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Prizemni snopovni radio (TETRA) – Govor in podatki (V+D) – 4. del: Osnovna operacija pri prehodu – 2. poglavje: Prehod pri digitalnem omrežju z integriranimi storitvami (ISDN)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 4: Gateways basic operation; Sub-part 2: Integrated Services Digital Network (ISDN) gateway

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Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 4: Gateways basic operation; Sub-part 2: Integrated Services Digital Network (ISDN) gateway

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Terrestrial Trunked Radio (TETRA) ETSI Project of the European Telecommunications Standards Institute (ETSI).

This ETS consists of 14 parts as follows:

Part 1: "General network design";

Part 2: "Air Interface (AI)";

Part 3: "Interworking at the Inter-System Interface (ISI)";

Part 4: "Gateways basic operation";

Part 5: "Peripheral Equipment Interface (PEI)";

Part 6: "Line connected Station (LS)";

Part 7: "Security";

Part 9: "General requirements for supplementary services";

Part 10: "Supplementary services stage 1";

Part 11: "Supplementary services stage 2";

Part 12: "Supplementary services stage 3";

Part 13: "SDL model of the Air Interface (AI)";

Part 14: "Protocol Implementation Conformance Statement (PICS) proforma specification".

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1 Scope

This ETS defines the Terrestrial Trunked Radio (TETRA) system supporting Voice plus Data (V+D). In accordance with ITU-T Recommendations I.130 [28], the stage one, stage two and stage three of the three level structure is used to specify the TETRA gateway to Public Integrated Services Digital Network (ISDN):

- Stage 1, is an overall service description, from the service subscriber's and user's standpoint;

- Stage 2, identifies the functional capabilities and information flows needed to support the services described in stage 1, and

  NOTE 1: The information flows in stage 2 have been drawn as Message Sequence Charts (MSCs).

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

Specifically this standard details the stage 1 aspects (overall service description) of the TETRA gateway as seen from the TETRA Switching and Maintenance Infrastructure point of view at the T reference point or coincident S and T reference points for the ISDN subscriber.

NOTE 2: This standard is applicable at the T and S references. It should however be noted, that no standards exist for the S reference point.

It details the stage 2 aspects (functional partitioning) of the TETRA gateway which includes the identification of the functional entities and the flows between them and finally it details the stage 3 signalling protocols for the TETRA gateway services, i.e. the protocol at the relevant reference points between the functional entities defined in stage 2. The described network layer services and protocols apply for the Switching and Management Infrastructure (SwMI), for the TETRA gateway and to the keypad protocol for the ISDN subscriber using TETRA services.

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A basic call is initiated at the TETRA gateway when, a SwMI detects an incoming call from an ISDN subscriber to a TETRA user or an outgoing call is made from a TETRA user to an ISDN subscriber. The TETRA gateway ensures that basic signalling required in the operation of the TETRA call and the ISDN call is maintained across the gateway.

The TETRA gateway and the TETRA system are seen by the external network as if it were a subscriber (users side) of the external network. For incoming calls from ISDN three methods of addressing a TETRA user are applicable, Subaddressing (SUB), Direct Dial In (DDI) and two stage dialing. Other means of incoming calls using other than ISDN subscriber lines, between the TETRA system and the external network exchange are outside the scope of this ETS.

End to end encryption is outside the scope of this ETS.

This ETS describes the TETRA gateway function, which provides an ISDN interface to the SwMI. Primary and basic rate is supported. However, multiple gateways on the same basic rate bus are not supported.

Circuit mode data calls are outside the scope of this ETS.