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Digitalno omrežje z integriranimi storitvami (ISDN) – Specifikacija vmesnika oddaljenega blokovnega strežnika (RFHI)

Integrated Services Digital Network (ISDN); Specification of the Remote Frame Handler Interface (RFHI)

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(ISDN)

Integrated Services Digital
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Foreword

This European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

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1 Scope

Applicability to frame mode services

The Remote Frame Handler (RFH) is an Integrated Services Digital Network (ISDN) frame handler, as defined in CCITT Recommendation Q.933 [4]:

- which is assumed to be remote with respect to the local connection-related function (refer to CCITT Recommendation I.324 [3]); and
- which is accessed by its subscribers via a two-step frame mode call establishment (CCITT Recommendation Q.933 [4], case A).

This European Telecommunication Standard (ETS) defines a manufacturer-independent interface between the local Connection Related Function (CRF) and the RFH, supporting a specific set of services. This interface is called the Remote Frame Handler Interface (RFHI).

The RFHI can operate:

- a) as an ISDN network-internal interface, in case the RFH belongs to the ISDN;
- b) as an inter-network interface, in case the RFH belongs to another network;
- c) as a private-public network interface.

However, the existence of this specification does not preclude alternative implementations of a network-internal interface for Frame Relay Bearer Service (FRBS) provided by a RFH.

Scope reduction

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This ETS specifies the interface between the local CRF and the RFH. It defines those additional requirements that are a direct result of standardizing this interface. Requirements to the ISDN and particularly to the RFH which are inherent to the provisioning of frame relay services by the ISDN/RFH and, therefore, are not a direct result of this interface, are specified in other standards. For such requirements this ETS makes reference to those standards.

Combination of the RFHI with the Packet Handler access point Interface (PHI), as specified in ETS 300 099 [8] is outside the scope of this ETS.

Supported ISDN frame mode services and conformance statement

The RFHI specification supports all case A services as defined in ETS 300 399-2 [10]; see clause 5 for details. No other services are supported by the RFHI specification.

The RFHI may be used to offer a subset of the frame relay services supported by the RFHI specification. Conformance to the RFHI specification is ensured by conforming to the sections of the specification that are relevant for the support of the subset of frame relay services to be offered with the RFHI.

2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are 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 E.164: "Numbering plan for the ISDN era".
- [2] CCITT Recommendation E.165: "Timetable for coordinated implementation of the full capability of the numbering plan for the ISDN era (Recommendation E.164)".
- [3] CCITT Recommendation I.324: "ISDN Network Architecture".
- [4] CCITT Recommendation Q.933 (1992): "Digital Subscriber Signalling System No 1 (DSS1) - Signalling specification for Frame Mode Bearer Service".
- [5] ETS 300 011 (1992): "Integrated Services Digital Network (ISDN); Primary rate user-network interface; Layer 1 specification and test principles".
- [6] ETS 300 089 (1992): "Integrated Services Digital Network (ISDN): Calling Line Identification Presentation (CLIP) supplementary service; Service description".
- [7] ETS 300 090 (1992): "Integrated Services Digital Network (ISDN): Calling Line Identification Restriction (CLIR) supplementary service; Service description".
- [8] ETS 300 099 (1992): "Integrated Services Digital Network (ISDN); Specification of the Packet Handler access point Interface (PHI)".
- [9] ETS 300 399-1 (1995): "Frame relay services; Part 1: General description".
- [10] ETS 300 399-2 (1995): "Frame relay services; Part 2: Integrated Services Digital Network (ISDN); Frame relay bearer service; Service definition".
- [11] ETS 300 402-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1); User-network interface data link layer; Part 1: General aspects [ITU-T Recommendation Q.920 (1993), modified]".
- [12] ETS 300 402-2: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1); User-network interface data link layer; Part 2: General application protocol specification [ITU-T Recommendation Q.921 (1993), modified]".
- [13] ETS 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1); User-network interface layer 3 specification for basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
- [14] ETS 300 403-2: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1); User-network interface layer 3 specification for basic call control; Part 2: Specification and Description Language (SDL) diagrams".

3 Definitions, symbols and abbreviations

3.1 Definitions

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

access channel: The channel used to access the RFH. This may be a 64 kbit/s or $n \times 64$ kbit/s multiple-rate (see ETS 300 289) bearer channel.

access network: The set of ISDN CRFs providing the connection of the access channel between a subscriber and the RFH.

administrative procedures: These RFHI Operations, Administration and Maintenance (OA&M) procedures are separately activated on both sides of the interface. Synchronisation is not automated, i.e. consistency has to be ensured externally. No signalling on the RFHI is involved.

CRF-F: CRF physically connected to the RFH.

CRF-S: CRF to which subscribers are connected. Synonym for "local CRF" as defined in CCITT Recommendation I.324 [3].

incoming call: Call in the direction from RFH to CRF-F (CRF-S).

local RFHI access: The configuration where the ISDN subscriber accessing frame mode services is directly connected to the CRF-F, i.e. CRF-F equal to CRF-S.

outgoing call: Call in the direction from CRF-S (CRF-F) to RFH.

remote RFHI access: The configuration where the ISDN subscriber accessing frame mode services is connected to the CRF-F via a CRF-S, different from the CRF-F.

RFHI OA&M: The RFHI specification deals only with those RFHI related OA&M aspects, that require the coordination of CRF-F/S and RFH. These aspects are called "RFHI OA&M". OA&M requirements that are local to the CRF-F/S side or the RFH side of the RFHI are not within its scope.

RFHI: The interface between the access network and the RFH.

3.2 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
CRF	Connection Related Function
CRF-F	CRF at RFH side
CRF-S	CRF at Subscriber side
DSS1	Digital Subscriber Signalling System No. one
FM	Frame Multiplexer
FRBS	Frame Relay Bearer Service
OA&M	Operations, Administration and Maintenance
PCM 30	30 channel Pulse Code Modulation
PRA	Primary Rate Access
PVC	Permanent Virtual Circuit
RFH	Remote Frame Handler
RFHI	Remote Frame Handler Interface
SS7	Signalling System No. 7
SVC	Switched Virtual Call
TE	Terminal Equipment
UUS1	User-to-User Signalling, service 1