



EUROPEAN
TELECOMMUNICATION
STANDARD

DRAFT
pr **ETS 300 392-11-10**
August 1996

Source: ETSI TC-RES

Reference: DE/RES-06001-11-10

ICS: 33.060, 33.060.50

Key words: TETRA, SS, PC

**Radio Equipment and Systems (RES);
Trans-European Trunked Radio (TETRA);
Voice plus Data (V+D);
Part 11: Supplementary Services (SS) Stage 2;
Part 11-10: Priority Call (PC)**

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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 prETS 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 (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).
- Part 15: "Inter-working - Extended Operations", (DE/RES-06001-15).

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 ETS defines the stage 2 specifications of the Supplementary Service Priority Call (SS-PC) for the Trans-European Trunked Radio (TETRA).

The SS-PC is defined to enable a user to have preferential access to the network resources in a TETRA system in times of congestion. The SS-PC specifies the definition, activation, deactivation and interrogation for the usage of low and high call priorities in the TETRA system. The SS-PC operations are defined for Switching and Management Infrastructure (SwMI), for the Mobile Station (MS) and for the Line Station (LS). SS-PC is defined for subscribers of one TETRA system, but the subscribers may be located in several TETRA systems and the information flows may be delivered over the Inter System Interface (ISI). SS-PC may also be invoked for basic services within one TETRA system or for basic services that extend over ISI to several TETRA systems.

The pre-emptive priorities, Man-Machine Interface (MMI) and charging principles are outside of 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, the MS and 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] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [2] ETS 300-392-2 (1996): "Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Voice plus Data (V+D); Part 2: Air Interface (AI)".
- [3] ECMA Specification 142 (1990): "Specification, Functional Model and Information Flows for Control Aspects of Circuit Mode Basic Services in Private telecommunication Networks".

3 Definitions and abbreviations

3.1 Definitions

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

authorized user: A user who is authorized to define, activate, deactivate and interrogate the SS-PC.

Functional Entity (FE): A FE specifies the functional characteristics of a party involved in the management or operation functions of SS-PC.

home system: A TETRA system to which the subscriber identity is permanently defined.

management functions: The management functions for SS-PC are definition, activation, deactivation and interrogation.

priority level: A pre-agreed value allocated to each mobile ITSI or GTSI on a per call basis. It is used to determine priority access to network resources in the event of network congestion.

system 1: A TETRA system to which SS-PC is defined, activated, deactivated and interrogated and in which SS-PC can be invoked and operated.

system 2: A TETRA system through which SS-PC definition, activation, deactivation and interrogation can be delivered. SS-PC can also be invoked and operated in system 2.

user A: Calling party on which behalf authorized user has made SS-PC definition.

user B: Called party in a call in which SS-PC is operated.

3.2 Abbreviations

For the purposes of this ETS, 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 ECMA Specification 142, [3]

FE	Functional Entity
GTSI	Group TETRA Subscriber Identity
ISDN	Integrated Services Digital Network
ISI	Inter-System Interface
ITSI	Individual TETRA Subscriber Identity
SS-PC	Supplementary Service Priority Call
SS-PPC	Supplementary Service Pre-emptive Priority Call
SDL	Specification and Description Language
SS	Supplementary Service
SwMI	Switching and Management Infrastructure
TETRA	Trans-European Trunked Radio

4 Supplementary Service Priority Call (SS-PC) stage 2 specification

4.1 Functional model

The functional model describes the functional characteristics of the FEs involved in the management and operation of SS-PC.

The functional model shall comprise the following FEs:

- FE1 user A's functional entity;
- FE2 SS-PC functional entity in SwMI for SS-PC definition, interrogation and operation;
- FE3 authorized user's functional entity;
- FE4 SS-PC generic functional entity in SwMI for SS-PC definition and interrogation in system 2;
- FE5 user B's functional entity.

The following relationships shall exist between these FEs:

- ra between FE1 and FE2;
- rb between FE2 and FE4 in different TETRA systems;
- rc between FE2 and FE3;
- rd between FE2 and FE5;

- re between FE1 and FE4;
- rf between FE4 and FE5;
- rg between FE3 and FE4;
- rh between FE2s in different systems.

Figure 1 shows these FEs and relationships for the management part and figure 2 for the operational part.

