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Foreword

This European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS is part 1 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Malicious Call Identification (MCID) supplementary service, as described below:

Part 1: "Protocol specification";

Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";

Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";

Part 5: "TSS&TP specification for the network";

Part 6: "ATS and partial PIXIT proforma specification for the network".

In accordance with CCITT Recommendation I.130, the following three level structure is used to describe the supplementary telecommunication services as provided by European public telecommunications operators under the pan-European Integrated Services Digital Network (ISDN):

- Stage 1: is an overall service description, from the user's stand-point;

- Stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1; and

- Stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This ETS details the stage 3 aspects (signalling system protocols and switching functions) needed to support the Malicious Call Identification (MCID) supplementary service. The stage 1 and stage 2 aspects are detailed in ETS 300 128 (1992) and ETS 300 129 (1992), respectively.

This reprint includes all previous Corrigenda as shown in the History box at the last page.

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1 Scope

This first part of ETS 300 130 specifies the stage three of the Malicious Call Identification (MCID) supplementary service for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators at the T reference point or coincident S and T reference point (as defined in CCITT Recommendation I.411 [1]) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol. Stage three identifies the protocol procedures and switching functions needed to support a telecommunication service (see CCITT Recommendation I.130 [2]).

In addition this standard specifies the protocol requirements at the T reference point where the service is provided to the user via a private ISDN.

This standard does not specify the additional protocol requirements where the service is provided to the user via a telecommunications network that is not an ISDN.

The MCID supplementary service enables a user to request that the source of an incoming call is identified and registered in the network.

The MCID supplementary service is applicable to all circuit-switched telecommunication services.

Further parts of this standard specify the method of testing required to identify conformance to this standard.

This standard is applicable to equipment supporting the MCID supplementary service, to be attached at either side of a T reference point or coincident S and T reference point when used as an access to the public ISDN.

2 Normative references

This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications listed hereafter. For dated references, subsequent amendments to, or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1] CCITT Recommendation I.411 (1988): "ISDN user-network interfaces - Reference configurations".

[2] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".

[3] ETS 300 195-1: "Integrated Services Digital Network (ISDN); Supplementary service interactions; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[4] CCITT Recommendation Z.100 (1988): "Functional Specification and Description Language (SDL)".

[5] ETS 300 102-1 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".

[6] ETS 300 196-1: "Integrated Services Digital Network (ISDN); Generic functional protocol for the support of supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[7] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means to describe them".

[8] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDN".

[9] CCITT Recommendation X.208 (1988): "Specification of Abstract Syntax Notation One (ASN.1)".

[10] CCITT Recommendation I.330 (1988): "ISDN Numbering and Addressing Principles".

[11] CCITT Recommendation X.219 (1988): "Remote Operations: Model, Notation and Service Definition".

3 Definitions

For the purposes of this standard, the following definitions apply:

Call information: call information consists of the called party number, the calling party number, the time and date of the request, and, as a network option, the calling party subaddress, if provided by the calling user.

Integrated Services Digital Network (ISDN): see CCITT Recommendation I.112 [8], § 2.3, definition 308.

Network: the DSS1 protocol entity at the network side of the user-network interface.

Service; telecommunication service: see CCITT Recommendation I.112 [8], § 2.2, definition 201.

Subaddress: see CCITT Recommendation I.330 [10], § 5.4.

Supplementary service: see CCITT Recommendation I.210 [7], § 2.4.

User: the DSS1 protocol entity at the user side of the user-network interface.

4 Symbols and abbreviations

ASN.1	Abstract Syntax Notation One
DSS1	Digital Subscriber Signalling System No. one
ISDN	Integrated Services Digital Network
MCID	Malicious Call Identification

5 Description

The MCID supplementary service shall allow, by an appropriate user request, the storage and registration of the call information.

6 Operational requirements

6.1 Provision and withdrawal

The MCID supplementary service shall be provided and withdrawn after prior arrangement with the administration.

6.2 Requirements on the originating network side

Not applicable.

6.3 Requirements on the destination network side

Not applicable.

7 Coding requirements

Table 1 shows the definition of the operation required for the MCID supplementary service using ASN.1 as defined in CCITT Recommendation X.208 [9] and using the OPERATION macro as defined in CCITT Recommendation X.219 [11], figure 4/X.219.

