SLOVENSKI STANDARD

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Prizemni snopovni radio (TETRA) - Govor in podatki (V+D) - 11. del: Dopolnilne storitve stopnje 2 - 11-18. del: Zapora odhodnih klicev (BOC)

Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 11: Supplementary services stage 2; Sub-part 18: Barring of Outgoing Calls (BOC)

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ICS:

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

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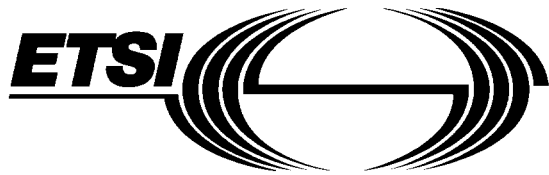
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Foreword

This draft European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI) and is now submitted for the Public Enquiry phase of the ETSI standards approval procedure.

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:   DE/RES-06001-9, work item stopped.

Part 10:   "Supplementary Services (SS) Stage 1".

Part 11:   **"Supplementary Services (SS) Stage 2".**

Part 12:   "Supplementary Services (SS) Stage 3".

Part 13:   "SDL Model of the Air Interface".

Part 14:   "PICS Proforma", (DE/RES-06001-14).

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

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1 Scope

This European Telecommunication Standard (ETS) defines the stage 2 specification of the Supplementary Service Barring of Outgoing Calls (SS-BOC) for the Trans-European Trunked Radio (TETRA) as provided by European operators.

SS-BOC enables barring restriction for outgoing calls to be set. SS-BOC specifies the definition, interrogation and operation of the supplementary service. The Switching and Management Infrastructure (SwMI) applies the SS-BOC definitions when the restricted user requests an outgoing service.

The SS-BOC actions are defined for the SwMI, for the Mobile Station (MS) and for the Line Station (LS). The SS-BOC information flows may be delivered over the Inter-System Interface (ISI). SS-BOC may also be invoked for services, e.g. calls, within one TETRA system or for services that extend over the ISI to several TETRA systems.

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

Stage 2 describes the functional capabilities of the Supplementary Service introduced in stage 1 description. Stage 2 identifies the functional capabilities for the management and operation of the service in the SwMI, in the MS and in the LS. Stage 2 describes also the information flows exchanged between these entities and the flows sent over the ISI.

> 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 the SwMI, in the MS and in the LS.

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]   ETS 300 392-2: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V+D); Part: 2: Air Interface (AI)".

[2]   ETS 300 392-12-18: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V+D); Part: 12: Supplementary services stage 2; Part 12-18: Barring of Outgoing Calls (BOC)".

[3]   ETS 300 392-11-19: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V+D); Part: 11: Supplementary services stage 2; Part 11-19: Barring of Incoming Calls (BIC)".

[4]   ETS 300 392-10-1: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V+D); Part: 10: Supplementary services stage 1; Part 10-1: Call diversion".

[5]   ETS 300 392-10-6: "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V+D); Part: 10: Supplementary services stage 1; Part 10-6: Call authorized by dispatcher".

3 Definitions and abbreviations

3.1 Definitions

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

affected user: The user who has outgoing calls barred.

authorized user: The user who is permitted to bar outgoing calls on affected user's behalf.

basic service: Circuit mode speech service and circuit mode data service, see ETS 300 392-2 [1] clause 11.

Functional Entity (FE): Functional Entity performs the SS-BOC specific tasks in the MS, the LS or the SwMI.

> NOTE: In stage 2 specification the FE functionality is not restricted to SS sub-entity within layer 3.

home system: The TETRA network which Mobile Network Identity (MNI) is equal to the user's MNI. The SS-BOC definition is saved in the home system and home system is responsible for transporting the SS-BOC definition to visited system(s).

Inter-System Interface (ISI): The interface between two TETRA networks, that supports the inter-working of services between these two systems.

Mobile Network Identity (MNI): Mobile Country Code (MCC) and Mobile Network Code (MNC) of the TETRA Subscriber Identity (TSI).

