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THE INTERNATIONAL
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CONSULTATIVE COMMITTEE

INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

GENERAL STRUCTURE AND SERVICE CAPABILITIES

CALLING LINE IDENTIFICATION PRESENTATION

Recommendation I.251.3 (rev.1)

Geneva, 1992

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.251.3 was prepared by Study Group I and was approved under the Resolution No. 2 procedure on the 4th of August 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 I.251.3

CALLING LINE IDENTIFICATION PRESENTATION

(revised 1992)

1 Definition

Calling Line Identification Presentation is a supplementary service offered to the called party which provides the calling party's ISDN-number, possibly with sub-address information, to the called party.

2 Description

2.1 *General description*

When Calling Line Identification Presentation (CLIP) is applicable and activated, the network provides the called party with the number of the calling party at call set-up on all incoming calls.

The calling party number may be accompanied by a sub-address.

The network should be capable of transmitting at least 15 digits [maximum length of an integrated services digital network (ISDN) number]. In addition, if provided by the calling party, the network should be capable of transmitting a sub-address.

The network to which the calling party belongs should attempt to ensure that enough digits are transmitted to enable the called party to return the call, based on the calling number presented.

2.2 *Specific terminology*

Partial number: a part of an ISDN number which is relevant to a selection process between addressable entities beyond the network boundary. The partial number digits and the partial number length are subject to subscription to the relevant supplementary services Direct-Dialling-In (DDI) or Multiple Subscriber Number (MSN).

2.3 *Qualifications on the applicability to telecommunication services*

This supplementary service is applicable to all telecommunication services.

It is to be noted that in the telematic services an exchange of terminal identification (TID) occurs at a higher layer subsequent to a successful call establishment.

For telematic services this supplementary service shall consist only of the access number of the calling party and this shall be provided by the network. For other non-voice services this supplementary service is for further study. The presentation of the calling party's ISDN-number by telematic terminals and by other non-voice terminals is for further study.

3 Procedures

3.1 *Provision/withdrawal*

CLIP may be provided on a subscription basis or be generally available. CLIP may be withdrawn at the request of the subscriber or by the network provider for administrative reasons.

3.2 *Normal procedures*

3.2.1 *Activation/deactivation/registration*

CLIP is activated on provision and deactivated on withdrawal. No information needs to be registered with the network for this supplementary service.

3.2.2 *Invocation and operation*

The number presented shall unambiguously identify the access of the calling party. The number presented is either:

i) completely provided by the network;

ii) completely provided by the calling party; or

iii) partially provided by the calling party, in the form of a partial number, with the rest provided by the network (e.g. the access number is provided by the network and the additional digits to make the number complete by the calling party).

Some networks may provide additional information (see Annex A).

Where either the complete calling number, or part of the calling number is initially provided by the calling party, the network may check its validity, unless a special connection arrangement exists between the customer and the public network (see § 3.2.2.1). If this check is successful, then this number is used by the network. For complete calling number, this validity check may determine whether the number is allocated to the access; for partially provided numbers this check may, for example, determine whether the digits are within the allocated range.

3.2.2.1 *Special connection arrangement*

Where the public network operator has confidence that the correct information will be provided by the calling customer, a special connection arrangement between the customer and the public network [e.g. for calls which originate from another private automatic branch exchange (PABX) in a private network] can be offered. Note that the details of such a special connection arrangement are beyond the scope of this Recommendation.

When this special arrangement applies, a full national or international ISDN number will be passed to the public network as the calling party identity. No screening will be required, and the public network will add country codes as required when crossing international boundaries, etc.

3.3 *Exceptional procedures*

3.3.1 *Activation/deactivation/registration*

None identified.

3.3.2 *Invocation and operation*

If the network check on a calling party provided number is unsuccessful, the network will use the default number as the number of the calling party.

There are two cases where the calling party number is not presented to the called party:

i) when the calling party has an arrangement (see definition of Calling Line Identification Restriction) whereby presentation of his number is not allowed; and

ii) when the calling party number is not available, e.g. due to interworking with the analogue public switched telephone network (PSTN).

In such cases no number is presented to the called party, but he shall receive an indication that the number of the calling party is unavailable.

In case i), the user will be given an indication that the presentation of number is restricted.

In case ii), the user will be given an indication that the number is not available, for example because of interworking.

3.4 *Alternative procedures*

3.4.1 *Activation/deactivation/registration*

None identified.

3.4.2 *Invocation and operation*

In some cases where a calling party has an arrangement such that presentation of his number is not allowed, there may be certain categories of called party that have the ability to override this restriction and have the calling number presented. This function is a national option.

Problems may occur when the calling party does not belong to the same network as the called party and in the calling party's network the override category does not exist, while in the called party's network it does. A problem occurs when a calling party who restricts presentation and assumes that his number is never presented, makes a call to a called party who is in the override category.

