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Prizemni snopovni radio (TETRA) – Govor in podatki (V+D) – 11. del: Dopolnilne storitve stopnje 2 – 1. poddel: Identifikacija klica (CI)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 1: Call Identification (CI)

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Project Terrestrial Trunked Radio (TETRA).

The present document had been published as ETS 300 392-11-1. During the maintenance it was converted into an EN.

The present document is part 11, sub-part 1 of a multi-part deliverable covering the Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D), as identified below:

EN 300 392-1: "General network design";

EN 300 392-2: "Air Interface (AI)";

EN 300 392-3: "Interworking at the Inter-System Interface (ISI)";

ETS 300 392-4: "Gateways basic operation";

EN 300 392-5: "Peripheral Equipment Interface (PEI)";

EN 300 392-7: "Security";

EN 300 392-9: "General requirements for supplementary services";

EN 300 392-10: "Supplementary services stage 1";

EN 300 392-11: "Supplementary services stage 2";

- **EN 300 392-11-1: "Call Identification (CI)";**
- ETS 300 392-11-2: "Call Report (CR)";
- ETS 300 392-11-3: "Talking Party Identification (TPI)";
- EN 300 392-11-4: "Call Forwarding (CF)";
- ETS 300 392-11-5: "List Search Call (LSC)";
- EN 300 392-11-6: "Call Authorized by Dispatcher (CAD)";
- ETS 300 392-11-7: "Short Number Addressing (SNA)";
- EN 300 392-11-8: "Area Selection (AS)";
- ETS 300 392-11-9: "Access Priority (AP)";
- EN 300 392-11-10: "Priority Call (PC)";
- ETS 300 392-11-11: "Call Waiting (CW)";
- EN 300 392-11-12: "Call Hold (HOLD)";

ETS 300 392-11-13: "Call Completion to Busy Subscriber (CCBS)";

EN 300 392-11-14: "Late Entry (LE)";

ETS 300 392-11-16: "Pre-emptive Priority Call (PPC)";

EN 300 392-11-17: "Include Call (IC)";

EN 300 392-11-18: "Barring of Outgoing Calls (BOC)";

EN 300 392-11-19: "Barring of Incoming Calls (BIC)";

ETS 300 392-11-20: "Discreet Listening (DL)";

EN 300 392-11-21: "Ambience Listening (AL)";

ETS 300 392-11-22: "Dynamic Group Number Assignment (DGNA)";

ETS 300 392-11-23: "Call Completion on No Reply (CCNR)";

ETS 300 392-11-24: "Call Retention (CRT)";

EN 300 392-12: "Supplementary services stage 3";

ETS 300 392-13: "SDL model of the Air Interface (AI)";

ETS 300 392-14: "Protocol Implementation Conformance Statement (PICS) proforma specification".

TS 100 392-15: "TETRA frequency bands, duplex spacing and channel numbering";

TS 100 392-16: "Network Performance Metrics";

TS 100 392-17: "TETRA V+D and DMO Release 1.1 specifications".

National transposition dates	
Date of adoption of this EN:	19 December 2003
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1 Scope

The present document specifies the stage 2 description of the Supplementary Services CLIP, CLIR and COLP all part of Call Identification for the Terrestrial Trunked Radio (TETRA). The term "Line" is used in the present document by extension to the air interface and to keep those supplementary service names at the Air Interface in TETRA Radio based network.

Calling Line Identification Presentation (SS-CLIP) is a supplementary service which is offered to the connected user and which provides either the calling user's identity (ITSI for TETRA) in case of individual call or the calling user identity (GTSI is presented as part of the normal group call set-up) in case of group call.

COnnected Line Identification Presentation (SS-COLP) is a supplementary service which is offered to the calling user and which provides the connected user's identity (connected ITSI for individual call, connected GTSI for a group call).

Calling/Connected Line Identification Restriction (SS-CLIR) is a supplementary service offered to a user to restrict presentation of that user's ITSI to another user. The generic term SS-CLIR covers in fact two different supplementary services: SS-CLIR (Calling Line Identity Restriction) and SS-COLR (COnnected Line identity Restriction). Contrary to ECMA-148 [9] and in line with public ISDN, the two services have been split in the present document to improve its readability.