Table 1

```
MCID-Operations {ccitt identified-organization etsi (0) 130 operations-and-errors (1)}

DEFINITIONS ::=
BEGIN

EXPORTS                          MCIDRequest;


IMPORTS                          OPERATION
                                 FROM Remote-Operation-Notation
                                        {joint-iso-ccitt remote-operations(4) notation (0)}
                                 notAvailable,
                                 notSubscribed,
                                 invalidCallState,
                                 notIncomingCall,
                                 supplementaryServiceInteractionNotAllowed
                                 FROM General-Errors
                                        {ccitt identified-organization etsi (0) 196 general errors};


MCIDRequest ::=                  OPERATION
                                 RESULT
                                 ERRORS {notSubscribed,
                                        notAvailable,
                                        invalidCallState,
                                        notIncomingCall,
                                        supplementaryServiceInteractionNotAllowed}


mCIDRequest MCIDRequest ::= 3

END -- of MCID-Operations
```

8 State definitions

The states associated with basic call control according to ETS 300 102-1 [5] shall apply.

9 Signalling procedures at the coincident S and T reference point

9.1 Activation, deactivation and registration

Not applicable.

9.2 Invocation procedures

9.2.1 Normal operation

To invoke the MCID supplementary service the called user shall send a mCIDRequest invoke component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6].

To indicate that the service has been accepted the network shall send a mCIDRequest return result component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6].

The FACILITY message shall be sent using the call reference as used for the previous call control messages for the call for which the MCID supplementary service is to be invoked.

9.2.2 Exceptional procedures

If the mCIDRequest invoke component is received from the called party in any other state than the Active state (N10) or the Disconnect Indication state (N12), then the network shall not invoke the MCID supplementary service and shall send a mCIDRequest return error component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6]. The error shall indicate "invalidCallState".

If the MCID supplementary service is not subscribed, the network shall send a mCIDRequest return error component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6]. The error shall indicate "notSubscribed".

If the MCID supplementary service is invoked for an outgoing call, the network shall send a mCIDRequest return error component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6]. The error shall indicate "notIncomingCall".

If the network receives from the user a RELEASE message before sending a mCIDRequest return result or return error component in response to the previous invoke component, the network shall process the mCIDRequest invoke component as appropriate, however the network may send an indication of the result of the invocation by including the appropriate component carried by a Facility information element in the RELEASE COMPLETE message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6].

If it is not possible to register any call information, the network shall send a mCIDRequest return error component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6]. The error shall indicate "notAvailable".

If the MCID supplementary service is invoked when another supplementary service is already activated or has already been invoked, and the network does not allow this MCID supplementary service invocation in combination with the other supplementary service, the network shall send a mCIDRequest return error component carried by a Facility information element in a FACILITY message according to the procedures of subclause 8.3.1.1 of ETS 300 196-1 [6]. The error shall indicate "supplementaryserviceInteraction-NotAllowed".

10 Procedures for interworking with private ISDNs

The procedures as specified in subclause 9.2 shall apply.

11 Interactions with other networks

No impact.

12 Interactions with other supplementary services

The interactions of the MCID supplementary service with other supplementary services shall be as specified in ETS 300 195-1 [3].

13 Parameter values (timers)

The timers associated with basic call control according to ETS 300 102-1 [5] shall apply.

14 Dynamic description (SDLs)

The dynamic description of the MCID supplementary service shall be as shown in figure 1, according to the Specification and Description Language (SDL) specified in CCITT Recommendation Z.100 [4].