The cases where the override category is applied is a national matter. Depending on bilateral agreement about the application of the override category in country B, and the "presentation not allowed" arrangement of the calling party in country A, country A may or may not deliver the calling line identification to country B. Agreements are also needed with any transit network.

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 requirements

On calls incoming from some non-ISDN networks, the calling number may be delivered to the destination ISDN without the ability to indicate whether presentation is allowed or not. How the ISDN should behave in this case is for further study.

From some other non-ISDN networks, no calling party number may be available to the ISDN and therefore, the calling party number cannot be given to the called party who has been provided with CLIP. In this situation, a "number unavailable" indication, is given to the called party. If a "number unavailable" indication is given to the called party, the called party will be clearly informed that the calling party number is not available as a result of network interworking.

As a national option, the originating network shall have the possibility to restrict any information identifying the calling party from being forwarded to another network. If a destination network receives a calling party ISDN number without any indication of presentation allowed or restricted, the destination network (host network) will act according to its own rules and regulations.

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.

If the called user(s) at B is (are) given a call waiting indication, and has (have) subscribed to the CLIP service, then the calling line identification shall be presented to the users at B at the time the call waiting indication is given.

6.2 *Call Transfer*

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

6.3 *Connected Line Identification Presentation*

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

6.4 *Connected Line Identification Restriction*

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

6.5 *Calling Line Identification Presentation*

Not applicable.

6.6 *Calling Line Identification Restriction*

The calling line identification will not be presented if the calling user has an arrangement to inhibit the presentation of his number to the called party. The only occasion when a user subscribing to CLIP can take precedence over Calling Line Identification Restriction (CLIR) is when the user has an override category. This is a national option.

6.7 *Closed User Group*

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

6.8 *Conference Calling*

Any party that has subscribed to CLIP will receive the calling line identification of a conference controller when:

– the party is to be included as a “new party” during the invocation of a conference call; or

– the party is being added to an existing conference call.

6.9 *Direct-Dialling-In*

No impact at the calling party’s user-network interface, except that the network may be supplied with a calling party number as a result of DDI applying either:

i) at that interface, in which case a partial or full calling party number may be supplied and may be subject to screening by the network; or

ii) (subject to the existence of a special arrangement for not screening) at that interface or at another interface to which the same customer’s equipment (e.g. a private network) is attached, in which case a full (national or international) number may be supplied.

At the called party's interface there is no impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.10 *Call diversion services*

If an incoming call to the party to which CLIP has been provided has already been forwarded, then the calling party's number should be the number of the original calling party.

6.10.1 *Call Forwarding Busy*

Called user: if subscribed to, the called user can receive the calling line identification of all calls which have been forwarded.

Forwarded-to users, who have subscribed to CLIP, may receive the calling user's number if the calling user has not subscribed/invoked CLIR.

6.10.2 *Call Forwarding No Reply*

Called user: if subscribed to, the called user can receive the calling line identification of all calls which have been forwarded.

Forwarded-to users, who have subscribed to CLIP may receive the calling user's number if the calling user has not subscribed/invoked CLIR.

6.10.3 *Call Forwarding Unconditional*

Called user: if subscribed to, the called user can receive the calling line identification of all calls which have been forwarded.

Forwarded-to users, who have subscribed to CLIP may receive the calling user's number if the calling user has not subscribed/invoked CLIR.

6.10.4 *Call Deflection*

Same as Call Forwarding Unconditional (see § 6.10.3).

6.11 *Line Hunting*

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

The Line Hunting service occurs before CLIP. The Line Hunting service would first provide a selection of an interface for presentation of a call. Once the service selects an interface, normal call processing would occur including the presentation of the calling party's number to a selected interface who has subscribed to CLIP.

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*

If MSN is subscribed to by the calling party, then this party may provide the appropriate calling party MSN digits, or the full ISDN number on outgoing calls. If no arrangement has been made with the calling subscriber, the network shall check the user provided calling party number information for validity on the corresponding access. If the check fails, or if no calling number information is provided by the user, then the network should apply the default ISDN number of the calling party's access.

At the called party's interface, there is 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*