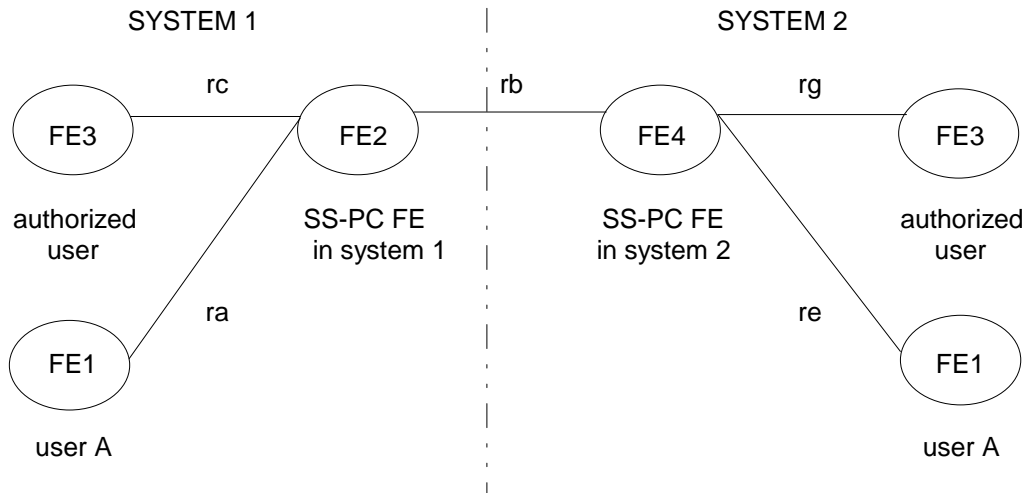


Figure 1: The relations and the functional entities of the management part of SS-PC

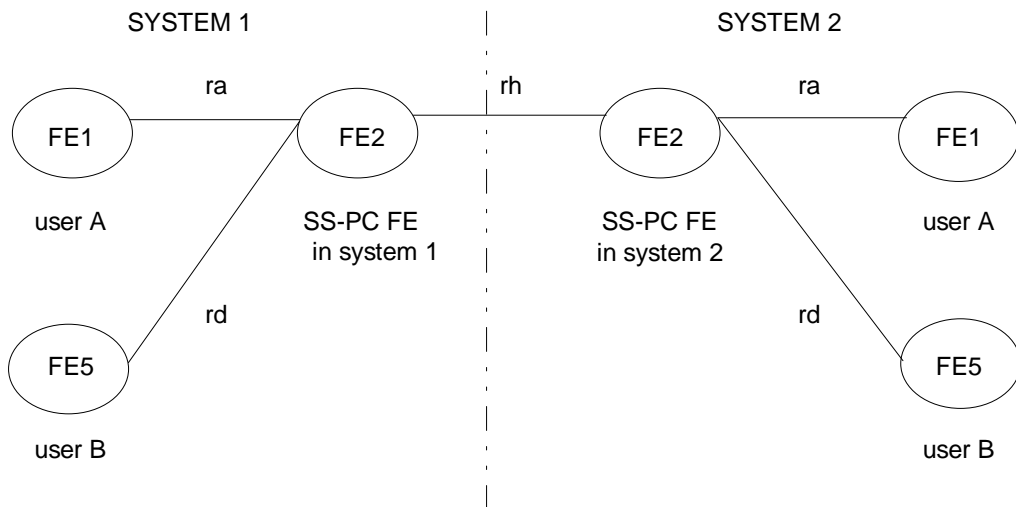


Figure 2: The relations and functional entities of the operational part of SS-PC

4.1.1 Functional model description

4.1.1.1 User A's functional entity, FE1

FE1 shall, as an option, receive and save the subscriber and group specific priority definitions. FE1 shall also acknowledge the definition request to FE2, if the acknowledgement was requested.

FE1 shall receive SS-PC interrogation requests from the user and send them to FE2. When the system sends the response or the acknowledgement for a requested service, FE1 shall display it to the user.

When initiating a call, the user or application shall provide the call priority. FE1 shall verify the priority and replace it with an allowed priority, if needed. FE1 shall send the call priority with the call invocation to FE2.

4.1.1.2 SS-PC functional entity in system 1 (system 2), FE2

At the reception of SS-PC definition, activation and deactivation requests for subscribers and groups, FE2 can verify the requests, and if it finds them valid it should save the changes to the database. In addition to this, if the authorized user requests, FE2 may send the requests to the concerned FE1s and receive their acknowledgements. After completing the request, FE2 should acknowledge the service request to FE3.

FE2 should also receive interrogation requests and if it finds them valid and authorized, it should send the interrogation response to FE3 (FE1) or an error indication, if applicable.

NOTE 1: The functional actions of FE2 for SS-PC definition, activation, deactivation and interrogation can only take place in system 1.

When FE2 receives call set-up request with call priority, FE2 should verify the received priority. FE2 should set up the call with the priority or change it, if needed.

