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European Standard (Telecommunications series)

**Terrestrial Trunked Radio (TETRA);
Voice plus Data (V+D);
Part 10: Supplementary services stage 1;
Sub-part 16: Pre-emptive Priority Call (PPC)**



Reference

REN/TETRA-03172

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Terrestrial Trunked Radio (TETRA), and is now submitted for the ETSI standards One-step Approval Procedure.

The present document is part 10, sub-part 16 of a multi-part deliverable covering 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";**
 - Sub-part 1: "Call Identification (CI)";
 - Sub-part 2: "Call report";
 - Sub-part 3: "Talking Party Identification (TPI)";
 - Sub-part 4: "Call Forwarding (CF)";
 - Sub-part 5: "List Search Call (LSC)";
 - Sub-part 6: "Call Authorized by Dispatcher (CAD)";
 - Sub-part 7: "Short number addressing";
 - Sub-part 8: "Area Selection (AS)";
 - Sub-part 9: "Access priority";
 - Sub-part 10: "Priority Call (PC)";
 - Sub-part 11: "Call Waiting (CW)";
 - Sub-part 12: "Call Hold (HOLD)";
 - Sub-part 13: "Call completion to busy subscriber";
 - Sub-part 14: "Late Entry (LE)";

Sub-part 15: "Transfer of control";

Sub-part 16: "Pre-emptive Priority Call (PPC)";

Sub-part 17: "Include Call (IC)";

Sub-part 18: "Barring of Outgoing Calls (BOC)";

Sub-part 19: "Barring of Incoming Calls (BIC)";

Sub-part 20: "Discreet Listening (DL)";

Sub-part 21: "Ambience Listening (AL)";

Sub-part 22: "Dynamic Group Number Assignment (DGNA)";

Sub-part 23: "Call completion on no reply";

Sub-part 24: "Call Retention (CRT)";

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

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 spacings and channel numbering";

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

TR 100 392-17: "TETRA V+D and DMO specifications";

TS 100 392-18: "Air interface optimized applications".

NOTE: Part 10, sub-part 15 (Transfer of Control), part 13 (SDL) and part 14 (PICS) of this multi-part are of status "historical" and will not be updated according to this version of the standard.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
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Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

The present document defines the stage 1 specifications of the Supplementary Service Pre-emptive Priority Call (SS-PPC) for the Terrestrial Trunked Radio system (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.

The present document specifies the service description of the supplementary service and the procedures to be expected with successful and unsuccessful outcomes. In addition the present document specifies the interactions with other TETRA supplementary services and interworking considerations.

Charging principles are outside the scope of the present document.

The SS-PPC enables a user to have preferential access to SwMI resources including pre-emption of calls.

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.221: "Common specific characteristics of services". |
| [2] | ITU-T Recommendation Z.100: "Specification and Description Language (SDL)". |
| [3] | ETSI ETS 300 392-10-24: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 10: Supplementary services stage 1; Sub-part 24: Call Retention (CRT)". |
| [4] | 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)". |

3 Definitions and abbreviations

3.1 Definitions

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

Access Priority Level (APL): value allocated to each mobile Individual TETRA Subscriber Identity (ITSI)/Group TETRA Subscriber Identity (GTSI)/Call type that is used at the initial call set-up attempt to determine priority access across the air interface to the control functional entities

busy: property of a user for whom a network determined user busy or user determined user busy condition applies

NOTE: See ITU-T Recommendation I.221 [1].

Call Retention Value (CRV): call retention priority is a network option which defines the relative level of protection of the established call against the probability of having the resources pre-empted

established call: call between User B and C upon which the pre-emption request is made

impending pre-emption warning indication: warning provided before a pre-emption of the call is established

Pre-emptive Priority Level (PPL): pre-agreed value allocated to each mobile ITSI/GTSI/Call type that is used so that resources may be allocated to the SS-PPC

pre-emptive state: call connection condition between the time the pre-emptive call is established by the network and the ending of the pre-emptive call, e.g. by the served user clearing

Priority Level (PL): pre-agreed value allocated to each mobile ITSI/GTSI/Call type that is used to determine priority access to network resources in the event of network congestion

resource: all radio and network infrastructure facilities used for an established call

NOTE: Typical resource that SwMI releases due to pre-emption is allocated timeslots for an existing call. Also other resources such as links between base stations and exchange or links between SwMIs may be released.

