INTERNATIONAL TELECOMMUNICATION UNION

CCITT I.251.7 (rev.1)

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

GENERAL STRUCTURE AND SERVICE CAPABILITIES

MALICIOUS CALL IDENTIFICATION

Recommendation I.251.7 (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.251.7 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.251.7

MALICIOUS CALL IDENTIFICATION

(revised 1992)

1 Definition

Malicious Call Identification is a supplementary service offered to the called party which enables the called party to request that the calling party be identified to the network and be registered in the network.

Note – This would be used by the called party on calls considered to be malicious.

2 Description

2.1 *General description*

Malicious Call Identification (MCID) gives an integrated services digital network (ISDN) user the possibility to cause, by an appropriate request, the registration in the network of the following items:

– called party number;

– calling party number;

– local time and date of the invocation in the network serving the called user; and

– as a service provider option: calling party sub-address (if provided by the calling user).

In the case of interaction with other supplementary services, it may be required to register more information (see § 6).

The location of the registration function in the served user's network is a matter of implementation. The information will not be available to the terminal equipment under the control of the called user nor the calling user. The information will be stored at a location(s) under the control of the network operator.

The provision of call information for MCID purposes on calls between different networks is subject to bilateral agreement between the service providers involved. Furthermore, the provision of call information for MCID purposes across international boundaries will be subject to bilateral agreement between the legal authorities of the countries involved.

The MCID supplementary service can either be invoked during or after the active phase of the call, but before the called user has cleared. Other alternatives are for further study (see § 3.2.2).

A network subscription option may be provided which allows automatic invocation of MCID on calls to the served user which are not answered.

As a network option, besides the above registration of call information, the connection may be held automatically for legal purposes, on invocation of MCID until the intervention of the service provider. This option is beyond the scope of this Recommendation.

2.2 *Specific terminology*

Calling party number: This is the public network provided number which identifies either the calling party or at least the access into the public network of the call from the calling party.

Served user: A called user to whom the MCID supplementary service has been provided.

2.3 *Qualification on the applicability to telecommunication services*

This supplementary service is applicable to all telecommunication services.

3 Procedures

3.1 *Provision/withdrawal*

This service shall be provided and withdrawn after pre-arrangement with the service provider, in accordance with national legal requirements.

A network subscription option may be provided which allows automatic invocation of MCID on calls to the served user which are not answered.

Note – The purpose of this option is to allow for registration of calls that ring for a short time only.

3.2 *Normal procedures*

3.2.1 *Activation/deactivation/registration*

The MCID supplementary service is activated at provision and deactivated at withdrawal, under the control of the service provider.

3.2.2 *Invocation and operation*

The served user can invoke the Malicious Call Identification supplementary service by an appropriate procedure in the following cases:

– Before answer (as a service provider option).

  Note – A typical example is where a called user may have received a Calling Line Identification (CLI), but wishes to "register" the incoming call with the exchange, possibly without answering the call. (This option is for further study.)

– During the active phase of the call: This is the normal situation. In this instance, the called user should be able to continue with the call after invocation of MCID.

– After the calling party has cleared: This would be possible during the limited time the network is awaiting the called user's reaction to the network disconnect indication, unless MCID has already been invoked for that call.

– After called party has cleared (network option): This would be possible during a short time-out period. (This option is for further study.)

Successful invocation will result in registration of the call information described in § 2.1.

The served user should be informed by an appropriate acknowledgement that the registration has been performed.

If the option described in § 3.1 is subscribed to by the served user, MCID will be invoked automatically by the network at the clearance of all or particular calls to the served user which have not been answered.

Note – Restrictions may be applied to automatic invocation in order to avoid excessive registration of call information on unanswered calls. Such restrictions may consist of, e.g.:

– automatic invocation only on "short" unanswered calls, i.e. those which are terminated within a certain time interval after presentation (e.g. 10 seconds);

– automatic invocation only during certain periods of the day (e.g. night hours).

If on an answered call, the calling user disconnects first, the network should allow the served (= called) user to invoke MCID within the normal time-out applied by the network awaiting the called user's reaction to the network disconnect indication, unless MCID has already been invoked for that call.

3.3 *Exceptional procedures*

3.3.1 *Activation/deactivation/registration*

Not applicable.

3.3.2 *Invocation and operation*

If an invocation request is received from a user who is not provided with the MCID supplementary service, an invocation request is received from the served user during a phase of the call when MCID is not supported, or if an invocation request is received from a calling user, then the network will not invoke MCID. In these cases an appropriate indication will be sent to the served user.

