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INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

SERVICE CAPABILITIES

CONNECTED LINE IDENTIFICATION PRESENTATION (COLP)

ITU-T Recommendation I.251.5

(Previously "CCITT Recommendation")

FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (ITU). The 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 their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation I.251.5 was revised by ITU-T Study Group 1 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 21st of February 1995.

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NOTE

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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SUMMARY

Connected Line Identification Presentation (COLP) is a supplementary service offered to the calling party which provides the connected party's ISDN number possibly with sub-address information to the calling party.

CONNECTED LINE IDENTIFICATION PRESENTATION (COLP)

(revised in 1994)

1   Definition

Connected Line Identification Presentation (COLP) is a supplementary service offered to the calling party which provides the connected party's ISDN number possibly with sub-address information to the calling party.

2   Description

2.1   General description

When COLP is applicable and invoked, the network provides the calling party with the number of the connected party when the connected party answers the incoming call. The connected party number may be accompanied by a sub-address.

NOTE – The possibility of enhancing this service to provide the called party number before the called party answers the call is for further study.

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 subscriptions to the relevant supplementary service (DDI or MSN).

2.3   Qualifications on the applicability to telecommunication services

This supplementary service is applicable to all telecommunication services.

3   Procedures

3.1   Provision/withdrawal

The COLP supplementary service may be provided on a subscription basis or be generally available.

COLP may be withdrawn at the request of the subscribers or by the network provider for administrative reasons.

3.2   Normal procedures

3.2.1   Activation/deactivation/registration

COLP 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 network shall automatically invoke the COLP supplementary service on each outgoing call made by the calling user.

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

    i)   completely provided by the network;

    ii) completely provided by the connected party; or

    iii) partially provided by the connected party as a partial number, and 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 connected party).

Where either the complete connected number, or part of the connected number is initially provided by the connected party, the network may check its validity unless a special connection arrangement exists between the customer and the public network (see below). If this check is successful, then this number shall be marked as "user provided, verified and passed" and it will be used by the network.

If the connected party does not provide any number, the public ISDN shall enter a default number marked as "network provided".

Special connection arrangement

Where the public network operator has confidence that the correct information will be provided by the connected customer, a special connection arrangement between the customer and the public network (e.g. for calls which are forwarded within 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 ISDN or international number will be passed to the public network as the connected party identity. No screening will be required, and the number shall be marked as "user provided, not screened". 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 the connected party provided number is unsuccessful, the network default number will be used instead and it shall be marked as "network provided".

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

    i)   when the connected party has an arrangement whereby presentation of his number is not allowed (see definition of Connected Line Identification Restriction); or

    ii) when the connected party number is not available [e.g. due to interworking with the analogue telephone network (PSTN)].

        In such cases the calling party shall be given a number unavailable indication.

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

        In case ii), the user will be given an indication that interworking has occurred.

3.4   Alternative procedures

3.4.1   Activation/deactivation/registration

None identified.

3.4.2   Invocation and operation

Problems may occur when the connected party does not belong to the same network as the calling party and in the connected party's network the override category does not exist, while in the calling party's network, it does exist. A problem occurs when a connected party who restricts presentation and assumes that his number is never presented, receives a call from a calling 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 A, and the presentation not allowed arrangement of the connected party in country B, country B may or may not deliver the connected line identification to country A. 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 considerations

NOTE – In interworking situations when information is passed to other networks which do not support the requirements of this Recommendation, COLP information (e.g. when a special arrangement exists where "user provided, not screened" applies) could be discarded.

5.1   Interworking with non-ISDN networks

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

On calls destined to some non-ISDN networks, no connected party number may be available to the ISDN and therefore the connected party number cannot be given to the calling party who has COLP. In this situation a "number unavailable indication" is given to the calling party.

5.2   Interworking with private ISDN

For a call which enters the private ISDN, the private ISDN shall perform its own screening function on the connected user provided information, after which the resulting number shall be given to the public ISDN in the form of an E.164 national or international ISDN number. This number shall be screened by the public ISDN unless a special arrangement has been made. (See 3.2.2.)

If the private ISDN does not provide any number, or if the screening performed by the public ISDN is unsuccessful, the public ISDN shall enter a default number which shall be marked as "network provided".

Where the connected user is attached to a public ISDN and the calling user is attached to a private ISDN, the public ISDN shall forward the appropriate connected party ISDN number to the private ISDN.

