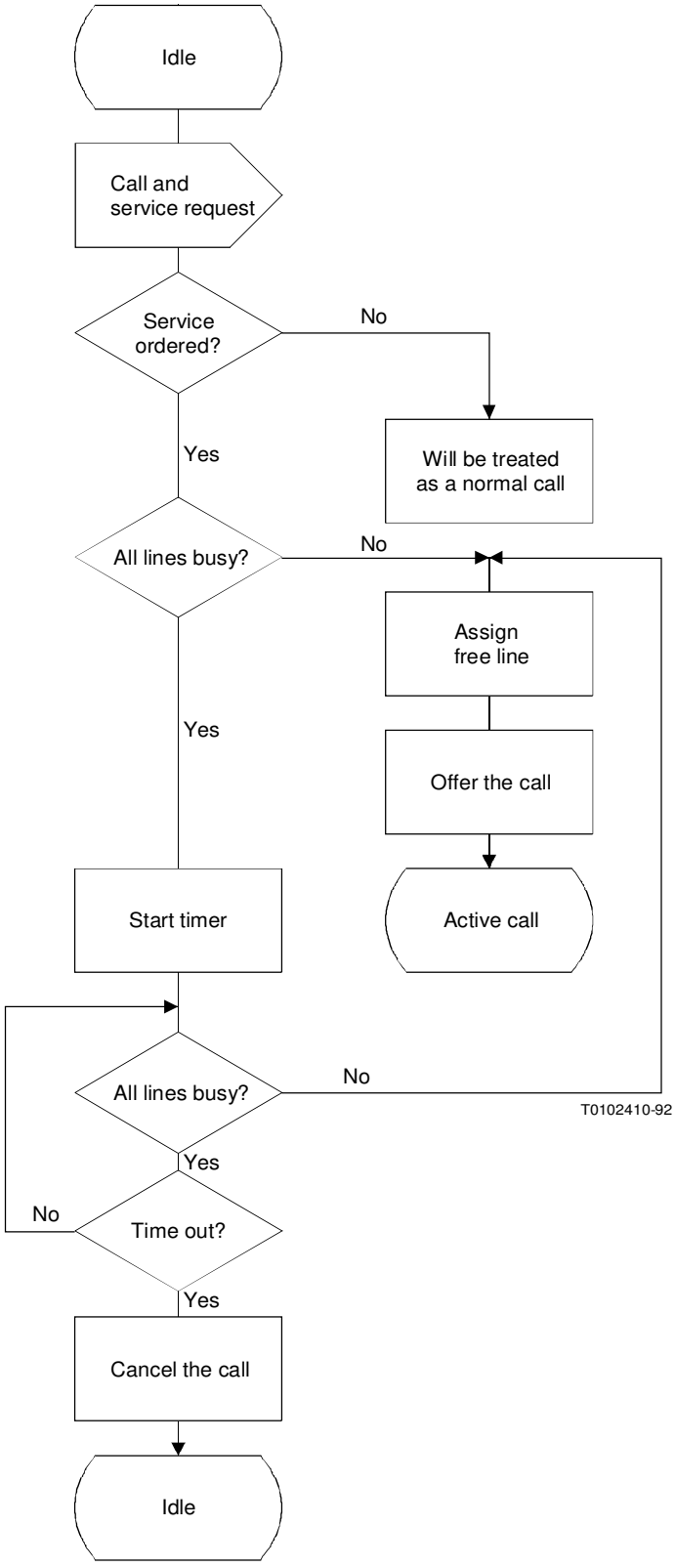

FIGURE 1/I.255.4

Overall SDL diagram for the case of A-priority

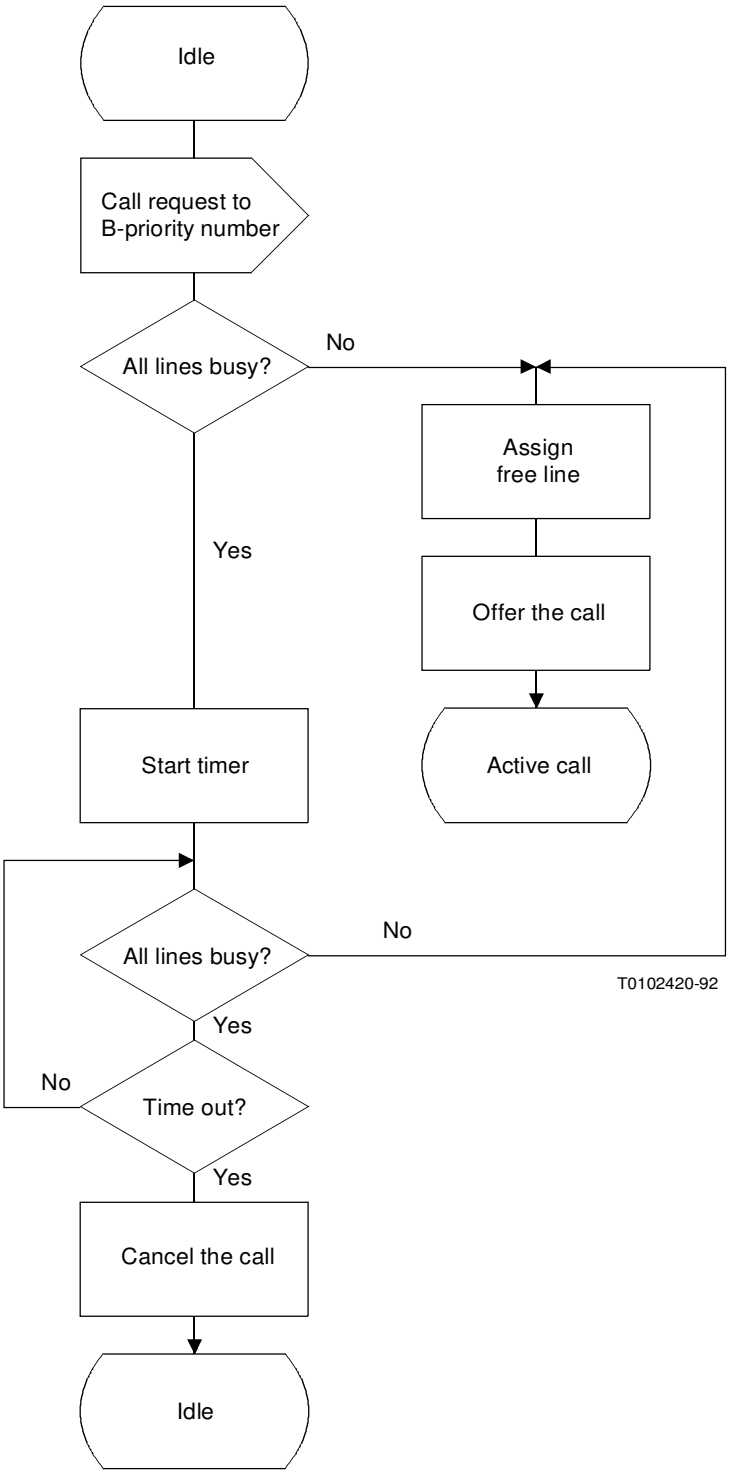

FIGURE 2/I.255.4

Overall SDL diagram for the case of B-priority