If a user has already successfully invoked the MCID supplementary service on a call and the information has been registered, then subsequent attempts to invoke the MCID supplementary service should not be acted upon by the network. The served user should be informed by an appropriate acknowledgement that the registration has been performed (as in the normal procedures).

3.4 *Alternative procedures*

3.4.1 *Activation/deactivation/registration*

Not applicable.

3.4.2 *Invocation and operation*

Not applicable.

4 Network capabilities for charging

Charging requirements are beyond the scope of this Recommendation.

5 Interworking requirements

5.1 *Interworking with PSTN*

When interworking between public switched telephone network (PSTN) and ISDN occurs, the number of the calling user may not be available; it may, however, be possible to register certain information about the routing of the call depending on the capabilities of the PSTN.

Where such interworking applies on a national call, the available information shall be registered in the location appropriate for the network. For international calls, the registration of available information is dependent on any agreement between the legal authorities of the countries involved.

In the case of interworking where:

– a call is forwarded or deflected to a PSTN destination; and

– the PSTN supports MCID; and

– the forwarded-to PSTN user has MCID activated,

then, at least the registration of the calling party number and time should be supported.

5.2 *Interworking with private networks*

A served user (i.e. a disturbed party) on a private ISDN shall be able to send an MCID invocation request to the public ISDN in the case of an incoming public to private network call.

Private ISDNs should technically be able to support and complement the public MCID service beyond the public network boundary by identifying a malicious caller on the private ISDN (if requested by the legal authority) on an outgoing private to public network call. This interworking case applies only when an appropriate arrangement between the two network operators exists.

5.3 *Interworking with data networks*

Wherever possible the MCID supplementary service should be supported on calls from data networks.

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*

The transferring user will not be able to invoke MCID on a call after transfer of that call has been invoked.

If, after transfer has been completed, the served (transferred to) user successfully invokes MCID, then the network shall register the numbers of the other user in the call and last transferring users.

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*

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

6.6 *Calling Line Identification Restriction*

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*

If Direct-Dialling-In (DDI) is provided to the served user of MCID, then MCID should be provided either globally for the whole access or on a per DDI number basis, according to access arrangements. In both cases, the ISDN number of the called user, including DDI digits, should be registered.

6.10 *Call diversion services*

6.10.1 *Call Forwarding Busy*

The MCID supplementary service can be invoked for a forwarded call. In addition to the normal operation of the MCID supplementary service, the identity of the called user shall be registered and, as a network option, the last diverting user can be registered.

Once forwarding has taken place, the forwarding user cannot invoke the MCID supplementary service.

6.10.2 *Call Forwarding No Reply*

The MCID supplementary service can be invoked for a forwarded call. In addition to the normal operation of the MCID supplementary service, the identity of the called user shall be registered and, as a network option, the last diverting user can be registered.

Once forwarding has taken place, the forwarding user cannot invoke the MCID supplementary service.

6.10.3 *Call Forwarding Unconditional*

The MCID supplementary service can be invoked for a forwarded call. In addition to the normal operation of the MCID supplementary service, the identity of the called user shall be registered and, as a network option, the last diverting user can be registered.

Once forwarding has taken place, the forwarding user cannot invoke the MCID supplementary service.

6.10.4 *Call Deflection*

The MCID supplementary service can be invoked for a deflected call. In addition to the normal operation of the MCID supplementary service, the identity of the called user shall be registered and, as a network option, the last diverting user can be registered.

Once deflection has taken place, the deflecting user cannot invoke the MCID supplementary service.

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*

If Multiple Subscriber Number (MSN) is provided to the served user of MCID, then MCID shall be provided either globally for the whole access or on a per MSN number basis, according to access arrangements.

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 Service*

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

6.19 *Malicious Call Identification*

Not applicable.