NOTE 2: When a call, where the SS-PC is applied, extends to several systems there may be system specific priority values that are used locally instead of the priority value defined in the invocation of the call or that is defined to a subscriber number.

4.1.1.3 Authorized user's functional entity, FE3

FE3 shall receive SS-PC definition, activation, deactivation and interrogation requests from a user and send them to FE2. When the system sends the response or the acknowledgement for a requested service, FE3 shall display it to the user.

4.1.1.4 SS-PC functional entity in system 2, FE4

In case of SS-PC definition or interrogation requests made to a subscriber number in another system, FE4 should forward the request to FE2 in that system (system 1). When FE4 receives responses to these requests from FE2, it should send them to FE3.

4.1.1.5 User B's functional entity, FE5

When receiving a call set-up indication, the FE5 can indicate the priority of the call to the user.

4.1.2 Relationship with a basic service

FE1 may optionally be collocated with user A's CCA. This depends on whether FE1 is able to verify that the call priority is valid.

FE2 is collocated with CC in system 1 and system 2 as the FE2 verifies and determines the call priority for the service.

Figure 3 shows the different relationships that may exist between FEs and CC/CCA. The call priority is sent from user A to SwMI(s) and from SwMI to user B(s) with the call invocation message. The SwMI should use the call priority for the resources it allocates for the call. These resources comprise of e.g. the radio link allocation, allocation of resources within SwMI and for the network connections over ISI.

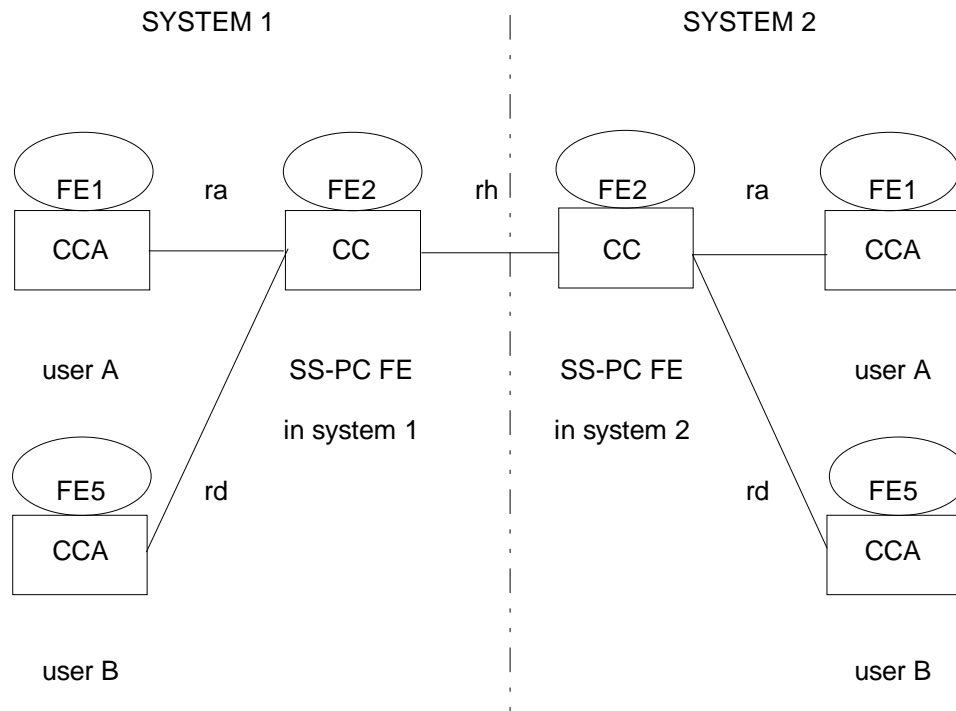


Figure 3: The relationships between the basic service and SS-PC functional entities

4.2 Information flows

4.2.1 Definition of information flows

In the tables listing the elements in the information flows, the column header "Type" indicates which of the elements are Mandatory (M), Conditional (C) or Optional (O). If type is conditional, the conditions are stated.

4.2.1.1 Definition

The authorized user may define SS-PC to be saved in a TETRA system. The definition may be made to a single individual subscriber or to a range or set of individual subscribers. The definition may also be made to one group or to a range or list of groups. However, if a priority value is defined for a group, it shall be applicable to all group calls made by the group members to the group. If the SS-PC definition is made to a subscriber, the definition affects the individual calls that the subscriber participates. If the definition is made to a group, it affects the multipoint calls made to the group.

