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Foreword

This European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS is a multi-part standard and will consist of the following parts:

- Part 1: "General network design".
- Part 2: "Air Interface (AI)".
- Part 3: "Inter-working", (DE/RES-06001-3).
- Part 4: "Gateways", (DE/RES-06001-4).
- Part 5: "Terminal equipment interface", (DE/RES-06001-5).
- Part 6: "Line connected stations", (DE/RES-06001-6).
- Part 7: "Security".
- Part 8: "Management services", (DE/RES-06001-8).
- Part 9: "Performance objectives", (DE/RES-06001-9).
- Part 10: "Supplementary services stage 1".**
- Part 11: "Supplementary services stage 2", (DE/RES-06001-11).
- Part 12: "Supplementary services stage 3", (DE/RES-06001-12).
- Part 13: "SDL Model of the Air Interface", (DE/RES-06001-13).
- Part 14: "PICS Proforma", (DE/RES-06001-14).
- Part 15: "Inter-working - Extended Operations", (DE/RES-06001-15).
- Part 16: "Gateways for Supplementary Services", (DE/RES-06001-16).

Transposition dates	
Date of adoption of this ETS:	1 March 1996
Date of latest announcement of this ETS (doa):	31 July 1996
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Date of withdrawal of any conflicting National Standard (dow):	31 January 1997

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1 Scope

This European Telecommunication Standard (ETS) defines the stage 1 specifications of the Supplementary Service Transfer of Control (SS-TC) for the Trans-European Trunked RAdio (TETRA). Stage 1 is an overall service description from the users point of view but does not deal with the details of the human interface itself.

This ETS specifies the service description of the supplementary service and the procedures to be expected with successful and unsuccessful outcomes. In addition this ETS specifies the interactions with other TETRA supplementary services and inter-working considerations.

Charging principles are outside the scope of this ETS.

The SS-TC enables the served user during the ongoing multipoint call to transfer the ownership of the multipoint call to another TETRA user within the ongoing multipoint call. This service is not applicable to broadcast calls.

2 Normative references

This ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] CCITT Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [2] ITU-T Recommendation Z.100 (1993): "Specification and Description Language (SDL)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this ETS, the following definitions apply:

bearer service: A type of telecommunication service that provides the capability for the transmission of signals between user-network interfaces.

call owner: The user who is able to actively clear the call.

served user: The call owner.

Supplementary Service (SS): A supplementary service modifies or supplements a bearer service or a teleservice. A supplementary service cannot be offered to a customer as a stand alone service. It should be offered in combination with a bearer service or a teleservice.

teleservice: A type of telecommunications service that provides the complete capability, including terminal equipment functions, for communication between users according to agreed protocols.

3.2 Abbreviations

3.2.1 General abbreviations

For the purposes of this ETS, the following general abbreviations apply:

GTSI	Group TETRA Subscriber Identity
ISDN	Integrated Services Digital Network
ITSI	Individual TETRA Subscriber Identity

SDL (Functional) Specification and Description Language
 SS Supplementary Service

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

SwMI Switching and Management Infrastructure
 TETRA Trans-European Trunked RAdio

3.2.2 Supplementary service abbreviations

For the purposes of this ETS, the following Supplementary Service abbreviations apply:

SS-AL	Ambience Listening
SS-AoC	Advice of Charge
SS-AP	Access Priority
SS-AS	Area Selection
SS-BIC	Barring of Incoming Calls
SS-BOC	Barring of Outgoing Calls
SS-CAD	Call Authorized by Dispatcher
SS-CCBS	Call Completion to Busy Subscriber
SS-CCNR	Call Completion on No Reply
SS-CFB	Call Forwarding on Busy
SS-CFNry	Call Forwarding on No Reply
SS-CFNrc	Call Forwarding on Not Reachable
SS-CFU	Call Forwarding Unconditional
SS-CLIP	Calling Line Identification Presentation
SS-CLIR	Calling/Connected Line Identification Restriction
SS-COLP	COnnected Line identification Presentation
SS-CR	Call Report
SS-CRT	Call ReTention
SS-CW	Call Waiting
SS-DGNA	Dynamic Group Number Assignment
SS-DL	Discreet Listening
SS-HOLD	Call HOLD
SS-IC	Include Call
SS-LE	Late Entry
SS-LSC	List Search Call
SS-PC	Priority Call
SS-PPC	Pre-emptive Priority Call
SS-SNA	Short Number Addressing
SS-TC	Transfer of Control
SS-TPI	Talking Party Identification

