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SERIES Q: SWITCHING AND SIGNALLING

**Functions and information flows for services in the ISDN –
Supplementary services**

**Stage 2 description for number identification
supplementary services:**

Malicious call identification (MCID)

ITU-T Recommendation Q.81.7

(Previously CCITT Recommendation)



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ITU-T RECOMMENDATION Q.81.7

STAGE 2 DESCRIPTION FOR NUMBER IDENTIFICATION SUPPLEMENTARY SERVICES: MALICIOUS CALL IDENTIFICATION (MCID)

Summary

This Recommendation defines the stage 2 of the Integrated Services Digital Network (ISDN) as provided by telecommunications operators for the Malicious Call Identification (MCID) supplementary service. Stage 2 identifies the functional capabilities and the information flows needed to support the service description. The stage 2 description also identifies user operations not directly associated with a call.

The malicious call identification supplementary service allows the served user to alert the service provider that a malicious call has been received and requests that the service provider retain the calling information for the purpose of identifying the caller. The MCID supplementary service is available to all telecommunications services.

Source

ITU-T Recommendation Q.81.7 was prepared by ITU-T Study Group 11 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 5th of June 1997.

FOREWORD

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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.

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

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Recommendation Q.81.7

STAGE 2 DESCRIPTION FOR NUMBER IDENTIFICATION SUPPLEMENTARY SERVICES: MALICIOUS CALL IDENTIFICATION (MCID)

(Geneva, 1997)

7 Malicious Call Identification (MCID)

7.1 Scope

This Recommendation defines the stage 2 of the Integrated Services Digital Network (ISDN) as provided by telecommunications operators for the Malicious Call Identification supplementary service (MCID). Stage 2 identifies the functional capabilities and the information flows needed to support the service description. The stage 2 description also identifies user operations not directly associated with a call (Recommendation I.130 [1]).

This Recommendation is specified according to the methodology specified in Recommendation Q.65 [2].

This Recommendation does not formally describe the relationship between this supplementary service and the basic call. Where possible this information is included for guidance however.

This Recommendation does not specify the requirements where the service is provided to the user via a private network or specify the requirements for the allocation of defined functional entities within a private ISDN. However it does define which functional entities may be allocated to a private network.

This Recommendation does not specify the additional requirements where the service is provided to the user via a telecommunications network that is not an ISDN. It does not, however, preclude provision to the user via a non-ISDN telecommunications network.

The **malicious call identification supplementary service** allows the served user to alert the service provider that a malicious call has been received and requests that the service provider retain the calling information for the purpose of identifying the caller. The MCID supplementary service is available to all telecommunications services [8].

This Recommendation is applicable to the stage 3 Recommendations for the ISDN MCID supplementary service. The term "stage 3" is also defined in Recommendation I.130 [1]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorization leaving freedom, or as a capability or possibility), this shall be reflected in the text of the relevant stage 3 Recommendations.

Conformance to this Recommendation is met by conforming to the stage 3 Recommendations with the field of application appropriate to the equipment being implemented. Therefore no method of testing is provided for this Recommendation.

7.2 References

The following ITU-T Recommendations, and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the

most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- [1] CCITT Recommendation I.130 (1988), *Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN*.
- [2] CCITT Recommendation Q.65 (1988), *Stage 2 of the method for the characterization of services supported by an ISDN*.
- [3] ITU-T Recommendation I.112 (1993), *Vocabulary of terms for ISDNs*.
- [4] ITU-T Recommendation Q.71 (1993), *ISDN circuit mode switched bearer services*.
- [5] ITU-T Recommendation Z.100 (1993), *CCITT Specification and Description Language (SDL)*.
- [6] CCITT Recommendation Q.9 (1988), *Vocabulary of switching and signalling terms*.
- [7] ITU-T Recommendation Z.120 (1993), *Message sequence chart (MSC)*.
- [8] CCITT Recommendation I.251.7 (1992), *Number Identification supplementary services: Malicious Call Identification*.

7.3 Definitions

This Recommendation defines the following terms:

- Integrated Services Digital Network (ISDN): see 2.3/I.112 [3], definition 308.
- Service; telecommunications service: see 2.2/I.112 [3], definition 201.

7.4 Symbols and abbreviations

This Recommendation uses the following symbols and abbreviations:

CC	Call Control, typically a LE
CCA	Call Control Agent, typically a TE
CLI	Calling Line Identity
FE	Functional Entity
FEA	Functional Entity Action
ISDN	Integrated Services Digital Network
LE	Local Exchange
MCID	Malicious Call Identification
PNX	Private Network Exchange
TE	Terminal Equipment

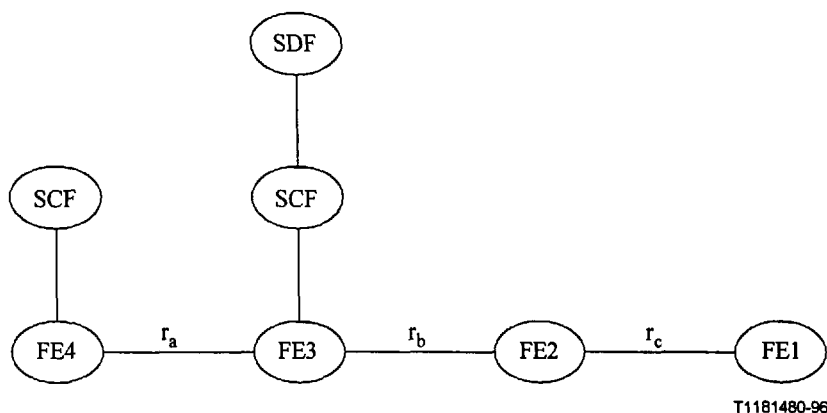
7.5 Description

Not applicable.