6   Interaction with other supplementary services

6.1   Advice of charge services (AOC)

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

6.2   Call Hold (HOLD)

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

6.3   Call transfer services (ECT, NCT)

Assume the situation where a user A has an established call with a user B and wishes to transfer this call with user B to a user C.

Except in the case where user C prohibits the presentation of his number, user C's number shall be presented:

–   To user B upon successful completion of the transfer to user C (independent of the type of transfer procedure invoked by user A) provided that user B has subscribed to COLP.

–   To user A when user A is using normal or explicit transfer procedures and has subscribed to COLP. The connected party's number will not be presented to user A if user A invokes the single step Call Transfer procedure.

NOTE – The connected number presentation may not be possible if interworking with a non-ISDN network is invoked in the call transfer.

6.4   Call Waiting (CW)

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

6.5   Closed User Group (CUG)

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

6.6   Completion of calls services

6.6.1   Completion of Calls on No Reply (CCNR)

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

6.6.2   Completion of Calls to Busy Subscribers (CCBS)

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

6.7   Conference services

6.7.1   Conference Calling (CONF)

A conference controller who has also subscribed to COLP should be presented with the connected party's number when that party is either part of the initial activation of the conference or is added as a new conferee to an existing conference.

Conferees in an existing conference who have subscribed to COLP will not receive a new party's number whenever a conference controller adds a new party to the conference.

6.7.2   Three-Party Service (3PTY)

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

6.8   Diversion services

6.8.1   Call Deflection (CD)

Calling user notification of the diverted-to number is part of the diversion service and should not be considered to require an invocation of COLP by the calling user.

If the served (diverting) user selects the option that the calling user is not notified of call deflection, then the calling user will receive no deflection notification. In addition, the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

If the served (diverting) user selects the option that the calling user is notified, but without the deflected-to number, then the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

6.8.2   Call Forwarding Busy (CFB)

Calling user notification of the diverted-to number is part of the diversion service and should not be considered to require an invocation of COLP by the calling user.

If the served (diverting) user selects the option that the calling user is not notified of call forwarding, then the calling user will receive no forwarding notification. In addition, the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

If the served (diverting) user selects the option that the calling user is notified, but without the forwarded-to-user number, then the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

6.8.3   Call Forwarding No Reply (CFNR)

Calling user notification of the diverted-to number is part of the diversion service and should not be considered to require an invocation of COLP by the calling user.

If the served (diverting) user selects the option that the calling user is not notified of call forwarding, then the calling user will receive no forwarding notification. In addition, the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

If the served (diverting) user selects the option that the calling user is notified, but without the forwarded-to user number, then the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

6.8.4   Call Forwarding Unconditional (CFU)

Calling user notification of the diverted-to number is part of the diversion service and should not be considered to require an invocation of COLP by the calling user.

If the served (diverting) user selects the option that the calling user is not notified of call forwarding, then the calling user will receive no forwarding notification. In addition, the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

If the served (diverting) user selects the option that the calling user is notified, but without the forwarded-to user number, then the calling user will not receive the connected user's identity when the call is answered, unless the calling user has override capability.

6.9   Direct-Dialling-In (DDI)

If DDI is applicable at the connected party's user-network interface, then the connected user should normally provide at least the extension number part of the connected party number.

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

    i)   at that interface, in which case a partial or full connected 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.

6.10   In-Call Modification (IM)

The connected user's identity of the second terminal shall be presented to the calling user after the incall modification has occurred.

6.11   ISDN Freephone (IFS)

Callers to freephone numbers may not be given the connected line identity, but the freephone number.

6.12   Line Hunting (LH)

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

6.13   Malicious Call Identification (MCID)

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

6.14   Multi-level Precedence and Preemption (MLPP)

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

6.15   Multiple Subscriber Number (MSN)

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

6.16   Name identification services

6.16.1   Calling Name Identification Presentation (CNIP)

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

6.16.2   Calling Name Identification Restriction (CNIR)

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

6.17   Number identification services

6.17.1   Calling Line Identification Presentation (CLIP)

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

6.17.2   Calling Line Identification Restriction (CLIR)

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

6.17.3   Connected Line Identification Presentation (COLP)

Not applicable.

6.17.4   Connected Line Identification Restriction (COLR)

The connected line identification will not be presented if the connected user has subscribed to COLR.