4 Supplementary Service Transfer of Control (SS-TC) stage 1 specification

4.1 Description

4.1.1 General description

SS-TC shall be defined as the facility whereby the owner of a multipoint call shall be able to subsequently transfer the ownership of the call to another TETRA user within the multipoint call. The previous owner shall be able to release from the multipoint call, but the call shall continue in his absence.

4.1.2 Qualifications on applicability to telecommunication services

SS-TC shall be applicable to TETRA group calls and to acknowledged group calls.

4.2 Procedures

4.2.1 Provision and withdrawal

This service shall be provided by prior arrangement or shall be provided on a general basis.

4.2.2 Normal procedures

4.2.2.1 Activation, deactivation, definition, registration, interrogation and cancellation

4.2.2.1.1 Activation/Deactivation

This service shall be activated upon provision and deactivated upon withdrawal.

4.2.2.1.2 Definition

Shall not be applicable.

4.2.2.1.3 Registration

As an operator option the service provider may provide the service only to registered users. In this case the following shall be provided to the service provider:

- 1) registered user identification Individual TETRA Subscriber Identity (ITSI);
- 2) applicable basic services, e.g. clear speech group call.

NOTE: If no basic service is inserted by the user, this is interpreted by the service provider as all TETRA multipoint calls.

4.2.2.1.4 Interrogation

The Switching and Management Infrastructure (SwMI) shall support interrogation on a per number basis for all basic services and/or for a user specified basic service. The TETRA response to an interrogation request may provide the following information to the user:

- ability to invoke the supplementary service;
- applicable basic services.

4.2.2.1.5 Cancellation

Shall not be applicable.

4.2.2.2 Invocation and operation

This service shall be invoked by the served user. The served user shall provide information about the identification of the proposed call owner.

It is necessary that the proposed call owner shall be involved within the ongoing multipoint call. Upon acceptance of the invocation, the infrastructure shall return a notification to the served user that the invocation was successful. In addition the new call owner shall receive a notification and shall acknowledge acceptance that the call ownership has been transferred to him.

The originator may choose to remain active in the call or he may choose to leave the call.

Should the originator choose to leave the call, the call shall remain operative and shall not be cleared until the new call owner clears the call.

It shall be an operator option as to the charging arrangements for the remainder of the call, once the call ownership has been transferred.

4.2.3 Exceptional procedures

4.2.3.1 Activation, deactivation, definition, registration, interrogation and cancellation

4.2.3.1.1 Activation/Deactivation

Shall not be applicable.

4.2.3.1.2 Definition

Shall not be applicable.

4.2.3.1.3 Registration

If the system cannot accept a registration request, the service provider shall receive a notification that SS-TC registration was not successful. Possible causes can be:

- 1) registered user identification (ITSI) is not allowed;
- 2) applicable basic services, e.g. clear speech group call is not allowed.

4.2.3.1.4 Interrogation

If the SwMI cannot accept an interrogation request, the interrogating user shall receive a notification that SS-TC interrogation was unsuccessful. Possible causes for rejection can be:

- service or option not subscribed to;
- insufficient information;
- basic service to which relevance is requested is not subscribed to.

4.2.3.1.5 Cancellation

Shall not be applicable.

4.2.3.2 Invocation and operation

If the infrastructure cannot invoke the service, the cause shall be returned to the subscriber. Possible causes can be:

- 1) invoking user is not authorized;
- 2) the proposed call owner (ITSI) is not a part of the ongoing multipoint call;
- 3) the applicable basic service, e.g. clear speech group call has not been authorized.