6.20 *Outgoing Call Barring*

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

6.21 *Reverse Charging*

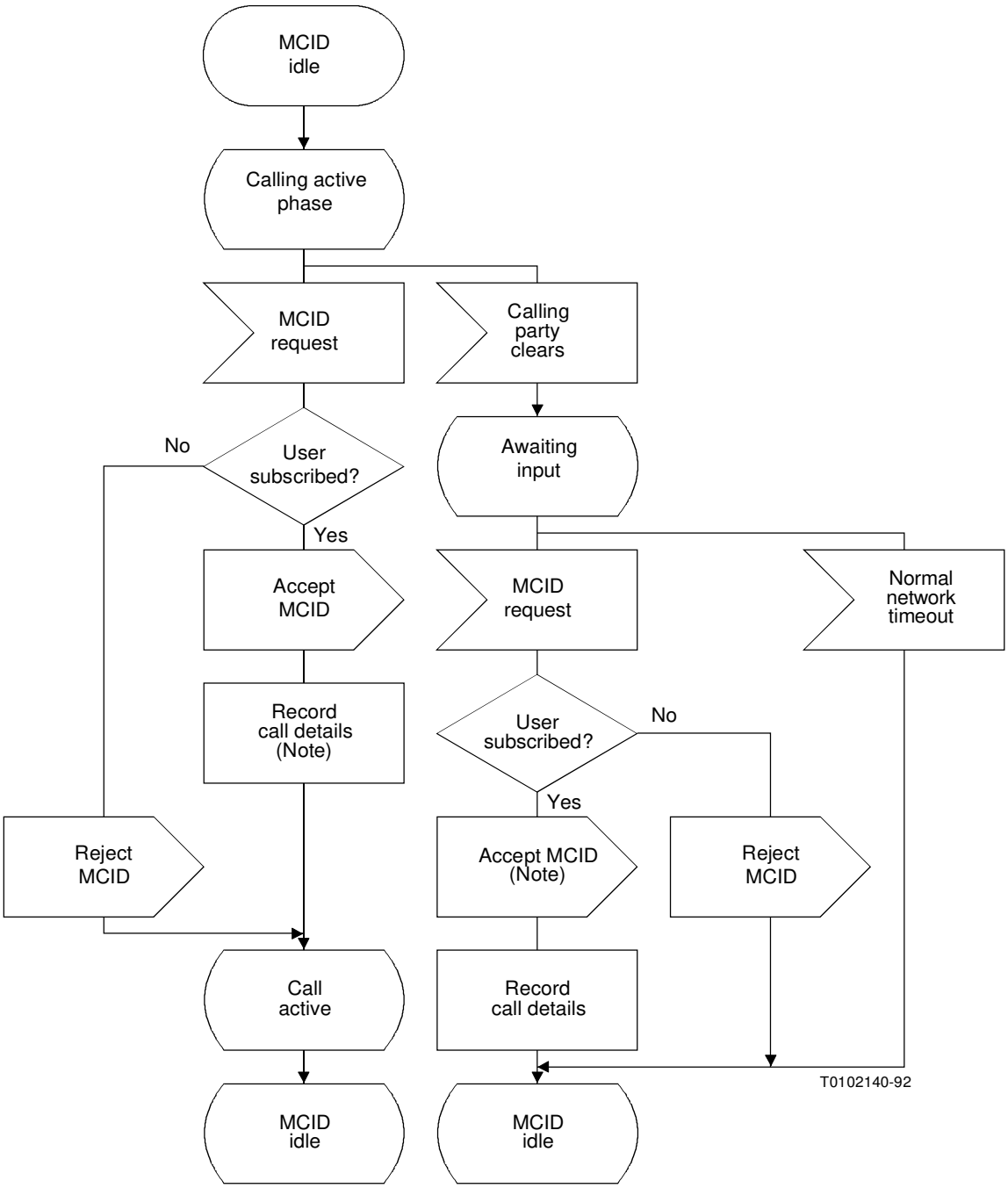
No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

6.22 *Sub-addressing*

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

7 Dynamic description

See Figure 1/I.251.7.



Note – If the information has previously been recorded, then no information will be recorded on subsequent requests during the call.

FIGURE 1/I.251.7 (sheet 1 of 2)

Dynamic description of MCID — Normal calls

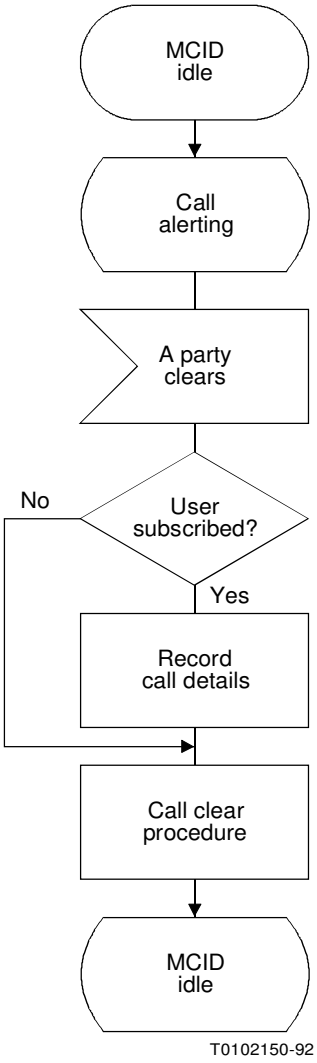


FIGURE 1/I.251.7 (sheet 2 of 2)

Dynamic description of MCID — Automatic invocation on all unanswered calls