served user: user A making the SS-PPC to user B

SS-PPC call: call with a pre-emptive priority value

time to pre-emption: selected time period between provision of warning of impending intrusion indication and establishment of the connection

3.2 Abbreviations

3.2.1 General abbreviations

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

APL	Access Priority Level
CRV	Call Retention Value
CSA	Called Subscriber Answer
GTSI	Group TETRA Subscriber Identity
I/F	Interface
ITSI	Individual TETRA Subscriber Identity
MS	Mobile Station
PL	Priority Level
PPL	Pre-emptive Priority Level
SDL	(Functional) Specification and Description Language
SDS	Short Data Service
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 supplementary service abbreviations apply:

SS-AL	Ambience Listening
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-TPI	Talking Party Identification

4 Supplementary Service Pre-emptive Priority Call (SS-PPC) stage 1 specification

4.1 Description

4.1.1 General description

4.1.1.1 Resource pre-emption

SS-PPC call enables the users to have resources allocated, even if this means that other calls with lower priority are disconnected. SS-PPC normally means one of the highest Access Priority Levels (APL) at uplink access and one of the highest Priority Levels (PL) across SwMIs.

Normally the calling user defines the pre-emptive priority level for the call, but SwMI may modify that value or allocate that value. The reasons for modification or allocation are outside the scope of the present document.

If the required resources are unavailable (i.e. occupied by other users) for the SS-PPC call SwMI should release resources of the oldest calls with the lowest SwMI Call Retention Value (CRV) and give the released resources to the SS-PPC call. The Call ReTention Supplementary Service (SS-CRT), ETS 300 392-10-24 [3], may also be used to determine which sources to release.

NOTE 1: It is possible that some networks may prefer a different process for determining resource priority.

NOTE 2: The network operator may have to provide a correspondence between priority values and CRVs. This correspondence and the means to establish it are outside the scope of the present document.

In the case where there is no congestion across the air interface or the network resources and the called user is not engaged, the call shall be set up in the normal manner, but the call shall keep the call retention value of the pre-emptive priority call.

4.1.1.2 Called user pre-emption

In the event where the destination TETRA address is already engaged on an established call the pre-emptive priority call shall have the ability to interrupt and pre-empt the call at the destination address, unless the established call has a sufficiently high priority that the incoming pre-emptive priority call cannot pre-empt.

The user pre-emption has two steps:

- SwMI decision whether the call where the called user is engaged is terminated; and
- in the case SwMI does not terminate the existing call the called user application decides whether to accept the incoming call or continue with the existing call.

The SwMI decision whether the existing call to the called user is disconnected is the same as in clause 4.1.1.1.

Table 1 indicates which priorities of the incoming PPC call should cause the active call to be pre-empted without user application decision, depending on whether option 1 or 2 is chosen, at the destination assuming the SS-PPC call is of a higher priority than the active call.

Table 1: Priorities that cause user pre-emption from a lower priority call without user application decision

		Active call	
		Group	Individual
SS-PPC call	Group	Option 1: 3 and 4 Option 2: none	3 and 4
	Individual	3 and 4	3 and 4

Table 2 indicates which priorities of the incoming PPC call should cause the "user application" to decide if the active call is to be pre-empted or not, depending on whether option 1 or 2 is chosen, at the destination assuming the SS-PPC call is of a higher priority than the active call.

Table 2: Priorities on which user application decides pre-emption

		Active call	
		Group	Individual
SS-PPC call	Group	Option 1: 1 and 2 Option 2: 1, 2, 3 and 4	1 and 2
	Individual	1 and 2	1 and 2

Terminal personalization may affect how user pre-emption is applied for the cases identified in table 2. The terminal personalization is outside the scope of the present document and MS may support option 1 or option 2 or both options defined in tables 1 and 2.

NOTE: Terminal personalization may define whether option 1 or 2 is applied.

If the Pre-emptive Priority Level (PPL) is the same or less than the priority of the established call, then pre-emption shall not take place. Retrieving the called user from an individual call shall automatically force release of the established call.

Retrieving the called user from a group call shall depend upon whether the called user is the call owner of the group call. If the called user is the group call owner then the group call shall be force released upon pre-emption. If the called user is solely a participating member of the group then the group call shall not be force released, and only the called user is removed from the ongoing group call.

4.1.2 Qualifications on applicability to telecommunication services

This supplementary service shall be applicable to all individual and group TETRA teleservices and bearer services. It shall not be applicable to TETRA packet data services nor to the Short Data Service (SDS).