The priority values can be defined separately to different basic services or a common value can be defined to these services. The priority shall be defined as high priority values and as normal priority values. However, it is not necessary to define both of these values. The definition for high or normal priority values can contain a range of numeric values. If a range is defined, the highest value of the range should be used as default value for "normal priority" and "high priority" when the user invokes SS-PC.

The authorized user, that is making the definition, shall indicate, if the definition should be sent to user A(s) subscriber unit(s). If the definition is sent to the user A's subscriber unit, an acknowledgement may be requested from it. If the definition is made to a group number, the definition shall be sent to the members of the group, if sending of definitions to MS/LS unit(s) was requested.

The activation and deactivation shall be made with the definition information flow. The SS-PC shall be applied only if the service is activated.

NOTE: As an operator option, the definition, activation and deactivation may be made to SwMI only, so that the SwMI knows and applies the allowed priority to a call. If this is the case, the user may request SS-PC for the call so that the SwMI changes the priority. The usage of this feature may be temporary or permanent.

A new definition shall override an older definition. However, a common definition for all basic services shall not override a definition made to a specific basic service.

4.2.1.1.1 DEFINE

DEFINE information flow shall be used to define the call priority value(s) for one TETRA identity or for a range or list of TETRA identities.

The information flow is for the relationship rc and from FE3 to FE2. The flow shall also be applied for the relationship rg and rb and sent from FE3 to FE2 via FE4, if FE3 is in another TETRA system. DEFINE information flow is described in table 1.

The elements basic service values, normal priority values and high priority values can be repeated in order to define different priority values to different basic services.

Table 1: The elements within DEFINE information flow

Element	Type	Remarks
Authorized user	M	
Defined subscriber number(s)	M	Group or individual subscriber number(s)
Activated/deactivated	M	
Basic service type(s)	C	note
Normal priority values	C	note
High priority values	C	note
Delivered to MS/LS unit(s)	O	
Acknowledgement from unit(s)	O	
NOTE:	The element shall be present if the information flow is used to define SS-PC. If the flow is used to activate or deactivate a previously made SS-PC definition, the element can be omitted.	

4.2.1.1.2 DEFINE-ACK

DEFINE-ACK information flow shall be used to acknowledge a previously sent definition request.

The information flow shall be for the relationship rc and from FE2 to FE3. The flow shall also be applied for the relationship rg and rb and from FE2 to FE3 via FE4, if FE3 is in another TETRA network. FE2 shall send an acknowledgement for each requested TETRA identity. That can be done in one or several information flows. DEFINE-ACK information flow is described in table 2.

The element Basic service type is needed only if different definitions were requested to different basic service types. If that is the case, the elements basic service type and result are repeated for each requested basic service type.

Table 2: The elements within DEFINE-ACK information flow

Element	Type	Remarks
Authorized user	M	
Defined subscriber number(s)	M	Group or individual subscriber number(s)
Basic service type(s)	O	
Result	M	

4.2.1.1.3 DEFINE-USER

DEFINE-USER information flow shall be used to define the call priority value(s) for one TETRA identity or for a range or list of TETRA identities to a user A(s). The usage of this information flow shall be optional to FE1.

The information flow shall be for the relationship ra and from FE2 to FE1. The flow shall be applied for the relationship rb and re and from FE2 to FE1 via FE4, if FE1 is in another TETRA system. DEFINE-USER information flow is described in table 3.

The elements basic service values, normal priority values and high priority values can be repeated in order to define different priority values to different basic services.

Table 3: The elements within DEFINE-USER information flow

Element	Type	Remarks
User A	M	
Defined subscriber number(s)	M	Group or individual subscriber number(s)
Activated/deactivated	O	
Basic service type(s)	O	
Normal priority values	C	
High priority values	C	
Acknowledgement requested	O	Requested for the definition

4.2.1.1.4 DEFINE-USER-ACK

DEFINE-USER-ACK information flow shall be used to acknowledge the previously received DEFINE-USER, if acknowledgement was requested.

The information flow shall be applied for the relationship ra and from FE1 to FE2. The flow shall be applied for the relationship re and rb and from FE1 to FE2 via FE4, if FE1 is in another TETRA system. DEFINE-USER-ACK information flow is described in table 4.

Table 4: The elements within DEFINE-USER-ACK information flow

Element	Type	Remarks
User A	M	
Defined subscriber number(s)	M	Group or individual subscriber number(s)
Result	M	

4.2.1.2 Interrogation

An authorized user can interrogate the SS-PC definitions made to the system. The user A can also interrogate his own priorities. The interrogation can be made to a single individual subscriber or to a range or set of subscriber numbers. One interrogated subscriber number can be an individual subscriber number or a group number.