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

6.18 *Priority*

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

6.19 *Malicious Call Identification*

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

6.20 *Outgoing Call Barring*

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

6.21 *Reverse Charging*

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

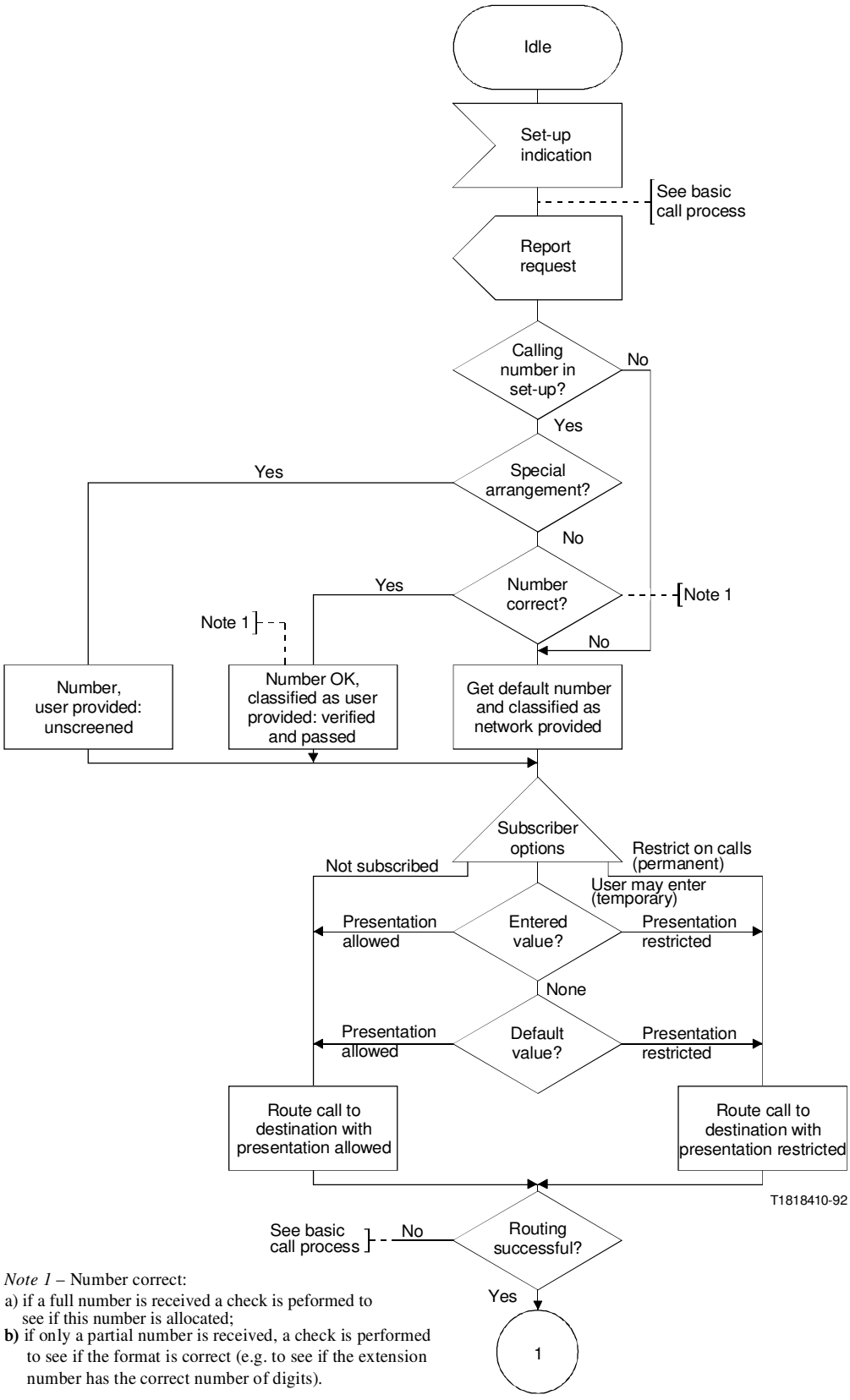
6.22 *Sub-addressing*

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

Note – If the called user subscribes to CLIP, the calling party sub-address, if provided by the calling user, and the calling party number are presented to the called user.