4.2 Procedures

4.2.1 Provision and withdrawal

Provision and withdrawal of SS-PPC shall be by pre-arrangement with the service provider.

SS-PPC shall be on a per TETRA number (ITSI/GTSI) basis. For each ITSI/GTSI, the supplementary service may be subscribed to for every basic service subscribed to at that ITSI/GTSI, or for only some of the basic services subscribed to at that ITSI/GTSI.

The subscription parameters and values offered by a Switching and Management Infrastructure (SwMI) shall be an implementation matter. A SwMI may offer more or less parameters and values than those specified in table 3.

Table 3: Subscription options

Subscription parameter	Value
Immediate pre-emption required	Yes/No
Time to pre-emption (only required if answer to above is "No")	Seconds

4.2.2 Normal procedures

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

4.2.2.1.1 Activation and deactivation

SS-PPC is activated by the service provider upon provision and deactivated upon withdrawal. Optionally SwMI may support activation and deactivation as a part of definition.

4.2.2.1.2 Definition

Definition of SS-PPC values for individual and group users may be optionally supported.

4.2.2.1.3 Registration

Registration shall not be applicable to a SS-PPC.

4.2.2.1.4 Interrogation

The infrastructure may optionally provide interrogation, which can be local, remote or both.

If local interrogation is provided, a SwMI shall support interrogation on a per number basis. The infrastructure response to an interrogation request shall provide the following information to the user:

- activation state; and
- priority value.

In remote interrogation in addition the response shall contain:

- delivery state to the served user; and
- whether acknowledgement is requested from the served user.

4.2.2.1.5 Cancellation

Optionally infrastructure may support removal of SS-PPC feature on request by authorized user.

4.2.2.2 Invocation and operation

4.2.2.2.1 General on invocation and operation

The served user shall be able to invoke SS-PPC as part of the initial call set up.

The served user should be assigned a traffic channel and network resources, regardless of the operating state of the SwMI. Should no traffic channels be available at the call request, the oldest call with the lowest call retention value should be released, if there are any lower priority calls, refer to clause 4.1.1.1.

If pre-emption indication is subscribed to, a warning indication shall be given, for a time period, to the connected parties to be pre-empted, after which the parties shall be cleared from the traffic channel, if the call still continues, and the traffic channel shall be given to the pre-emptive priority call. The warning indication should act as an indication to the connected parties to terminate the call. The time given to the connected parties before pre-emption occurs shall be a subscription or network option.

If immediate pre-emption is subscribed to, then the connected parties to be released shall be given the reason for release as part of normal call release procedure.

User pre-emption from another call without a need of resource pre-emption of the active call is defined in clauses 4.2.2.2.2 and 4.2.2.2.3.

4.2.2.2.2 Pre-empting individual call set-up

In the case where the called user is engaged on an individual call, infrastructure shall check the CRV of the existing call. If the incoming pre-emptive priority call cannot pre-empt because the established call has a sufficiently high CRV, refer to table 1, then the served user shall be informed of the rejection of the invocation and the reason shall be provided.

In the case where the called user is engaged on a group call, infrastructure may check the CRV of the existing group call. If the incoming pre-emptive priority call cannot pre-empt user because the established call has a sufficiently high CRV, refer to table 1, then the served user shall be informed of the rejection of the invocation and the reason shall be provided.

For those pre-emptive priority values for which the MS application may decide whether to accept the new PPC call or not as defined in table 2 SwMI should offer individual pre-emptive calls to the users independently of the CRV of the existing call.

If the CRV of the existing call is low and it is possible to pre-empt, then the users in the established call may be notified of an impending pre-emptive priority call. In this case, a special notification may be provided to all of the users involved in the existing call i.e. "Impending pre-emption warning indication".

The impending pre-emption warning indication shall act as a notification to the user to terminate the established call, if the user is going to join the pre-empting call. The impending pre-emption warning to the called user may contain the call set-up information of the pre-empting call.

NOTE: If immediate pre-emption is required, no impending pre-emption warning indication is given.

A selected time period, "time to pre-emption" (e.g. 0 s to 10 s), after the impending pre-emption warning indication has been given, a connection shall be set up between the served user and the called user B. The user C shall be cleared. The called user B may disconnect the call to user C before expiry of "time to pre-emption" and accept the pre-emptive call or the called user may reject the pre-emptive call, refer to clause 4.1.1.

