SLOVENSKI STANDARD
SIST EN 300 392-12-3 V1.2.1:2006

01-april-2006

Prizemni snopovni radio (TETRA) ï Govor in podatki (V+D) ï 12. del: Dopolnilne storitve stopnje 3 ï 3. poddel: Identifikacija govoreļ ega udeleģenca (TPI)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 3: Talking Party Identification (TPI)

Ta slovenski standard je istoveten z: EN 300 392-12-3 Version 1.2.1

ICS:

33.070.10	Prizemni snopovni radio (TETRA)	Terrestrial Trunked Radio (TETRA)

SIST EN 300 392-12-3 V1.2.1:2006 **en**

ETSI EN 300 392-12-3 V1.2.1 (2004-02)

European Standard (Telecommunications series)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 3: Talking Party Identification (TPI)

Reference
REN/TETRA-03099

Keywords
TETRA, V+D

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from:
http://www.etsi.org

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
http://portal.etsi.org/tb/status/status.asp

If you find errors in the present document, send your comment to:
editor@etsi.org

Copyright Notification

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://webapp.etsi.org/IPR/home.asp).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

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

The present document is part 12, sub-part 3 of a multi-part deliverable covering the 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 300 392-12: "Supplementary services stage 3";

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

ETS 300 392-12-13: "Call Completion to Busy Subscriber (CCBS)";

EN 300 392-12-14: "Late Entry (LE)";

ETS 300 392-12-16: "Pre-emptive Priority Call (PPC)";

EN 300 392-12-17: "Include Call (IC)";

EN 300 392-12-18: "Barring of Outgoing Calls (BOC)";

EN 300 392-12-19: "Barring of Incoming Calls (BIC)";

ETS 300 392-12-20: "Discreet Listening (DL)";

EN 300 392-12-21: "Ambience Listening (AL)";

EN 300 392-12-22: "Dynamic Group Number Assignment (DGNA)";

ETS 300 392-12-23: "Call Completion on No Reply (CCNR)";

ETS 300 392-12-24: "Call Retention (CRT)";

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 spacings 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:	6 February 2004
Date of latest announcement of this EN (doa):	31 May 2004
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2004
Date of withdrawal of any conflicting National Standard (dow):	30 November 2004

1 Scope

The present document specifies the stage 3 description of the Supplementary Service Talking Party Identification (SS-TPI) for the Terrestrial Trunked Radio (TETRA).

The SS-TPI supplementary service enables the party/parties participating in a call to receive the identification of the talking/sending party. The SS-TPI is activated against individual identity in individual call and against group identity in group calls.

Man-Machine Interface (MMI) and charging principles are outside the scope of the present document.

The supplementary service stage 3 description is preceded by the stage 1 and the stage 2 description of the service, according to the method described in ITU-T Recommendation I.130 [10]. The stage 1 description specifies the service from the user's point of view. 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. The present stage 3 description specifies the protocols at the air interface and at the various Inter-System Interfaces (ISI) to support SS-TPI.

NOTE: According to ITU-T Recommendation I.130 [10], the stage 3 description of any telecommunication service addresses the network implementation aspects. Consequently it comprises two steps: the specifications of all protocols at the various reference points involved in any of the service procedures (notably the service operation) are the first step of the stage 3 description, and the specifications of the functions of the corresponding network entities are its second step.

The latter have not been provided since they can be derived from the specification of the functional entity actions in the stage 2 description.

The present document is applicable to Voice plus Data individual call or group call, more specifically to the following entities:

- the MS/LS of listening/receiving users during an individual call or a group call;
- to the originating Switching and Management Infrastructures (SwMIs) in an individual call or a group call;
- to the group home SwMI and the participating SwMI for a group call;
- to the terminating SwMI for an individual call;
- and, optionally, to the home SwMI of the group or of the MS/LSs involved, for managing the supplementary service.

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] ETSI EN 300 392-2: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)".

[2] ETSI EN 300 392-3-1: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 3: Interworking at the Inter-System Interface (ISI); Sub-part 1: General design".

[3] 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)".

[4] 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)".

[5] 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)".

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

[7] ETSI ETS 300 392-10-3: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 3: Talking Party Identification (TPI)".

[8] ETSI ETS 300 392-11-3: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 3: Talking Party Identification (TPI)".

[9] ETSI EN 300 392-12-6: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 12: Supplementary services stage 3; Sub-part 6: Call Authorized by Dispatcher (CAD)".

[10] ITU-T Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".

[11] ITU-T Recommendation Z.100: "Specification and Description Language (SDL)".