4.3 Interactions with other supplementary services

4.3.1 Calling Line Identification Presentation (SS-CLIP)

SS-TC shall not have any interaction with SS-CLIP.

4.3.2 Connected Line identification Presentation (SS-COLP)

SS-TC shall not have any interaction with SS-COLP.

4.3.3 Calling/Connected Line Identification Restriction (SS-CLIR)

SS-TC shall not have any interaction with SS-CLIR.

4.3.4 Call Report (SS-CR)

SS-TC shall not have any interaction with SS-CR.

4.3.5 Talking Party Identification (SS-TPI)

SS-TC shall not have any interaction with SS-TPI.

4.3.6 Call Forwarding Unconditional (SS-CFU)

SS-TC shall not have any interaction with SS-CFU.

4.3.7 Call Forwarding on Busy (SS-CFB)

SS-TC shall not have any interaction with SS-CFB.

4.3.8 Call Forwarding on No Reply (SS-CFNRY)

SS-TC shall not have any interaction with SS-CFNRY.

4.3.9 Call Forwarding on Not Reachable (SS-CFNRC)

SS-TC shall not have any interaction with SS-CFNRC.

4.3.10 List Search Call (SS-LSC)

SS-TC shall not have any interaction with SS-LSC.

4.3.11 Call Authorized by Dispatcher (SS-CAD)

SS-TC shall not have any interaction with SS-CAD.

4.3.12 Short Number Addressing (SS-SNA)

SS-TC shall not have any interaction with SS-SNA.

4.3.13 Area Selection (SS-AS)

SS-TC shall not have any interaction with SS-AS.

4.3.14 Access Priority (SS-AP)

SS-TC shall not have any interaction with SS-AP.

4.3.15 Priority Call (SS-PC)

SS-TC shall not have any interaction with SS-PC.

4.3.16 Call Waiting (SS-CW)

SS-TC shall not have any interaction with SS-CW.

4.3.17 Call Hold (SS-HOLD)

SS-TC shall not have any interaction with SS-HOLD.

4.3.18 Call Completion to Busy Subscriber (SS-CCBS)

SS-TC shall not have any interaction with SS-CCBS.

4.3.19 Late Entry (SS-LE)

SS-TC shall not have any interaction with SS-LE.

4.3.20 Transfer of Control (SS-TC)

SS-TC shall not have any interaction with SS-TC. The new call owner may in turn transfer the ownership of the call to another TETRA user active in the call.

4.3.21 Pre-emptive Priority Call (SS-PPC)

SS-TC shall not have any interaction with SS-PPC.

4.3.22 Include Call (SS-IC)

SS-TC shall not have any interaction with SS-IC.

4.3.23 Advice of Charge (SS-AoC)

SS-TC shall not have any interaction with SS-AoC.

4.3.24 Barring of Outgoing Calls (SS-BOC)

SS-TC shall not have any interaction with SS-BOC.

4.3.25 Barring of Incoming Calls (SS-BIC)

SS-TC shall not have any interaction with SS-BIC.

4.3.26 Discreet Listening (SS-DL)

SS-TC shall not have any interaction with SS-DL.

4.3.27 Ambience Listening (SS-AL)

SS-TC shall not have any interaction with SS-AL.

4.3.28 Dynamic Group Number Assignment (SS-DGNA)

SS-TC shall not have any interaction with SS-DGNA.

4.3.29 Call Completion on No Reply (SS-CCNR)

SS-TC shall not have any interaction with SS-CCNR.

4.3.30 Call Retention (SS-CRT)

SS-TC shall not have any interaction with SS-CRT.

4.4 Inter-working considerations

SS-TC shall be available across the intersystem interface if the ongoing call stretches across a number of TETRA systems.

4.5 Overall SDL

Figure 1 contains the dynamic description of SS-TC using the Specification and Description Language (SDL) defined in ITU-T Recommendation Z.100 [2]. The SDL process represents the behaviour of the network in providing SS-TC.