4.2.1.2.1 INTERROGATE

INTERROGATE information flow shall be used to interrogate the defined call priority value(s) for one TETRA identity or for a range or list of TETRA identities. The interrogating party can be either an authorized user or a user A. User A is only authorized to interrogate its own SS-PC definitions or definitions made to a group that user A is a member of.

The information flow shall be applied for the relationship ra or rc and from FE1 or FE3 to FE2. The flow shall be used for the relationship rg/re and rb, and from FE1 or FE3 to FE2 via FE4, if FE1 or FE3 is in another TETRA system.

Table 5 lists the elements in the INTERROGATE information flow.

Table 5: The elements within INTERROGATE information flow

Element	Type	Remarks
Interrogating user	M	Authorized user/user A
Interrogated subscriber number(s)	M	Group or individual subscriber number(s)

4.2.1.2.2 INTERROGATE-ACK

INTERROGATE-ACK information flow shall be used to give a response for a SS-PC interrogation. The response includes all defined call priority value(s) and the basic service types, if priorities are separately defined for them.

The information flow shall be applied for the relationship ra or rc and from FE2 to FE1 or to FE3. The flow shall be used for the relationship rb and rg/re, and from FE2 to FE1 or FE3 via FE4, if FE1 or FE3 is in another TETRA system.

The elements basic service values, normal priority values and high priority values can be repeated in order to define different priority values to different basic services.

Table 6 lists the elements in the INTERROGATE-ACK information flow.

Table 6: The elements within INTERROGATE-ACK information flow

Element	Type	Remarks
Interrogating user	M	Authorized user/user A
Defined subscriber number(s)	M	Group or individual subscriber number(s)
Result for interrogation		Successful/error indication
Activated/deactivated	M	
Basic service type(s)	O	
Normal priority values	C	
High priority values	C	
Delivered to MS/LS units	O	

4.2.1.3 Operation and invocation

The calling party applies SS-PC by requesting a non-pre-emptive call priority when requesting call invocation. At the reception of the call invocation, FE2 shall verify the call priority, change it if needed and apply it for the call.

FE2 can change the requested call priority, if:

- the requested priority was not authorized;
- the call extends to several TETRA systems, FE2 of each system shall be able to select the applied call priority in that system;
- as network option, FE1 did not request any priority, FE2 may select the applied priority value;
- as operator option, FE2 may always change the requested priority, e.g. due to congestion.

4.2.1.3.1 OPERATE1

Calling party shall use OPERATE1 to request a call priority for a call at call invocation.

The information flow shall be applied for the relationship ra and from FE1 to FE2. The flow shall be applied for the relationship re and rb and from FE1 to FE2 via FE4, if FE1 is in another TETRA system. OPERATE1 information flow is described in table 7.

Table 7: The elements within OPERATE1 information flow

Element	Type	Remarks
Calling party	M	
Called subscriber number	M	Group or individual subscriber number(s)
Requested call priority	M	

4.2.1.3.2 OPERATE2

SwMI shall use OPERATE2 to indicate the call priority of the invoked call. The information flow shall be sent to the calling and called parties.

The information flow shall be applied for the relationship ra and rd, and from FE2 to FE1 and to FE5. The flow shall also be applied for the relationship rh and from FE2 to FE2 (in different TETRA systems) if SS-PC operation extends to several TETRA systems. OPERATE2 information flow is described in table 8.

Table 8: The elements within OPERATE2 information flow

Element	Type	Remarks
Receiving party	M	User A, user B
Called subscriber number	C	Group or individual subscriber number(s)
Call identifier	M	
Invoked call priority	M	

4.2.1.4 Information flows between different TETRA systems

The general principles and mechanism for sending supplementary service information flows between different TETRA systems apply for SS-PC.

4.2.2 Relationship of SS-PC information flows to other information flows

The SS-PC information flows for definition, activation, deactivation and interrogation between all entities should be sent with FACILITY PDU or any basic call information flow that can include SS-FACILITY element.

The call priority shall be included in any circuit mode basic service information flow that can contain the parameter "Call Priority" as defined in ETS 300 392-2 [2], or in any connection-oriented packet mode data information flow that can contain "Priority" element as defined in ETS 300 392-2 [2].

4.2.3 Information flow sequences

Signalling procedures shall be provided in support of the information flow sequences showed below. In addition, signalling procedures should be provided to cover other sequences arising from error situations, interactions with basic call, interactions with other supplementary services, different topologies etc.