3 Definitions and abbreviations

3.1 Definitions

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

authorized user: identified user who is allowed to define, activate, deactivate and/or interrogate the SS-TPI parameters

served user: listening/receiving party in a call, that receives the SS-TPI information

NOTE: In a group call, all parties except the talking/sending party will be served users. In an individual call, if SS-TPI is provided to the calling and the connected users:

- if the call is half-duplex, whenever one of the two parties becomes the talking/sending user, the other party is the served user;
- if the call is duplex, both of them are served users.

served user SwMI: in the case of an individual call, SwMI where the served user is registered, or in the case of a group call, any SwMI where served users are registered different from the group controlling SwMI

NOTE: The protocol specified for the start of the call in the present document for such SwMI applies independently of whether or not the/a served user is registered in that SwMI at that time (i.e. the user registered in that SwMI involved the call may be talking/sending at set-up time, and become served user only later during the call).

talking/sending user: party to whom transmission permission has been granted during a group call or a half-duplex individual call

talking/sending user SwMI: SwMI where the talking/sending user is registered

NOTE: That definition applies without restriction in the case of an individual call. In the case of a group call, the talking/sending user SwMI exists only when it is different from the group controlling SwMI, The protocol specified for the start of the call in the present document for such SwMI applies independently of whether or not the talking/sending user is registered in that SwMI at that time (i.e. the user registered in that SwMI involved the call may be listening/receiving at set-up time, i.e. thus the/a served user, and become talking/sending user only later during the call).

In addition, the other definitions given in EN 300 392-9 [6] shall apply.

3.2 Abbreviations

3.2.1 General abbreviations

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

ANF-ISIGC	Additional Network Feature - Inter-System Interface Group Call
ANF-ISIIC	Additional Network Feature - Inter-System Interface Individual Call
ANF-ISIMM	Additional Network Feature - Inter-System Interface Mobility Management
ANF-ISISS	Additional Network Feature - Inter-System Interface Supplementary Service
GTSI	Group TETRA Subscriber Identity
ISI	Inter-System Interface
ITSI	Individual TETRA Subscriber Identity
MS	Mobile Station
PDU	Protocol Data Unit
ROSE	Remote Operation Service Element
SS	Supplementary Service

NOTE: The abbreviation SS is only used when referring to a specific supplementary service.

SwMI	Switching and Management Infrastructure

3.2.2 Supplementary service abbreviations

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

CAD	Call Authorized by Dispatcher
CLIR	Calling/connected Line Identification Restriction
COLP	Connected Line identification Presentation
TPI	Talking Party Identification

4 SS-TPI service description

4.1 General

SS-TPI enables a listening/receiving user in an individual or a group call to be provided with the identity of the talking/sending party, and on an optional basis, with its mnemonic name and/or with the level of priority of its request for transmission grant.

This clause describes SS-TPI specific services offered by the Circuit Mode Control Entity (CMCE) at the Supplementary Services service access point (TNSS-SAP) of the TETRA voice plus data layer 3 service boundary in a TETRA Mobile Station (MS) or TETRA Line Station (LS). The SS-TPI service access point is used in conformance testing as a normative boundary in MSs and LSs.

NOTE: As the present document only deals with the SS-TPI all the service primitives has been shown without a TNSS-TPI-prefix e.g. the TNSS-TPI-ACTIVATE request is shorten into an ACTIVATE request.

4.2 SS-TPI services offered over the TNSSSAP

NOTE 1: As man-machine interface or user applications are outside the scope of the present document service primitives are used to define information exchange to and from the standardized part of the MS/LS. Those primitives may be only indirectly accessible.

The SS-TPI service primitives at the served user MS/LS TNSS-SAP shall be:

- INFORM indication.

The SS-TPI service primitives at the authorized user MS/LS TNSS-SAP shall be:

- ACTIVATE request;
- ACTIVATE indication;
- DEFINE request;
- DEFINE indication;
- INFORM indication;
- INTERROGATE request;
- INTERROGATE indication;
- INTERROGATE BY NAME request;
- INTERROGATE BY NAME indication.

Any user to whom SS-TPI is provided should have the possibility to use the INTERROGATE primitives mentioned above, limited to its own ITSI and to GTSIs of groups he is member of.

NOTE 2: Formally, when such user is using the INTERROGATE primitives to know whether SS-TPI has been activated for him, and if yes with which optional subscription parameters, he is acting as a served user. While when he is using those primitives to know his mnemonic name, he is acting as a talking/sending user (since that name is going to be delivered to the served user(s)). However no difference has been made between the two cases, since during a call any user can be in turn a served user and talking/sending user.

4.2.1 ACTIVATE indication

The ACTIVATE indication primitive shall be sent to the user application by the MS/LS CMCE over TNSS-SAP to inform it of the result of a previous ACTIVATE request.

If the previous request has been addressed to a SwMI for more than one identity, that SwMI may send its corresponding response either in one single request which applies to all those identities or in multiple requests.

The ACTIVATE indication primitive shall contain the SS-TPI parameters listed in table 1.