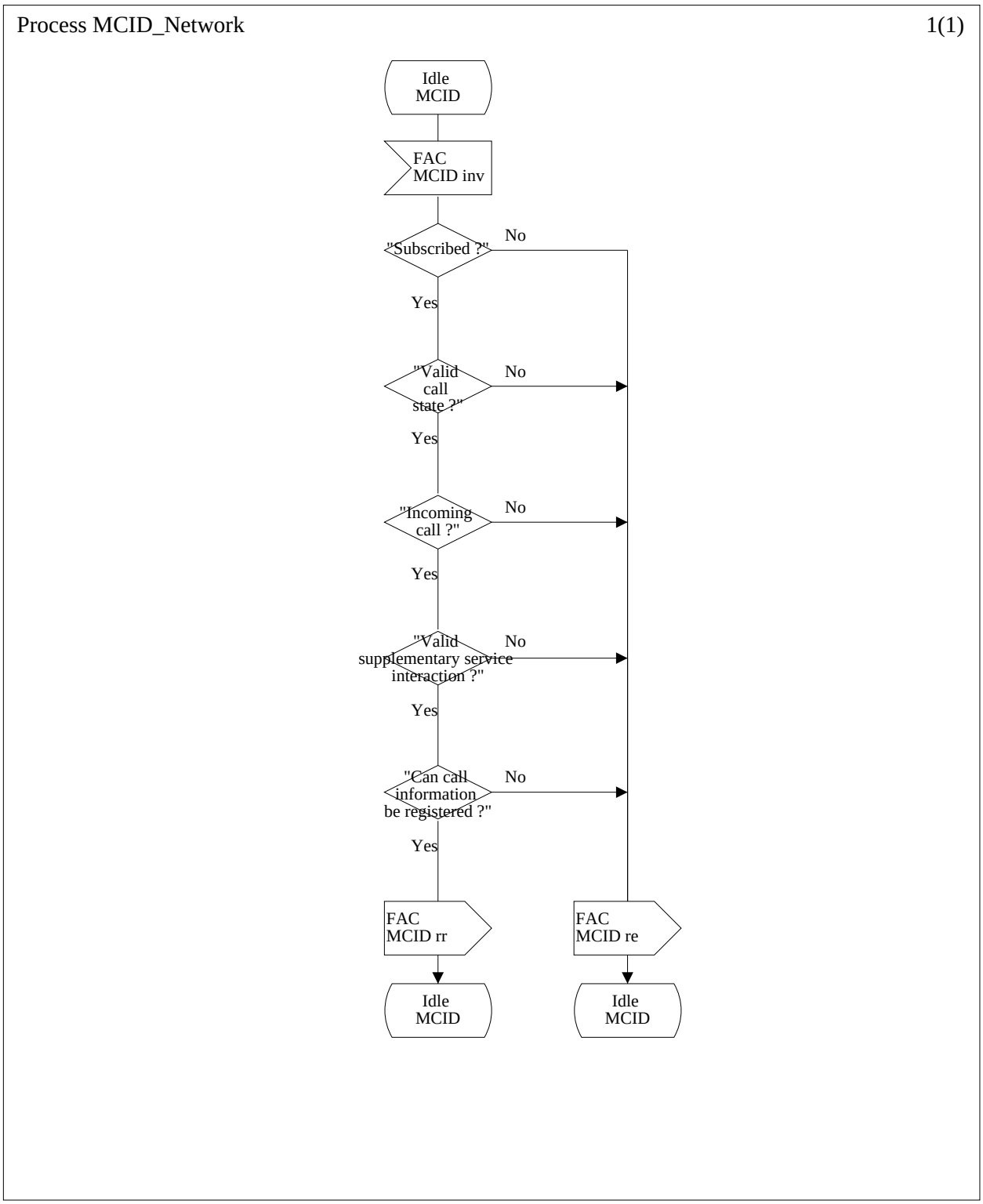


Figure 1: MCID supplementary service network side dynamic description

Annex A (informative): Signalling flows

Example signalling flows for the MCID supplementary service are shown in figure A.1 and figure A.2. Table A.1 indicates the key to these figures.

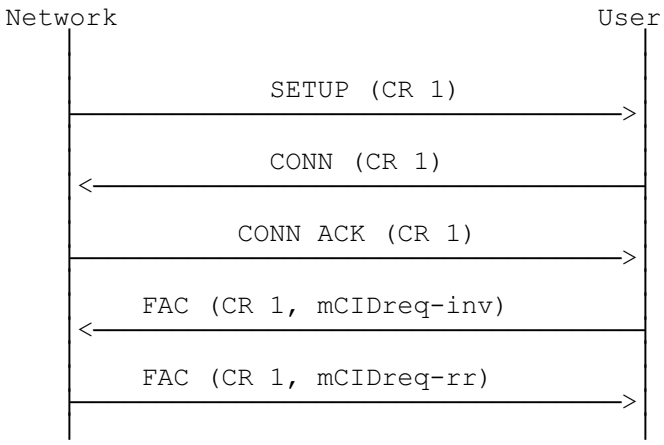


Figure A.1: Successful MCID supplementary service invocation during the Active state (N10, U10)