In figures 4 to 9, SS-PC information flows are represented by solid arrows and basic call information flows are represented by broken arrows. An ellipse embracing two information flows indicates that the two information flows occur together. Within a column representing a SS-PC functional entity, the numbers refer to functional entity actions listed in subclauses 4.2.5 and 4.2.8.

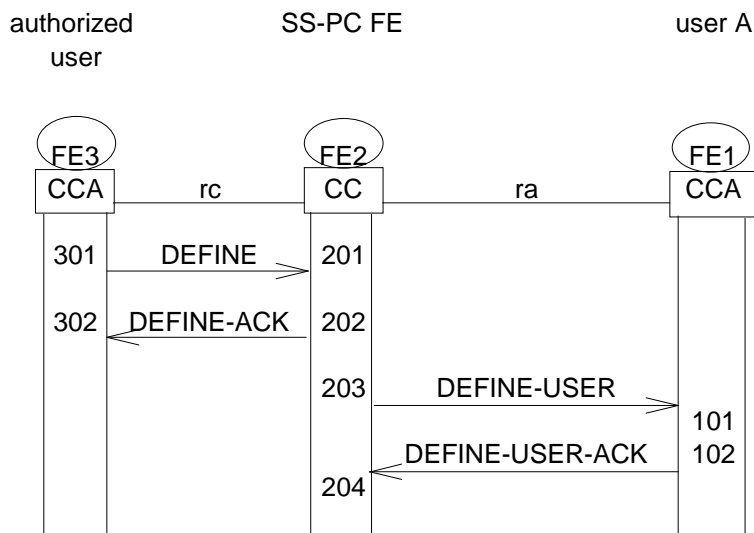
No timers are used in figures 4 to 9.

NOTE: The information flow sequences are examples and they may not cover all possible variations of the service.

4.2.4 Definition of SS-PC when definition is sent to user A

Figure 4 shows the information flow sequence for normal operation of SS-PC definition when the definition is also sent to user A and when all parties are in one TETRA system.

In the case of SS-PC definition for a group or for several subscribers, the information flow DEFINE-USER/DEFINE-USER-ACK should appear for every group member/subscriber, if sending was requested to FE1s.



NOTE: The information flow from FE2 to FE1 is optional.

Figure 4: Successful definition of SS-PC

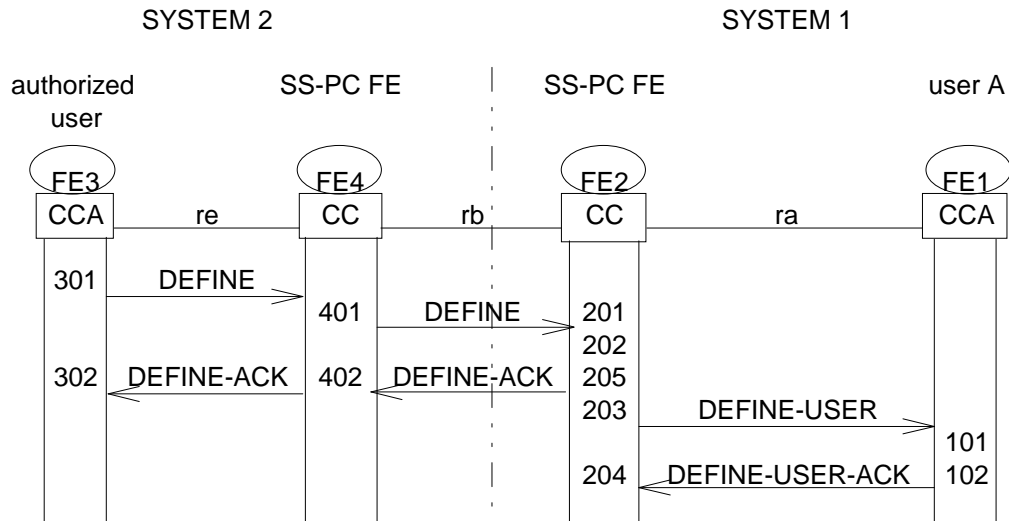
4.2.4.1 Definition when the authorized user is in a visited system

Figure 5 shows the information flow sequence for normal operation of SS-PC definition when the definition is also sent to user A and when the authorized user is in a visited system and served user is in the home system. If the user A has migrated into another TETRA system, the DEFINE and DEFINE-ACK information flows shall appear between FE4 and FE3 in the relationship rd and between FE2 and FE4 in the relationship rb.

In the case of SS-PC definition for a group or for several subscribers, the information flow DEFINE-USER/DEFINE-USER-ACK should appear for every group member/subscriber, if sending was requested to FE1s.