If the called (pre-empted) user is not the call owner of the group call, the participants of the existing group call shall be able to continue with the call without interruption.

If the called user is the group call owner, then the existing group call shall be force released.

4.2.2.2.3 Pre-empting group call set-up

If the incoming pre-emptive priority group call cannot pre-empt users from a group call because of a high CRV of the existing group call, then the served user shall be informed of the rejection of the invocation and the reason shall be provided.

NOTE 1: As the user pre-emption is finally decided in MS, SwMI normally offers pre-emptive group calls to the users independently of the CRV of the existing group call as some of the participants may have different behaviour as defined by personalization, refer to clause 4.1.1. Also SwMI may not know whether one or more of members of the group for the pre-emptive group call are in an existing group call and so SwMI may prefer to continue presentation of the pre-emptive group call to the users in the existing group call or calls without any CRV checking.

If the CRV of the existing call is low and it is possible to pre-empt, then the called users in the established call may be notified of an impending pre-emptive priority call.

The impending pre-emption warning indication shall act as a notification to the called users to give them an opportunity to inform others of pre-emption. The means how the called users informs others is outside the scope of the present document.

After a selected time period, "time to pre-emption" (e.g. 0 s to 10 s), infrastructure shall send to the called user the pre-emptive call set-up. If the called (pre-empted) user is not the call owner of the group call, the participants of the existing group call shall be able to continue with the call without interruption.

If the called user is the group call owner, then the group call shall be force released.

NOTE 2: If immediate pre-emption is required no impending pre-emption warning indication is given.

4.2.3 Exceptional procedures

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

4.2.3.1.1 Activation and deactivation

Refer to clause 4.2.3.1.2.

4.2.3.1.2 Definition

If the infrastructure cannot accept definition request, the user shall receive a notification that SS-PPC definition was unsuccessful. Possible causes for rejection can be:

- accepted but SS-PPC priority values changed;
- users A(s) could not accept the request/ users A(s) was not reached;
- request failed for any reason;
- user not authorized;
- unknown TETRA identity;
- parameters not valid;
- insufficient information.

4.2.3.1.3 Registration

Exceptional procedures for registration shall not apply to SS-PPC.

4.2.3.1.4 Interrogation

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

- SS-PPC not defined for the given identity;
- request failed for any reason;
- user not authorized;
- unknown TETRA identity;
- parameters not valid.

4.2.3.1.5 Cancellation

If the infrastructure cannot accept cancellation request, the user shall receive a notification that SS-PPC cancellation was unsuccessful. Possible causes for rejection can be:

- user A(s) was not reached;
- request failed for any reason;
- user not authorized;
- unknown TETRA identity;
- parameters not valid; or
- insufficient information.

4.2.3.2 Invocation and operation

Invocation and operation of SS-PPC shall be rejected by TETRA if:

- the served user does not have the appropriate profile to use the service;
- all traffic channels are occupied by pre-emptive priority calls with high CRVs which protect against pre-emption.

If the infrastructure cannot invoke the service, the cause shall be returned to the subscriber. Potential disconnection causes may be:

- cause not defined or unknown;
- congestion in infrastructure; or
- pre-emptive use of resource.

4.3 Interactions with other supplementary services

Interactions with other TETRA supplementary services are specified below.

4.3.1 Calling Line Identification Presentation (SS-CLIP)

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

4.3.2 Connected Line identification Presentation (SS-COLP)

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

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

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

4.3.4 Call Report (SS-CR)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.5 Talking Party Identification (SS-TPI)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.6 Call Forwarding Unconditional (SS-CFU)

SS-PPC shall not have any interaction with SS-CFU and the served user shall be connected to the diverted-to party.

4.3.7 Call Forwarding on Busy (SS-CFB)

SS-PPC shall take precedence over SS-CFB and the served user shall be connected directly with the called user.

4.3.8 Call Forwarding on No Reply (SS-CFNRY)

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

Neither supplementary service shall affect the operation of the other supplementary service. A pre-emptive priority call shall be forwarded if there is no reply from the called user.

4.3.9 Call Forwarding on Not Reachable (SS-CFNRC)

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

Neither supplementary service shall affect the operation of the other supplementary service. A pre-emptive priority call shall be forwarded if the called MS is not reachable.