7 Dynamic description

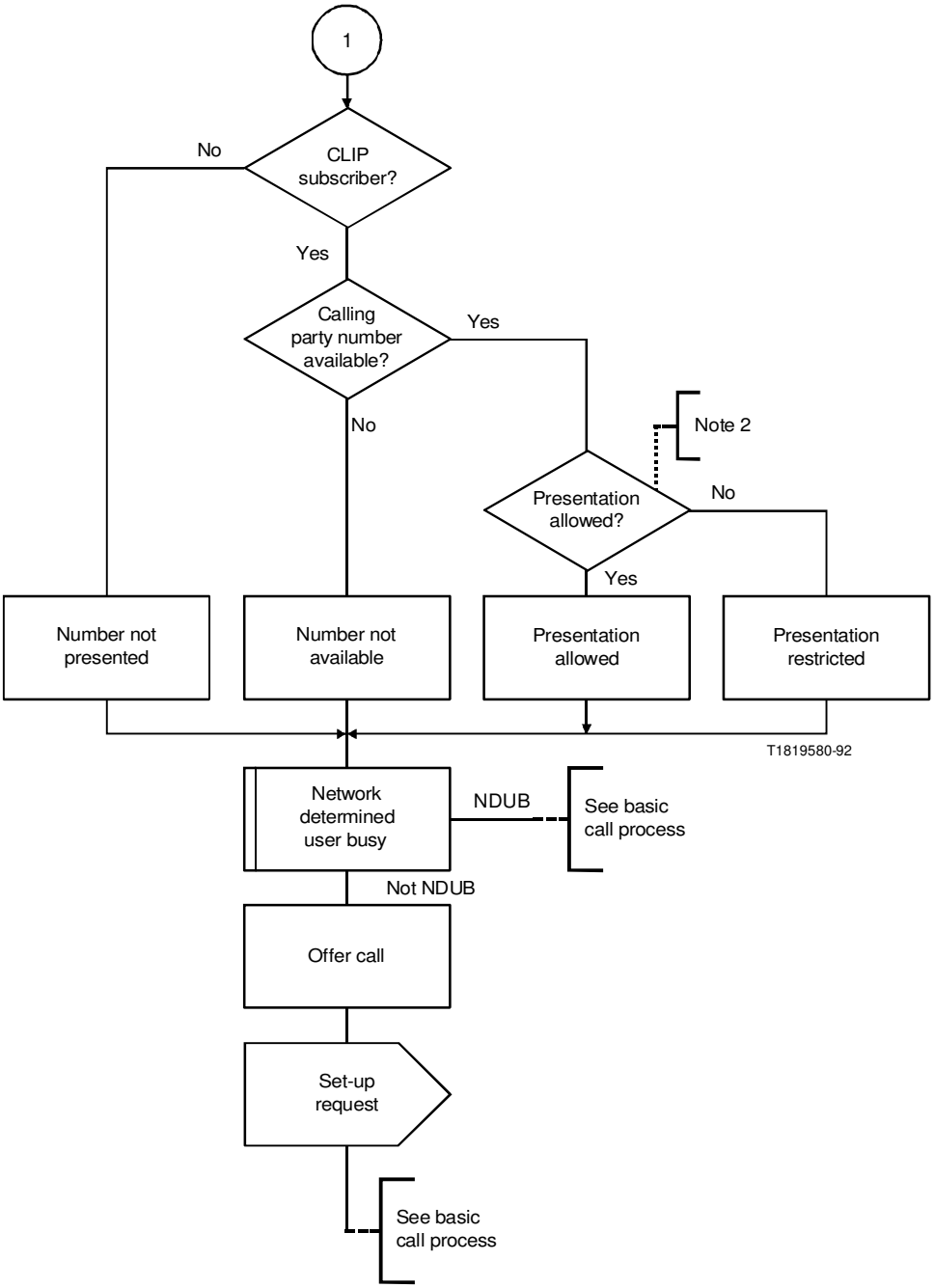
The dynamic description for this service is shown in Figure 1/I.251.3.



Note 1 – Number correct:
a) if a full number is received a check is peformed to see if this number is allocated;
b) if only a partial number is received, a check is performed to see if the format is correct (e.g. to see if the extension number has the correct number of digits).

FIGURE 1/I.251.3 (sheet 1 of 2)

Overal SDL diagram for calling line identification presentation/restriction



NDUB Network determined user busy

Note 2 – In some Administrations certain categories of customers (e.g., the police) may have the ability to override the restriction of presentation.

FIGURE 1/I.251.3 (sheet 2 of 2)

Overall SDL diagram for calling line identification presentation/restriction

ANNEX A

(to Recommendation I.251.3)

Calling line identification presentation

A.1 *Scope*

This annex describes additional features of the CLIP supplementary service that may be provided by some public ISDN networks as a national option.

These additional features shall have no impact and shall place no requirement whatsoever on the provision and operation of the CLIP supplementary service defined in this Recommendation by the ISDN networks that do not support these additional features, or on the interchangeability of terminals.

A.2 *Description*

Some public networks may deliver two calling numbers at the called subscriber's user-to-network interface possibly as a subscription option. When two numbers are available and the called user subscribes to two number delivery, then a "network provided" number will be presented together with a user-provided number marked "user provided, not screened". In addition, some networks may provide a "network provided" number together with a "user provided, verified and failed" number. The order of the numbers will not be specified since each number is uniquely identifiable.

If two numbers are available, but only a single number is to be delivered at the called user-to-network interface (e.g. the called user does not subscribe to two number delivery, but subscribes to single number delivery), the "user-provided" number will be presented if the "special arrangement" of § 3.2.2 is in force; otherwise the "network-provided" number will be presented.

Principles for interaction with other supplementary services are those of § 6 of this Recommendation with the following characteristics:

i) calling line identification restriction when subscribed-to/invoked at the calling side applies for both network provided and user provided numbers;

ii) when a call has been forwarded/diverted and the forwarded-to/diverted-to user has been provided with CLIP, that user shall receive the original user and network provided numbers if this calling user has not subscribed-to/invoked CLIR.