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

6.18   Outgoing Call Barring (OCB)

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

6.19   Reverse Charging (REV)

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

6.20   Sub-addressing (SUB)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.
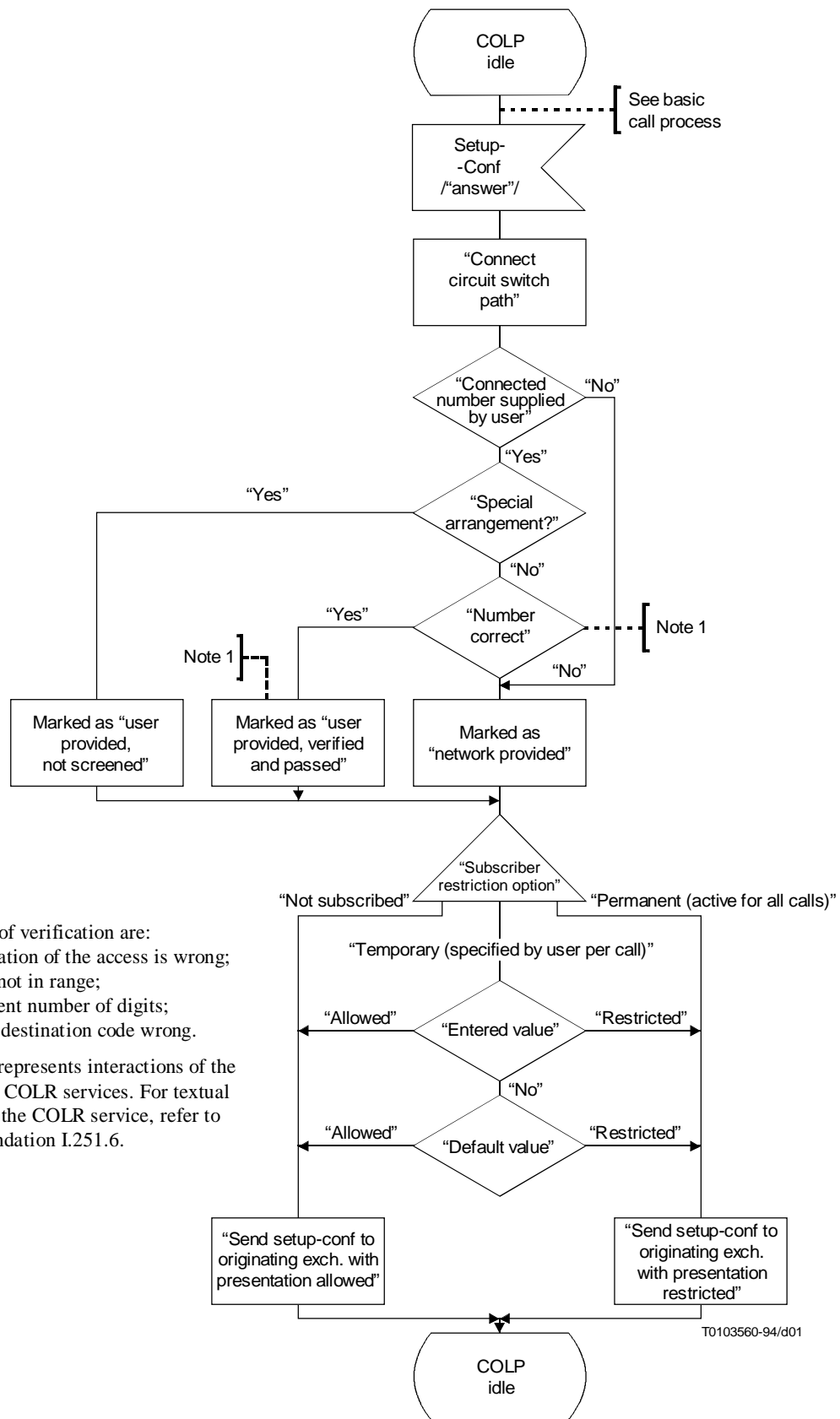
6.21   Terminal Portability (TP)

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

6.22   User-to-User Signalling (UUS)

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

7   Dynamic description

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

NOTES

1 Examples of verification are:
   – identification of the access is wrong;
   – number not in range;
   – insufficient number of digits;
   – network destination code wrong.

2 This SDL represents interactions of the COLP and COLR services. For textual details for the COLR service, refer to Recommendation I.251.6.

FIGURE 1/I.251.5

Connected line identification presentation/restriction