Man-Machine Interface and charging principles are outside the present document.

Supplementary service specifications are produced in three stage according to the method defined in ITU-T Recommendation I.130 [1]. The stage 2 description identifies the functional capabilities and the information flows needed to support the supplementary service as specified in its stage 1 description (see EN 300 392-10-1 [7]). The stage 2 description is followed by the stage 3 description (see EN 300 392-12-1 [8]), which specifies the protocols at the air interface and at the various Inter-System Interfaces (ISI) to support the service.

The present document is applicable to MS and SwMIs involved in the operation of those supplementary services. Specifications of interworking gateways to non-TETRA networks (mainly PSTN and ISDN) are outside the scope of the present document.

The stage 2 descriptions for the SS-CLIP, SS-CLIR and SS-COLP are derived from ECMA-148 [9] taken as normative reference for the corresponding supplementary services for Private Integrated Services Networks (PISNs).

NOTE: The stage 2 description is followed by the stage 3 description, which specifies the encoding rules for the information flows and process behaviour for the different entities in SwMI and MS.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

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

[1] ITU-T Recommendation I.130: "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".

[2] ETSI EN 300 171: "Private Integrated Services Network (PISN); Service description, functional capabilities and information flows; Circuit-mode 64 kbit/s bearer services [ISO/IEC 11574 (2000) modified]".

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

[4] ETSI EN 300 392-3-2: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 2: Additional Network Feature Individual Call (ANF-ISIIC)".

[5] ETSI EN 300 392-3-3: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 3: Additional Network Feature Group Call (ANF-ISIGC)".

[6] ETSI EN 300 392-9: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 9: General requirements for supplementary services".

[7] ETSI EN 300 392-10-1: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 1: Call Identification (CI)".

[8] ETSI EN 300 392-12-1: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 1: Call Identification (CI)".

[9] Standard ECMA-148: "Private Integrated Services Network (PISN) - Specification, Functional Model and Information Flows - Identification Supplementary Services (ISSD), 3rd edition".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

affected user: user the identity of which is either presented (SS-COLP), received (SS-CLIP), restricted of presentation (SS-CLIR) or restricted of reception (SS-COLR)

calling user identity: see EN 300 392-1 [3], clause 7.2 where ITSI and SSI are defined

NOTE: When the connected user and the calling user belongs to the same home SwMI, and according to clause 8.4.1 of EN 300 392-9 [6], this identity can be given using only the SSI part of the ITSI. In all other cases, the identity will be the full ITSI. In the case of a group call, the calling user identity is the individual calling user ITSI setting up the group call.

connected user: user that answers a call

NOTE: The connected user is not necessarily the called user, different from ECMA-148 [9].

connected user identity: identity of the connected user for identification purposes

NOTE 1: See EN 300 392-1 [3], clause 7.2 where ITSI and SSI are defined.

NOTE 2: When the connected user and the calling user belongs to the same home SwMI, and according to clause 8.4.1 of EN 300 392-9 [6], this identity can be given using only the SSI part of the ITSI. In all other cases, the identity will be the full ITSI. In the case of a group call, the connected user identity is not defined

presentation indicator: presentation indicator provides instructions on whether or not the provided calling line identity is allowed to be presented or not (restricted), or indicates that the number is not available

screening indicator: screening indicator provides information on the source and the quality of the provided information

served user(s): Served user in the case of SS-CLIP is the connected user for an individual call and the connected users for a group call; the served user in the case of SS-COLP is the calling user

NOTE: In the ECMA terminology, SS-CLIR includes the CLIR restriction of CLIP and the COLR restriction of COLP; in the present document SS-CLIR and SS-COLR are used preferably to a generic SS-CLIR term; thus in the case of SS-CLIR as applicable to the present document, the served user is the calling user and in the case of SS-COLR, the served user is the connected user

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CC	Basic service call control functional entity
CCA	Basic service call control functional entity agent

NOTE: CC and CCA are applied as defined in EN 300 171 [2].