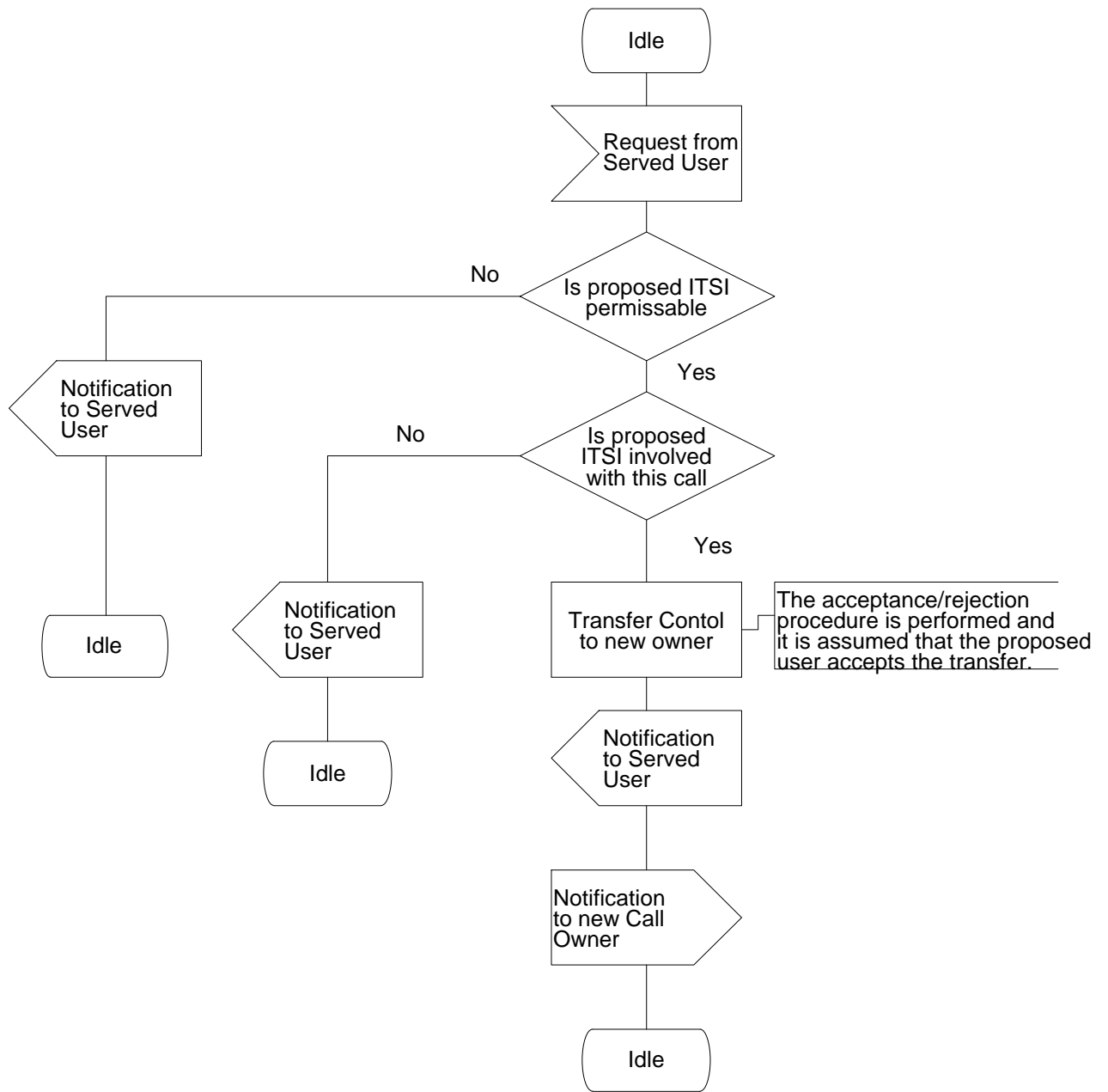


Figure 1: SS-TC supplementary service, overall SDL

History

Document history			
November 1994	Public Enquiry	PE 73:	1994-11-07 to 1995-03-03
December 1995	Vote	V 94:	1995-12-27 to 1996-02-16
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