4.3.10 List Search Call (SS-LSC)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.11 Call Authorized by Dispatcher (SS-CAD)

The SS-PPC may take precedence over SS-CAD and the pre-emptive priority call may proceed to completion without the necessity of seeking approval from the dispatcher or the call proceeds for SS-CAD authorization as defined in EN 300 392-10-6 [4]. Interaction options are defined in EN 300 392-10-6 [4], clause 4.3.21.

4.3.12 Short Number Addressing (SS-SNA)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.13 Area Selection (SS-AS)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.14 Access Priority (SS-AP)

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

A SS-PPC has the highest APL.

4.3.15 Priority Call (SS-PC)

A SS-PPC shall always take precedence over a SS-PC.

4.3.16 Call Waiting (SS-CW)

If the established call can be pre-empted then pre-emptive priority call shall take precedence and SS-CW shall not be invoked. If however the established call has a sufficiently high CRV that it cannot be pre-empted, then SS-CW shall be invoked.

4.3.17 Call Hold (SS-HOLD)

If SS-HOLD is subscribed to by the served user there shall not be any interaction between SS-HOLD and SS-PPC operation in infrastructure.

If SS-HOLD is subscribed to by the user B then user B shall not be able to invoke the SS-HOLD whilst the pre-emption state applies.

If user B is actively on hold, it shall be possible for the served user to pre-empt on user B and force release the connection to user C.

4.3.18 Call Completion on Busy Subscriber (SS-CCBS)

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

It shall be possible to invoke this supplementary service if the served user has been unable to make a connection with user B, due to the resources/called user required having a sufficiently high CRV to protect against pre-emptive priority calls.

4.3.19 Late Entry (SS-LE)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.20 Pre-emptive Priority Call (SS-PPC)

If SS-PPC is invoked by the called user before the served user is connected to the called user, then the CRV of the established call shall be checked against the pre-emptive priority level of the served user.

4.3.21 Include Call (SS-IC)

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

It shall be possible for the served user to include another user into the pre-emptive priority call.

It shall be possible for the called user to include another user into the pre-emptive priority call.

4.3.22 Barring of Outgoing Calls (SS-BOC)

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

Pre-emptive priority calls may also be barred.

4.3.23 Barring of Incoming Calls (SS-BIC)

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

A pre-emptive priority call shall not be offered to the barred user.

4.3.24 Discreet Listening (SS-DL)

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

A pre-emptive priority call to the dispatcher whilst the dispatcher is engaged on a SS-DL, shall override the SS-DL call and force release after the "Time to Pre-emption" period.

NOTE: It should be for the "dispatcher" to ensure that ITSIs used for SS-DL calls are not generally available for incoming calls.

4.3.25 Ambience Listening (SS-AL)

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

A pre-emptive priority call to the dispatcher whilst the dispatcher is engaged on an SS-AL call shall ensure that the impending pre-emption warning indication shall only be given to the dispatcher.

NOTE: It should be for the "dispatcher" to ensure that ITSIs used for SS-AL calls are not generally available for incoming calls.

4.3.26 Dynamic Group Number Assignment (SS-DGNA)

SS-PPC shall not have any interaction with dynamic group number assignment.

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.27 Call Completion on No Reply (SS-CCNR)

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

Neither supplementary service shall affect the operation of the other supplementary service.

4.3.28 Call ReTention (SS-CRT)

If the calling user has invoked SS-PPC and SS-CRT at the same time, there shall be no interaction.

If the calling user has invoked SS-PPC and the called user is engaged on a call, and SS-CRT has been invoked for that call then the CRV shall be checked before the call can be pre-empted under normal procedures of the supplementary services. If the CRV is sufficiently high, the SS-PPC shall not be able to pre-empt the ongoing call.

4.4 Interworking considerations

When the user C belongs to another network, indications to the user C shall be sent to user C's network for forwarding to the user C.

The served user shall not be able to pre-empt the called user, if the called user is not a TETRA subscriber.