Mobile Station (MS): A physical grouping that contains all of the mobile equipment that is used to obtain TETRA services. By definition, a mobile station contains at least one Mobile Radio Stack.

packet data service: Connection oriented packet mode data service and connectionless packet mode data service, see ETS 300 392-2 [1] clauses 24 and 26.

SS-BOC definition indication: The SS-BOC definition indication may be sent to the affected user(s) to inform him about the definition made on his behalf.

SS-BOC operation: The barring of a call in accordance with the SS-BOC definition.

Switching and Management Infrastructure (SwMI): All of the TETRA equipment for a Voice plus Data (V+D) network except for subscriber terminals. The SwMI enables subscriber terminals to communicate with each other via the SwMI.

visited system: The TETRA network which MNI is not equal to the user's MNI.

3.2 Abbreviations

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

CC	Call Control functional entity
CCA	Call Control functional entity Agent
FE	Functional Entity
ISI	Inter-System Interface
LS	Line Station
MCC	Mobile Country Code
MNC	Mobile Network Code
MNI	Mobile Network Identity
MS	Mobile Station
SDL	(Functional) Specification and Description Language
SS-BOC	Supplementary Service Barring of Outgoing Calls

SwMI   Switching and Management Infrastructure
TETRA   Trans-European Trunked RAdio
TSI   TETRA Subscriber Identity
V+D   Voice plus Data

4 SS-BOC stage 2 specification

4.1 Functional model

4.1.1 Functional model description

The functional model shall comprise the following Functional Entities (FEs):

FE1   affected user's (calling party's) FE for SS-BOC in MS/LS;
FE2   SS-BOC FE in SwMI;
FE3   authorized party's FE for SS-BOC in MS/LS;
FE4   SS-BOC generic FE in SwMI in visited system;
FE5   called party's FE for SS-BOC in MS/LS;
CC   call control functional entity in SwMI;
CCA   call control functional entity agent in MS/LS.

> NOTE: CC/CCA refers to any basic service sub-entity or packet mode data service entity, which shall be used in conjunction with SS-BIC.

The following relationships shall exist between these FEs:

ra   between FE1 and FE2;
rb   between FE2 and FE2 in different TETRA systems;
rc   between FE2 and FE3;
rd   between FE2 and FE4 in different TETRA systems;
re   between FE1 and FE4;
rf   between FE3 and FE4;
rg   between FE2 and FE5.

Figures 1 and 2 show these FEs and their relationships. Figure 1 gives the functional model for the management part and figure 2 gives the functional model for the operational part.
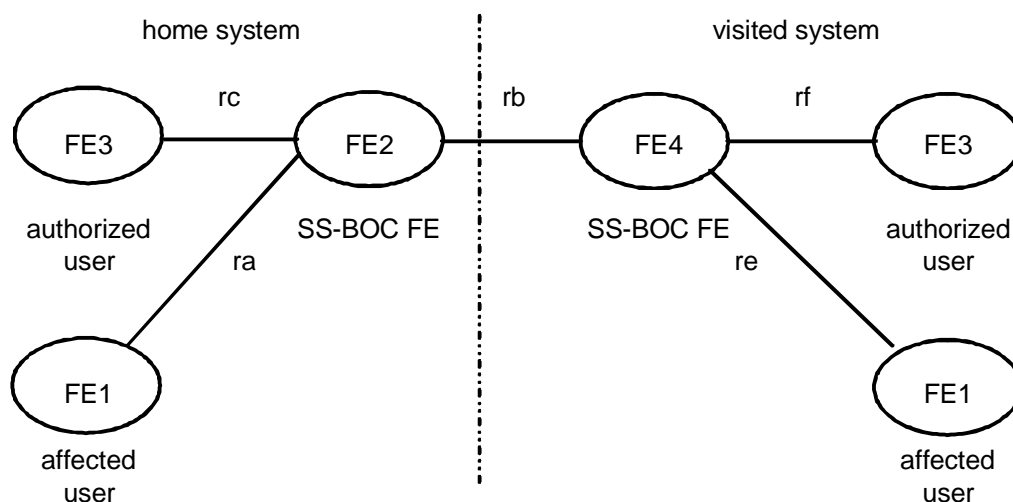

Figure 1: Functional model for the management part