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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)

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

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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 15 of a multi-part deliverable covering the Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D), as identified below:

Part 1: "General network design";

Part 2: "Air Interface (AI)";

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 300 392-3-5 [i.1]. The main changes are:

- Removal of any reference to the bearer protocol (except what is carried in PDUs).
- 'visited SwMI' definition is replaced by 'individual subscriber visited SwMI' and 'group visited SwMI'.
- 'home SwMI' is replaced by 'individual subscriber home SwMI' and 'group home SwMI'.
- Removal of clause 9.5.1 as this clause was completely wrong (De-registration is about the MS deregistering from the SwMI, not that the SwMI tries to de-register the MS).
- Dynamic descriptions are removed - they were not up to date and brought no additional information.
- Stage 2 sequences have been updated.

For all sub-parts in the TETRA specification ETSI EN 300 392-3 the terms ISI and TETRA ISI are equivalent.

National transposition dates	
Date of adoption of this EN:	13 November 2019
Date of latest announcement of this EN (doa):	31 July 2020
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

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Introduction

The present document is a transport layer independent description of ISI Mobility Management based on ETSI EN 300 392-3-5 [i.1]. All transport layer dependent information is described in separate documents for each transport protocol such as ETSI EN 300 392-3-10 [13] or ETSI EN 300 392-3-11 [14]. More transport describing sub-parts may be present (in the future).

1 Scope

The present document defines the mobility management of interworking at the Inter-System Interface (ISI) for Terrestrial Trunked Radio (TETRA) system supporting Voice plus Data (V+D).

The TETRA V+D Inter-working - basic operation part defines the Inter-System Interface (ISI) between the SwMIs as specified in the following sub-parts:

- Transport layer independent, General design [i.5].
- General design, PSS1 over E.1 [13].
- General design, SIP/IP [14].
- Transport layer independent Additional Network Feature Individual Call (ANF-ISIIC) [9].
- Transport layer independent Additional Network Feature Group Call (ANF-ISIGC) [10].
- Transport layer independent Additional Network Feature Short Data Service (ANF-ISISDS) [i.2].
- Transport layer independent Additional Network Feature, Mobility Management (ANF-ISIMM) (the present document).
- Generic Speech Format Implementation [i.4].

NOTE: These TSs are produced in analogy with the Recommendation ITU-T I.130 [4].

The present document contains the ANF-ISIMM part. The ANF-ISIMM part defines additional Mobility Management (MM) services to the SwMIs. If supported, the ANF-ISIMM services complement the intra-SwMI-MM, authentication and key management services. In support of these, the ANF-ISIMM enables the invocation and operation of these services between the SwMIs over the ISI. Thus, ANF-ISIMM offers the following services:

- Migration and restricted migration.
- Individual subscriber and group profile update.
- Supplementary Service profile update.
- De-registration.
- Group attachment/detachment.
- Linked group attachment/detachment.
- Individual subscriber and group database recovery.
- Authentication, one-directionally or mutually between the individual subscriber and the home SwMI.
- Over-The-Air-Re-keying (OTAR) for Static Cipher Key (SCK) generation and SCK delivery.

For the following service are only included in the stage 1 descriptions:

- Group Linking/unlinking.
- GTSI attachment/detachment to a linking participating group from another SwMI.

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.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

NOTE 1: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

NOTE 2: Note that for the TETRA standards, the reference is always to a European Standard (ETSI EN 300 xxx) if such has been published, but the latest version of that standard can be either an EN or a Technical Specification (ETSI TS 100 xxx), even if this is not visible in the reference list.

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/ETS 300 392-12 (all parts): "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3".
- [3] ETSI EN 300 392-7: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 7: Security".
- [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/ETS 300 392-10 (all parts): "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1".
- [6] ETSI EN 300 392-10-6: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 6: Call Authorized by Dispatcher (CAD)".
- [7] ETSI EN 300 392-10-18: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 18: Barring of Outgoing Calls (BOC)".
- [8] ETSI EN 300 392-9: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services".
- [9] 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)".
- [10] 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)".
- [11] ETSI TS 101 747: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); IP Interworking (IPI)".
- [12] ETSI EN 300 392-12-22: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 22: Dynamic Group Number Assignment (DGNA)".
- [13] 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".
- [14] 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".

- [15] ETSI EN 300 392-1: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design".

2.2 Informative 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.

NOTE 1: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

NOTE 2: Note that for the TETRA standards, the reference is always to a European Standard (ETSI EN 300 xxx) if such has been published, but the latest version of that standard can be either an EN or a Technical Specification (ETSI TS 100 xxx), even if this is not visible in the reference list.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI EN 300 392-3-5: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 5: Additional Network Feature for Mobility Management (ANF-ISIMM)".
- [i.2] ETSI EN 300 392-3-14: "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)".
- [i.3] Void.
- [i.4] ETSI EN 300 392-3-8: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 8: Generic Speech Format Implementation".
- [i.5] 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".

koniec náhľadu – text ďalej pokračuje v platenej verzii STN