4.5 Overall SDL

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

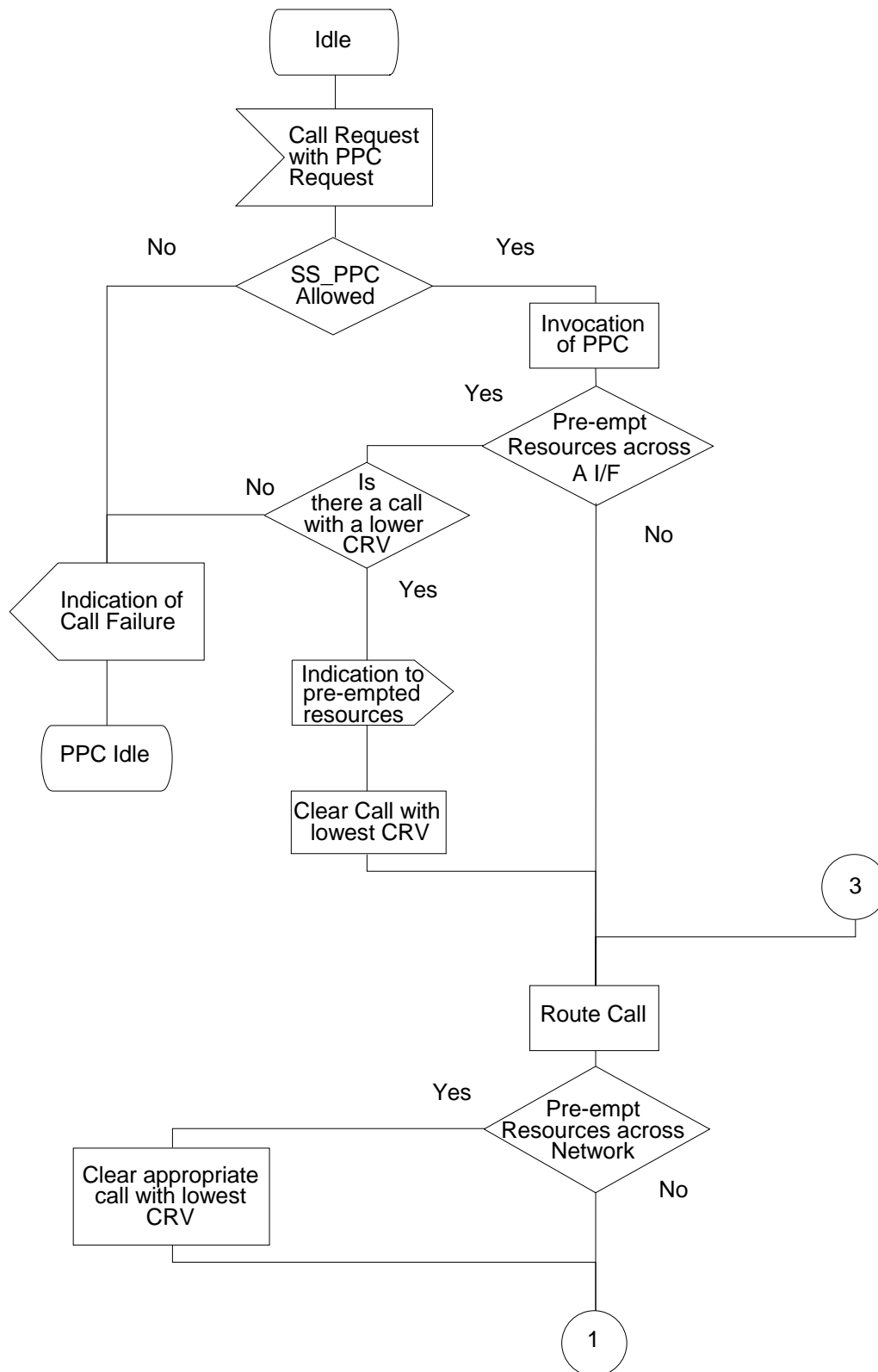


Figure 1 (sheet 1 of 3): SS-PPC supplementary service, overall SDL

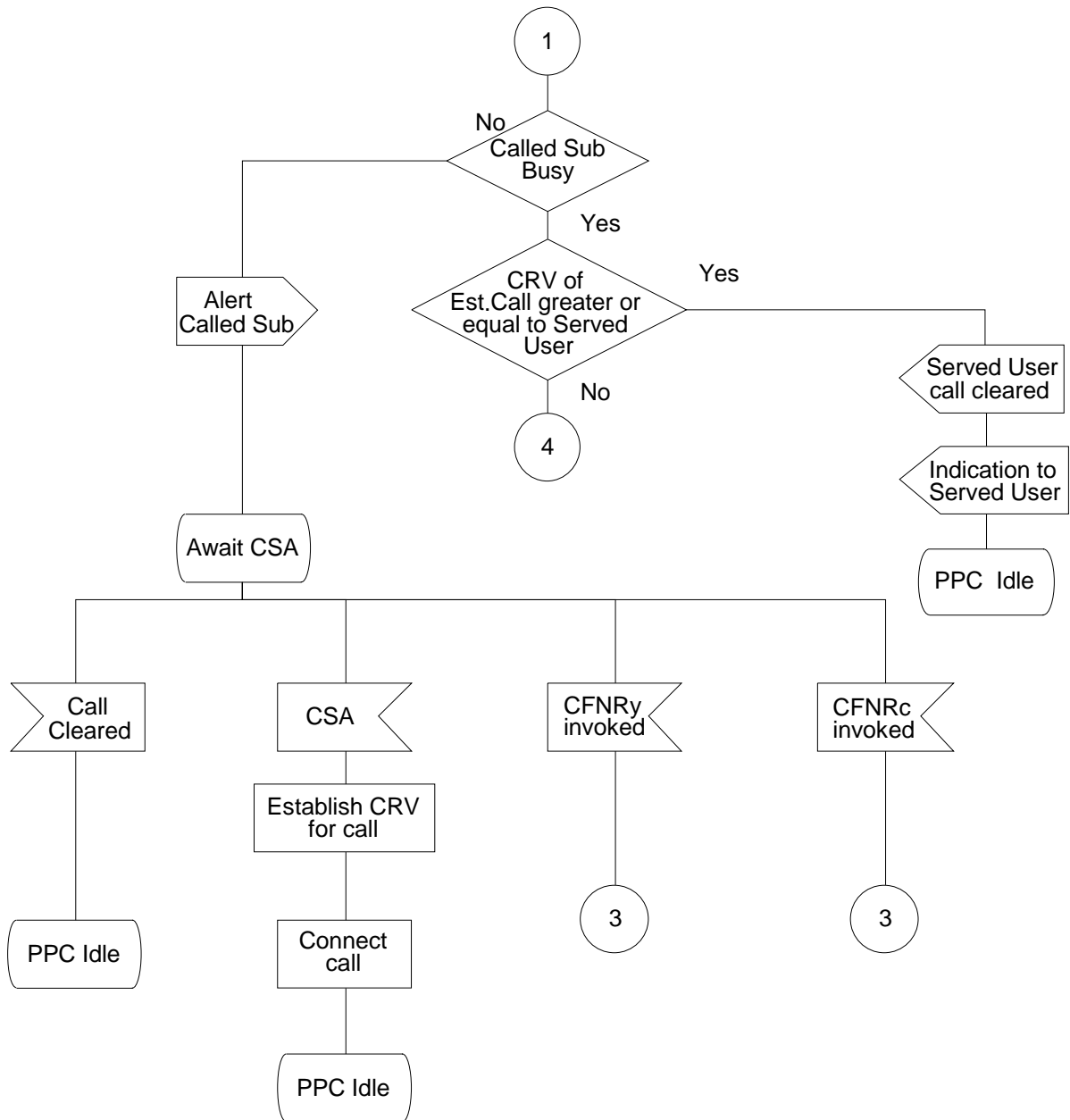


Figure 1 (sheet 2 of 3): SS-PPC supplementary service, overall SDL

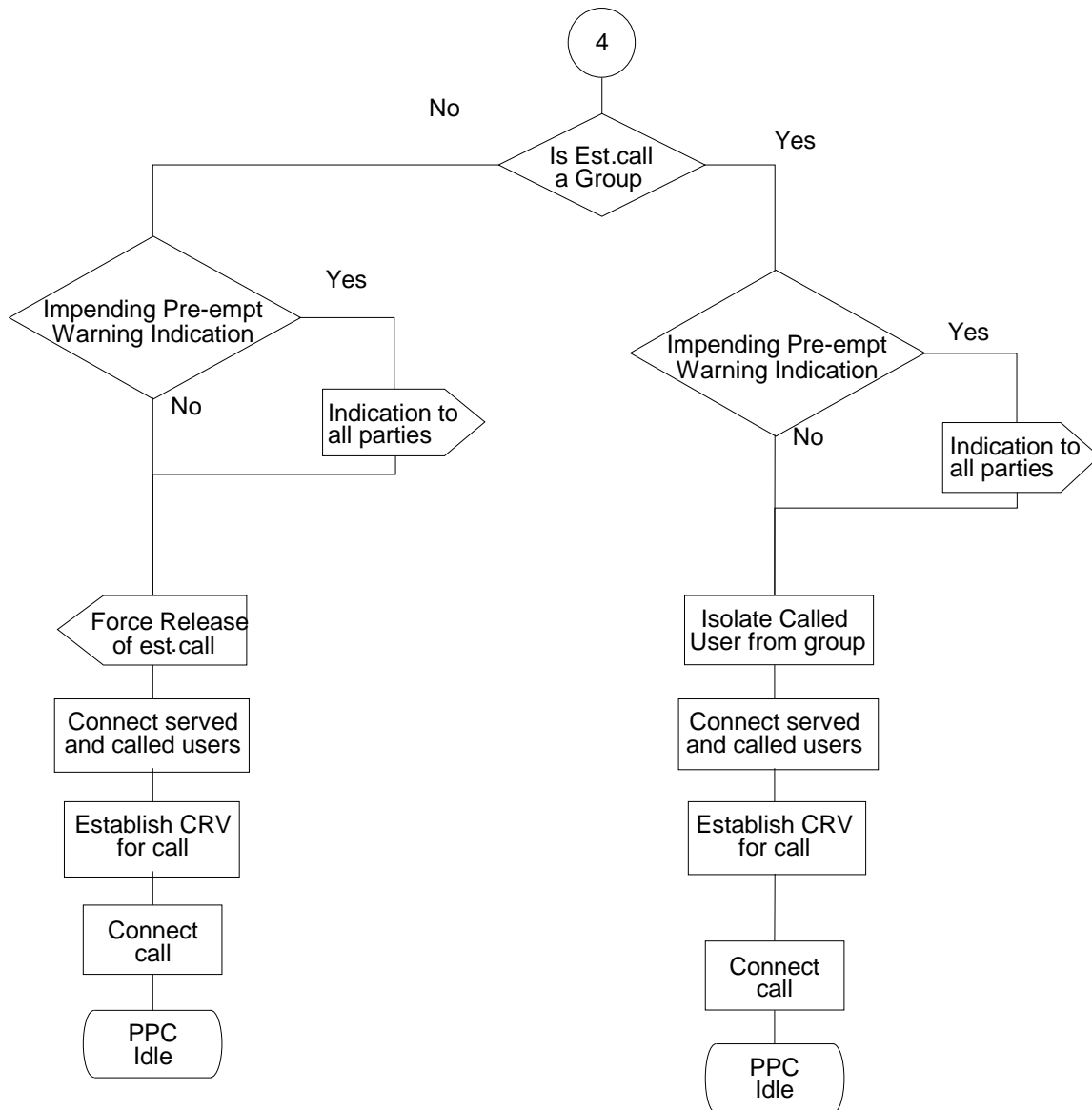


Figure 1 (sheet 3 of 3): SS-PPC supplementary service, overall SDL

Annex A (informative): Bibliography

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

Annex B (informative): Change requests