Table 1: Parameters for the primitive ACTIVATE indication

Parameter	Indication
Activation result	M (see note 1)
TETRA identity/identities	M (see note 2)
Activation state	C (see notes 1 and 3)
NOTE 1: There shall be only one activation result and one activation state per indication primitive. NOTE 2: It is optional to support more than one identity. NOTE 3: Conditional on the activation result.	

4.2.2 ACTIVATE request

The ACTIVATE request primitive shall be sent to the MS/LS CMCE by the user application by over TNSS-SAP to activate SS-TPI.

The activation process shall support one TETRA identity in a request. Optionally it may support a list and/or range of identities. Such identity/identities may be those of either individual users or of groups.

The ACTIVATE request primitive shall contain the SS-TPI parameters listed in table 2.

Table 2: Parameters for the primitive ACTIVATE request

Parameter	Request
Access priority	O
TETRA identity/identities	M (see note 1)
Activation request	M (see note 2)
NOTE 1: It is optional to support more than one identity. NOTE 2: There shall be only one activation request per request primitive.	

4.2.3 DEFINE indication

The DEFINE indication primitive shall be sent to the user application by the MS/LS CMCE over TNSS-SAP to inform it of the result of a previous DEFINE request.

If the previous request has been addressed to a SwMI for more than one identity, that SwMI may send its corresponding response either in one single request which applies to all those identities or in multiple requests.

The DEFINE indication primitive shall contain the SS-TPI parameters listed in table 3.

Table 3: Parameters for the primitive DEFINE indication

Parameter	Indication
Definition result	M (see note 1)
TETRA identity/identities	M (see note 2)
Activation state	C (see notes 1 and 3)
NOTE 1: There shall be only one definition result and one activation state per indication primitive. NOTE 2: It is optional to support more than one identity. NOTE 3: Conditional on the definition result.	

4.2.4 DEFINE request

The DEFINE request primitive shall be sent to the MS/LS CMCE by the user application by over TNSS-SAP to give a mnemonic name to a user.

The definition process shall support one TETRA identity in a request. Optionally it may support a list and/or range of identities. Such identity/identities may only be those of individual users (since the groups have no mnemonic names).

The DEFINE request primitive shall contain the SS-TPI parameters listed in table 4.

Table 4: Parameters for the primitive DEFINE request

Parameter	Request
Access priority	O
TETRA identity/identities	M (see note 1)
TETRA mnemonic name/names	M (see note 2)
Activation request	C (see note 3)
NOTE 1: It is optional to support more than one identity. NOTE 2: There shall be as many mnemonic names as there are identities. NOTE 3: There shall be only one activation request per request primitive.	

4.2.5 INFORM indication

The INFORM indication primitive shall be sent to the user application by the MS/LS CMCE over TNSS-SAP as a result of SS-TPI operation. The INFORM indication primitive shall contain the SS-TPI parameters listed in table 5.

Table 5: Parameters for the primitive INFORM indication

Parameter	Indication
SS-CLIR invoked for talking/sending party	M
Talking/sending party identity	C (see note 1)
Talking/sending party mnemonic name	O (see note 2)
Tx demand priority	O
NOTE 1: Conditional on SS-CLIR not having been invoked for talking/sending party. NOTE 2: Shall not be present if SS-CLIR has been invoked for talking/sending party.	

4.2.6 INTERROGATE indication

The INTERROGATE indication primitive shall be sent to the user application by the MS/LS CMCE over TNSS-SAP to inform it of the result of a previous INTERROGATE request.

If the previous request has been addressed to a SwMI for more than one identity, that SwMI may send its corresponding response either in one single request which applies to all those identities or in multiple requests.

The INTERROGATE indication primitive shall contain the SS-TPI parameters listed in table 6.

Table 6: Parameters for the primitive INTERROGATE indication

Parameter	Indication
Interrogation result	M (see note 1)
TETRA identity/identities	M (see note 2)
TETRA mnemonic name/names	C (see notes 3 and 4)
Activation state	C (see notes 1 and 3)
NOTE 1: There shall be only one interrogation result and one activation state per indication primitive. NOTE 2: It is optional to support more than one identity. NOTE 3: Conditional on the interrogation result. NOTE 4: If that parameter is present (see note 3), there shall be as many mnemonic names as there are identities.	

4.2.7 INTERROGATE request

The INTERROGATE request primitive shall be sent to the MS/LS CMCE by the user application by over TNSS-SAP to know the SS-TPI activation status of a user and his mnemonic name.

The interrogation process shall support one TETRA identity in a request. Optionally it may support a list and/or range of identities. Such identity/identities may be those of either individual users or of groups.

The INTERROGATE request primitive shall contain the SS-TPI parameters listed in table 7.

Table 7: Parameters for the primitive INTERROGATE request

Parameter	Request
Access priority	O
TETRA identity/identities	M (see note)
NOTE: It is optional to support more than one identity.	