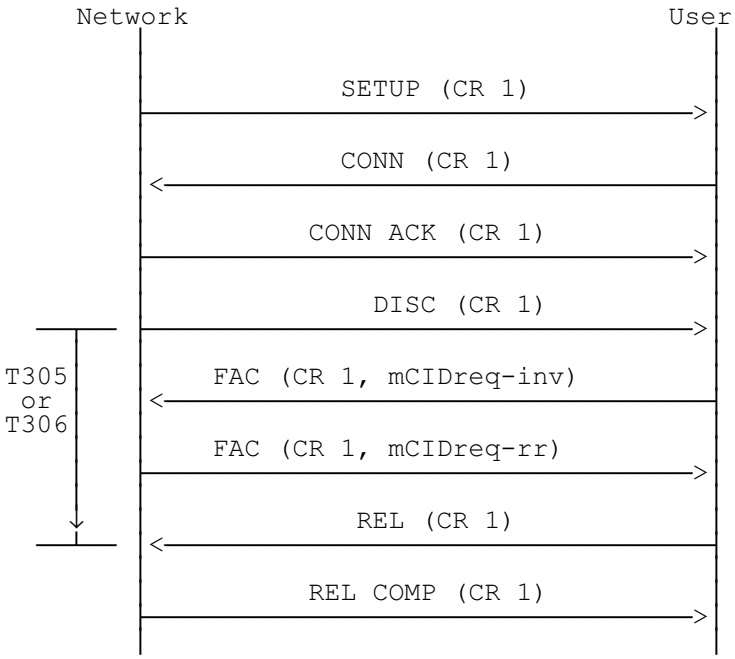


Figure A.2: Successful MCID supplementary service invocation during the Disconnect Indication state (N12)

Table A.1: Key to figure A.1 and figure A.2

Layer three messages:

CONN	CONNECT
CONN ACK	CONNECT ACKNOWLEDGE
FAC	FACILITY
REL	RELEASE
REL COMP	RELEASE COMPLETE

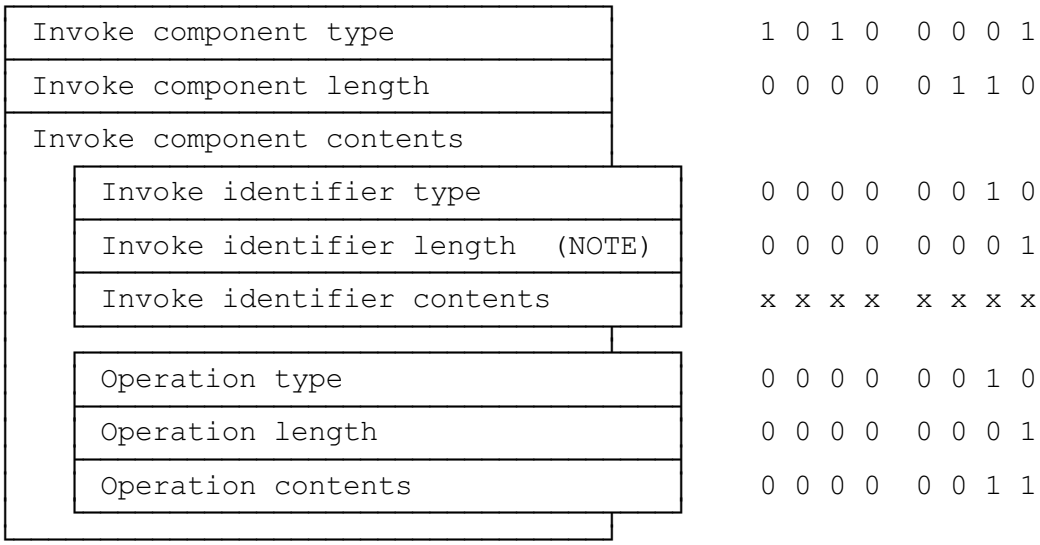
Layer three message information elements/parameters:

CR	Call Reference
inv	invoke component type
rr	return result component type

Annex B (informative): mCIDRequest components

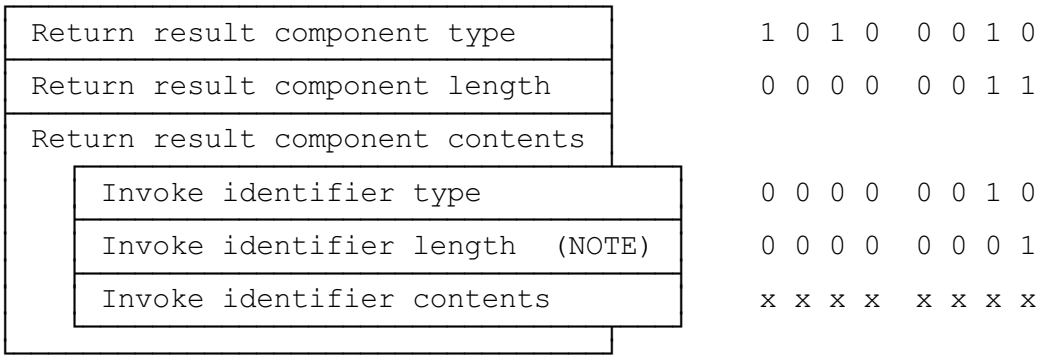
Example component structures for the MCID supplementary service are shown in figures B.1, B.2 and B.3.

In cases of discrepancies between this annex and Clause 7, Clause 7 is considered as the prime source.



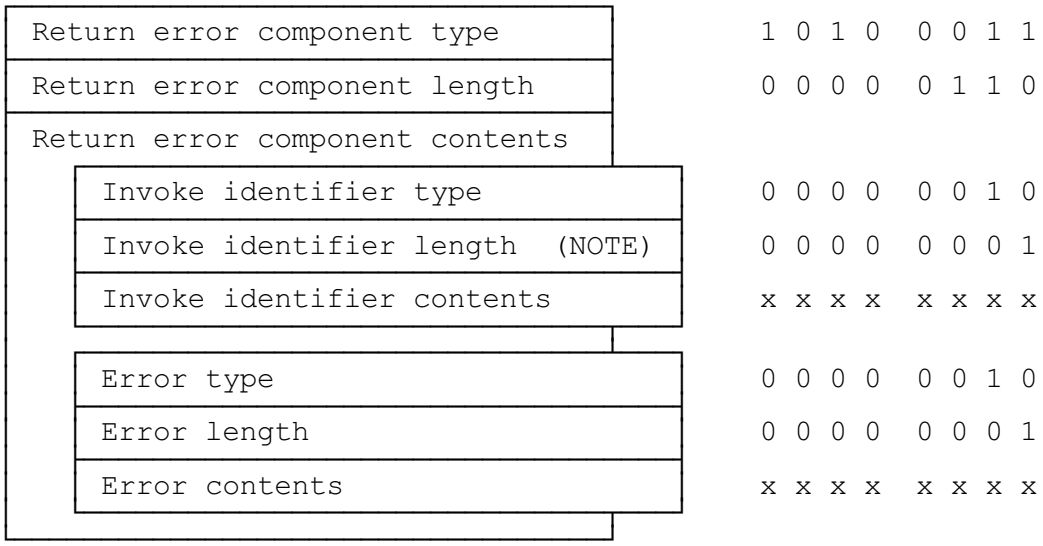
NOTE: The length of the invoke identifier is either 1 or 2 octets.

Figure B.1: Example mCIDRequest invoke component



NOTE: The length of the invoke identifier is either 1 or 2 octets.

Figure B.2: Example mCIDRequest return result component



NOTE: The length of the invoke identifier is either 1 or 2 octets.

Figure B.3: Example mCIDRequest return error component

History

Document history	
May 1992	First Edition
April 1994	Corrigendum to First Edition: change to part 1 of a multi-part standard
March 1996	Converted into Adobe Acrobat Portable Document Format (PDF) and incorporation of all prior Corrigenda