After the SS-PC definition has been concluded, the home system of the defined subscriber identity can send the SS-PC definitions applying the mobility management functions to other TETRA systems (system 2, if any user A is located in system 2). If this is done, system 2 can use the SS-PC definitions for determining the priority for calls, if invoked for the defined subscriber identity. However, this is outside the scope of this ETS.

NOTE FE4 in system 2 should not keep any SS-PC definitions as part of the generic function tasks when delivering SS-PC definitions from system 2 to system 1 on an authorized user's behalf, even if the authorized user is located in system 2 when he makes the definition, activation or deactivation.



NOTE: The information flow from FE2 to FE1 is optional and the acknowledgement (DEFINE-USER-ACK) is only sent, if requested in DEFINE-USER information flow.

Figure 5: Successful definition of SS-PC when an authorized user is in a visited system

4.2.4.2 Definition when user A is in a visited system

Figure 6 shows the information flow sequence for definition of SS-PC when the definition is also sent to user A and when user A is in system 2 and authorized user is in system 1 (home system for the defined subscriber identity). If the served user has migrated into another TETRA system, the DEFINE and DEFINE-ACK information flows shall appear between FE2 and FE3 in the relationship rc and between FE1 and FE4 in the relationship re. In the case of SS-PC definition for a group, the information flow DEFINE-USER/DEFINE-USER-ACK should appear for every group member, if sending was requested to FE1s.

After the SS-PC definition has been concluded, the home system of the defined subscriber identity can send the SS-PC definitions applying the mobility management functions to other TETRA systems (system 2 if any user A is located in system 2). If this is done, system 2 can use the SS-PC definitions for determining the priority for calls, if invoked for the defined subscriber identity. However, this is outside the scope of this ETS.

NOTE: FE4 in system 2 should not keep any SS-PC definitions as part of the generic function tasks when delivering SS-PC definitions when delivering SS-PC definition from system 1 to user A, when user A is located in system 2. If the SS-PC definitions are updated on FE1's behalf to system 2, system 2 should use the definitions to determine the relative priorities when SS-PC is operated for basic services, e.g. if user A invokes a SS-PC with a value corresponding to high priority the operated priority level should correspond to a high priority for that user in system 2.

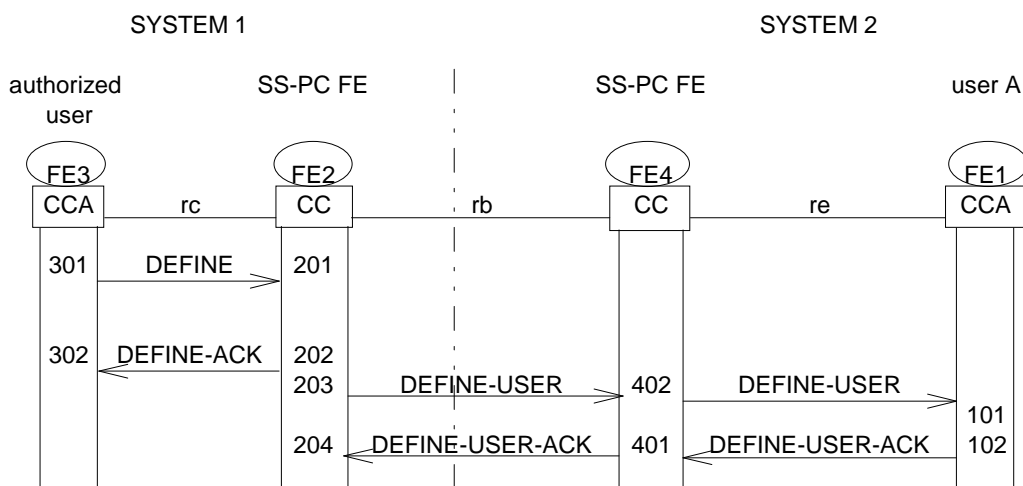


Figure 6: Successful definition of SS-PC when user B is in a visited system

4.2.4.3 Interrogation

Figure 7 shows the information flow sequence for normal operation of SS-PC interrogation when authorized user is in the home system. If an authorized user requests the interrogation in another TETRA system, the same information flow shall appear between FE3 and FE4 over the re relationship, but it shall also appear between FE2 and FE4 in the relationship rb.

