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Terrestrial Trunked Radio (TETRA) - Voice plus Data (V+D) - Part 3: Interworking at the Inter-System Interface (ISI) - Sub-part 14: Transport layer independent Additional Network Feature Short Data Service (ANF-ISISDS)

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**Terrestrial Trunked Radio (TETRA);
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Sub-part 14: Transport layer independent
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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee TETRA and Critical Communications Evolution (TCCE).

The present document is part 3, sub-part 14 of a multi-part deliverable covering the Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D), as identified below:

- Part 1: "General network design"; [SIST EN 300 392-3-14 V1.2.1:2020](https://standards.iteh.ai/catalog/standards/sist/239b9067-c687-4814-b85a-8c99ebf8514e/sist-en-300-392-3-14-v1-2-1-2020)
- Part 2: "Air Interface (AI)"; [8c99ebf8514e/sist-en-300-392-3-14-v1-2-1-2020](https://standards.iteh.ai/catalog/standards/sist/239b9067-c687-4814-b85a-8c99ebf8514e/sist-en-300-392-3-14-v1-2-1-2020)

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

- Sub-part 1: "General design";
- Sub-part 2: "Additional Network Feature Individual Call (ANF-ISIIC)";
- Sub-part 3: "Additional Network Feature Group Call (ANF-ISIGC)";
- Sub-part 4: "Additional Network Feature Short Data Service (ANF-ISISDS)";
- Sub-part 5: "Additional Network Feature for Mobility Management (ANF-ISIMM)";
- Sub-part 6: "Speech format implementation for circuit mode transmission";
- Sub-part 7: "Speech Format Implementation for Packet Mode Transmission";
- Sub-part 8: "Generic Speech Format Implementation";
- Sub-part 9: "Transport layer independent, General design";
- Sub-part 10: "General design, PSS1 over E.1";
- Sub-part 11: "General design, SIP/IP";
- Sub-part 12: "Transport layer independent Additional Network Feature Individual Call (ANF-ISIIC)";
- Sub-part 13: "Transport layer independent Additional Network Feature Group Call (ANF-ISIGC)";
- Sub-part 14: "Transport layer independent Additional Network Feature Short Data Service (ANF-ISISDS)";**

Sub-part 15: "Transport layer independent Additional Network Feature, Mobility Management (ANF-ISIMM)";

Part 4: "Gateways basic operation";

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

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";

Part 15: "TETRA frequency bands, duplex spacings and channel numbering";

Part 16: "Network Performance Metrics";

Part 17: "TETRA V+D and DMO specifications";

Part 18: "Air interface optimized applications";

Part 19: "Interworking between TETRA and Broadband systems".

NOTE 1: Part 3, sub-parts 6 and 7 (Speech format implementation), part 4, sub-part 3 (Data networks gateway), part 10, sub-part 15 (Transfer of control), part 13 (SDL) and part 14 (PICS) of this multi-part deliverable are in status "historical" and are not maintained.

NOTE 2: Some parts are also published as Technical Specifications such as ETSI TS 100 392-2 and those may be the latest version of the document.

The present document is based on ETSI EN 300 392-3-4 [i.1]. The main changes are:

- Removal of any reference to the bearer protocol.

For all subparts in the TETRA specification ETSI EN 300 392-3, "Interworking at the Inter-System Interface (ISI)" the terms ISI and TETRA ISI are equivalent.

National transposition dates	
Date of adoption of this EN:	13 November 2019
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Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2021
Date of withdrawal of any conflicting National Standard (dow):	31 January 2021

Modal verbs terminology

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1 Scope

The TETRA V+D interworking - at the Inter-System Interface (ISI) part defines the interworking between TETRA networks over the corresponding interface: the Inter-System Interface (ISI). It comprises the following sub-parts:

- Transport layer independent General design [3];
- General Design, PSS1 over E.1 [i.2];
- General Design, SIP/IP [i.3];
- Transport layer independent Additional Network Feature - ISI Individual Call (ANF-ISIIC) [i.4];
- Transport layer independent Additional Network Feature - ISI Group Call (ANF-ISIGC) [2];
- Transport layer independent Additional Network Feature - ISI Short Data service (ANF-ISISDS) (the present document);
- Transport layer independent Additional Network Feature - ISI Mobility Management (ANF-ISIMM) [i.5];
- Generic Speech Format Implementation [i.6].

The present document specifies the Additional Network Function (ANF) - Inter-System Interface (ISI) Short Data service (ANF-ISISDS) which is part of the Interworking at the Inter-System Interface (ISI) of the Terrestrial Trunked Radio system (TETRA) supporting Voice and Data (V+D). This service comprises of:

- TETRA short message transmission over the ISI to individual and group addresses;
- TETRA pre-defined status message transmission over the ISI to individual and group addresses.

ANF-ISISDS enables short data and status messages to be transferred between a user registered in one TETRA network to another user registered in another TETRA network, operating at the ISI of both SwMIs.

Like all other Additional Network Feature (ANF) specifications, those of ANF-ISISDS are produced in three stages, according to the method described in Recommendation ITU-T T.130 [4]. The present document contains the stage 1 and 2 descriptions of ANF-ISIIC, and stage 3 description. The stage 1 description specifies the ANF as seen by its users, which are essentially the CMCE SDS entities in both TETRA networks. The stage 2 description identifies the functional entities involved in the ANF and the information flows between them. The stage 3 description of ANF-ISISDS specifies its protocol.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] ETSI EN 300 392-2: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)".
- [2] ETSI EN 300 392-3-13: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 13: Transport layer independent Additional Network Feature Group Call (ANF-ISIGC)".
- [3] ETSI EN 300 392-3-9: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 9: Transport layer independent, General design".
- [4] Recommendation ITU-T I.130: "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [5] ETSI EN 300 392-12-8: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 8: Area Selection (AS)".
- [6] ETSI EN 300 392-9: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services".
- [7] ISO/IEC 11571 (1998): "Information technology -- Telecommunications and information exchange between systems -- Private Integrated Services Networks -- Addressing".
- [8] Recommendation ITU-T E.164: "The international public telecommunication numbering plan".
- [9] Recommendation ITU-T X.121: "International numbering plan for public data networks".

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- [i.1] ETSI EN 300 392-3-4: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 4: Additional Network Feature Short Data Service (ANF-ISISDS)".
- [i.2] ETSI EN 300 392-3-10: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 10: General design, PSS1 over E.1".
- [i.3] ETSI EN 300 392-3-11: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 11: General design, SIP/IP".
- [i.4] ETSI EN 300 392-3-12: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 12: Transport Layer Independent Additional Network Feature Individual Call (ANF-ISIIC)".
- [i.5] ETSI EN 300 392-3-15: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 15: Transport layer independent Additional Network Feature, Mobility Management (ANF-ISIMM)".