CGLI	CallinG Line Identification (ECMA)
CLI	Calling Line Identification
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
COLI	COnnected Line Identification
COLP	COnnected Line Presentation
COLR	COnnected Line Restriction
FE	Functional Entity
GTSI	Group TETRA Subscriber Identity
ISI	Inter System Interface
ITSI	Individual TETRA Subscriber Identity
PI	Presentation Indicator
req	request
SDL	Specification and Description Language
SS	Supplementary Service
SSI	Short Subscriber Identity
SwMI	Switching and Management Infrastructure
TETRA	Terrestrial Trunked Radio

4 Supplementary Service Calling Line Identification Presentation (SS-CLIP) stage 2 specification

4.1 Functional model

The functional model for TETRA SS-CLIP is different from the functional model for ECMA-148 [9] in particular with the addition of group call. Moreover, the TETRA terminology is used and the present document is in line with EN 300 392-9 [6].

4.1.1 Functional model description

The functional model shall comprise the following functional entities:

- FE1 Served User CGLI (CallinG Line Identification) Reception Functional Entity;
- FE21 Served User current SwMI CGLI Presentation Functional Entity;
- FE22 Group Controlling SwMI Functional Entity.

The following functional relationships shall exist between these FEs:

- ra between FE1 and FE21;
- rb between FE21 and FE22;
- rc between FE22 and FE21;
- rd between FE21 and FE1.

Figure 1 shows these FEs and relationships in the case of individual call while figure 2 shows these FEs and relationships in the case of group call.

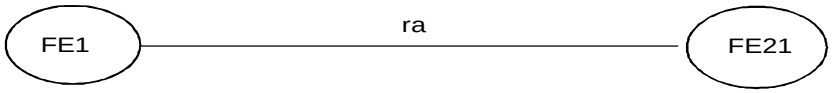

Figure 1: Functional model for SS-CLIP in the case of Individual Call

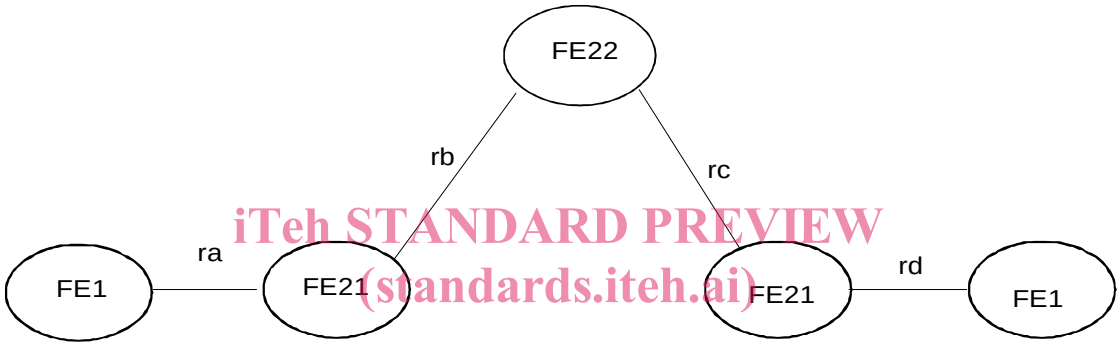

Figure 2: Functional model for SS-CLIP in the case of Group Call

According to stage 1 description in EN 300 392-10-1 [7], activation/deactivation of SS-CLIP is done by provision at subscription time; as a result, there is no activation/deactivation, no interrogation and/or no definition procedure; there shall be no authorized user for that SS-CLIP.

4.1.2 Description of functional entities

4.1.2.1 Served User CGLI Reception, FE1

This functional entity receives the information related to the calling user identity and delivers it either to the served/connected user in the case of an individual call or to the served/connected users in the case of a group call.

4.1.2.2 Served User current SwMI, CGLI Presentation, FE21

When an individual call is being set-up, FE21 shall determine if SS-CLIP is activated, and if so, the applicable presentation parameters (i.e. whether SS-CLIR has been invoked or not for that call). If yes, FE21 shall then invoke SS-CLIP and shall report to served user FE1 the calling user identity.

In the case of interworking, the presentation of an indicator "number not available due to interworking" shall be possible.