The present document contains updates due to change requests as detailed in table B.1.

Table B.1: Change requests

No	CR vers.	Standard version	Clauses affected	Title	CR status
001	APP	Ed. 1	2, 3.1, 3.2, 4.1.1.1 (new), 4.1.1.2 (new), 4.2.2.2, 4.2.2.2.1 (new), 4.2.2.2.2 (renumbered), 4.2.2.2.3 (renumbered)	Emergency call user pre-emption	EPT approved 040224
002	APP	Ed. 1	4.2.2.2.2	SS-HOLD and group calls	EPT approved 040224
003	APP	Ed. 1	2, 3.1, 3.2, 4.1.1, 4.2.2.2, 4.2.2.2.1 (new), 4.2.2.2.2 (renumbered), 4.2.2.2.3 (renumbered), annex A	SwMI behaviour on call pre-emption	EPT approved 040224
004	APP	Ed. 1	4.2.2.1 to 4.2.2.1.5, 4.2.3	Alignment with stage 3 functions and PDU information elements	EPT approved 040224
005	APP	Ed. 1	4.3.17	SS-HOLD interaction	EPT approved 040224
101	10	1.2.1	2.4.3.11	Interaction with SS-CAD	WG3 approved 050906

History

Document history		
Edition 1	April 1996	Publication as ETS 300 392-10-16 (Historical)
V1.2.1	September 2004	Publication
V1.3.0	April 2006	One-step Approval Procedure OAP 20060818: 2006-04-19 to 2006-08-18