7.6 Derivation of the functional model

7.6.1 The functional model description

The functional model for the MCID supplementary service is shown in Figure 7-1.



NOTE 1 – This model recognizes that a PNX (NT2) will require service control functionality (i.e. FE2) to be provided by the PNX. For the case where no PNX is involved, e.g. TE directly connected, generally by basic access, neither FE2 nor relationship r_b exists.

NOTE 2 – It is assumed that a PNX uses access link clearing procedures independent of the extension clearing procedures. FE2 shall meet the requirements of the stage 1 service description and shall not delay the access throughput.

NOTE 3 – FE4 provides CLI, when requested from FE3.

Figure 7-1/Q.81.7

7.6.2 Description of the functional entities

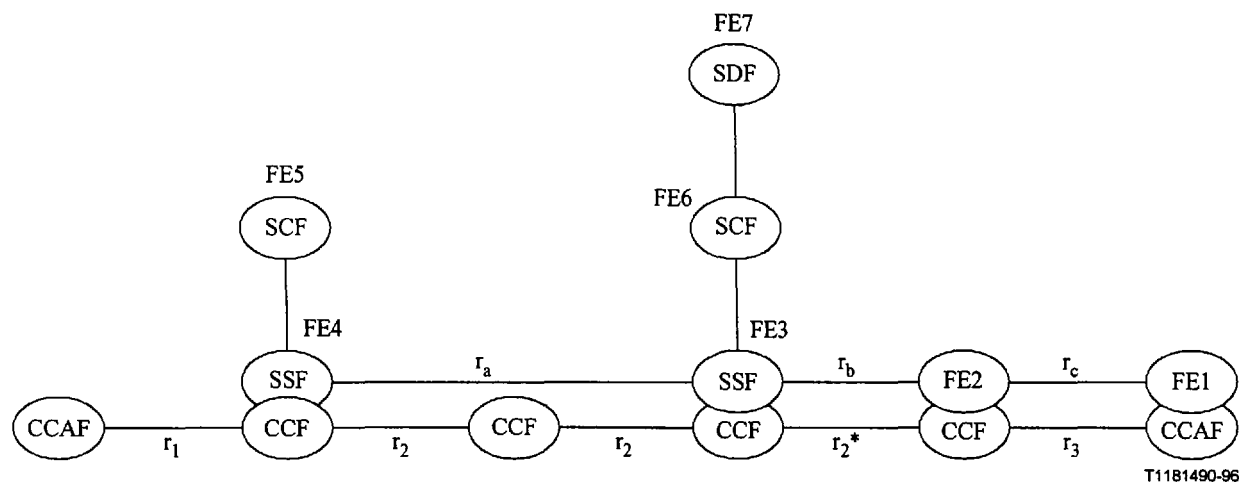
The Functional Entities (FEs) required by the MCID supplementary service above those of the basic call are as follows:

- FE1: MCID agent of the served user;
- FE2: MCID control of served PNX user;
- FE3: MCID control of served user;
- FE4: MCID control of the call originating network entity.

7.6.3 Relationship with a basic service

The relationship to a basic service is shown in Figure 7-2.

NOTE – The basic call model is defined in 2.1/Q.71 [4] with the exception that r_1 represents an outgoing call relationship from a CCAA and r_3 represents an incoming call relationship to a CCA.



NOTE 1 – For the case where no PNX is involved, e.g. TE directly connected, generally by basic access, neither FE2 nor relationship r_b exists

NOTE 2 – Information flows between FE4 and FE5 and information flows between FE3, FE6 and FE7 are not shown.

Figure 7-2/Q.81.7

7.7 Information flows

7.7.1 Information flow diagrams

The initiation of functional entity actions at functional entities and the information flow between FEs is shown in the following diagrams.

7.7.1.1 Entry into the MCID service at FE3

See Figure 7-3.

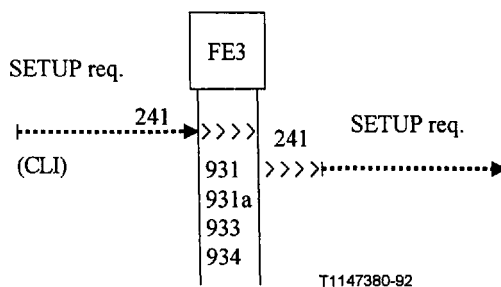


Figure 7-3/Q.81.7