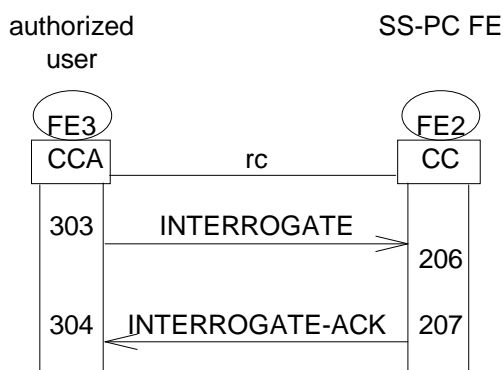


Figure 7: Interrogation of SS-PC

4.2.5 Functional entity actions

4.2.5.1 Functional entity actions of FE1

- 101 At the reception of SS-PC definition from FE2, FE1 shall save the definition to the database of the MS/LS, if FE1 doesn't find any reason for rejection.
- 102 FE1 shall acknowledge the definition request positively, if it finds the request valid. If not, it shall return a negative acknowledgement.

4.2.5.2 Functional entity actions of FE2

- 201 At the reception of SS-PC definition from FE3, FE2 should verify that the definition request is authorized, its parameters are valid and their values are in allowed range.
- 202 FE2 should acknowledge the definition request to FE3 positively, if the service was successfully carried out. If the service request failed for any reason, FE2 should return a negative acknowledgement to FE3.
- 203 As an operation option, FE2 may locate the LS- or MS-subscriber(s) and send them the definition request. FE2 may save the definition data and send it later, if FE1 is not reachable for the moment.

NOTE 1: If the served user has migrated to another tetra system, the step 205 is also made in order to deliver the DEFINE USER information flow to FE1.

204 FE2 receives the acknowledgement(s) from the FE1(s). Step 204 should apply only if step 203 is carried out.

NOTE 2: If SS-PC definition is made for a group, the actions 203 and 204 can be carried for each group member.

205 FE2 should add the routing address of FE4 to the SS-PC information flow.

206 At the reception of SS-PC interrogation from FE3, FE2 should verify that the request is authorized, its parameters valid and their values in the allowed range.

207 If the interrogation request is valid and authorized, FE2 should fetch the interrogation data and return the response to FE3. If the request is not valid or not authorized FE2 should send an error indication to FE3.

4.2.5.3 Functional entity actions of FE3

301 At the reception of SS-PC definition request from user, FE3 may perform local checks for suitability. FE3 may bar the request based on these checks, but if the request is not barred, FE3 shall send it to FE2. If the request is barred locally, FE3 shall indicate the error to the user.

302 At the reception of the definition acknowledgement, FE3 shall display it to the user.

303 At the reception of SS-PC interrogation request from user, FE3 may perform local checks for suitability. FE3 may bar the request based on these checks, but if the request is not barred, FE3 sends it to FE2. If the request is barred locally, FE3 shall indicate the error to the user.

304 At the reception of the response, FE3 shall display it to the user.

4.2.5.4 Functional entity actions of FE4

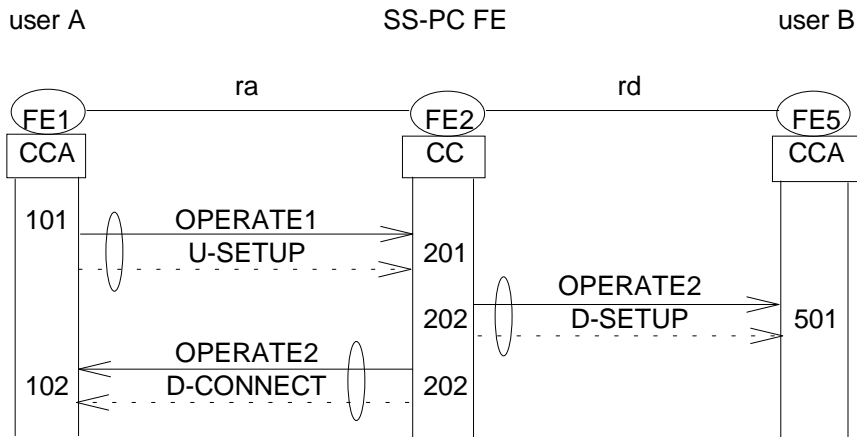
401 FE4 should add the routing address of FE2 to the SS-PC information flow.

402 FE4 should locate the FE3/FE1 and send the information to it.

NOTE: FE3 may be replaced by FE1 in this action in order to reach the FE1 that has migrated into another system.

4.2.6 Operation for call within one TETRA system

Figure 8 shows the information flow sequence for normal operation of SS-PC applied in call. It applies for both point-to-point and point-to-multipoint call. user A requests the priority and FE2 applies it for the call and indicates this to user A and user Bs. In case of point-to-multipoint call, there are several user B(s), however, only one user B is shown in figure 8. All parties are within one TETRA system.

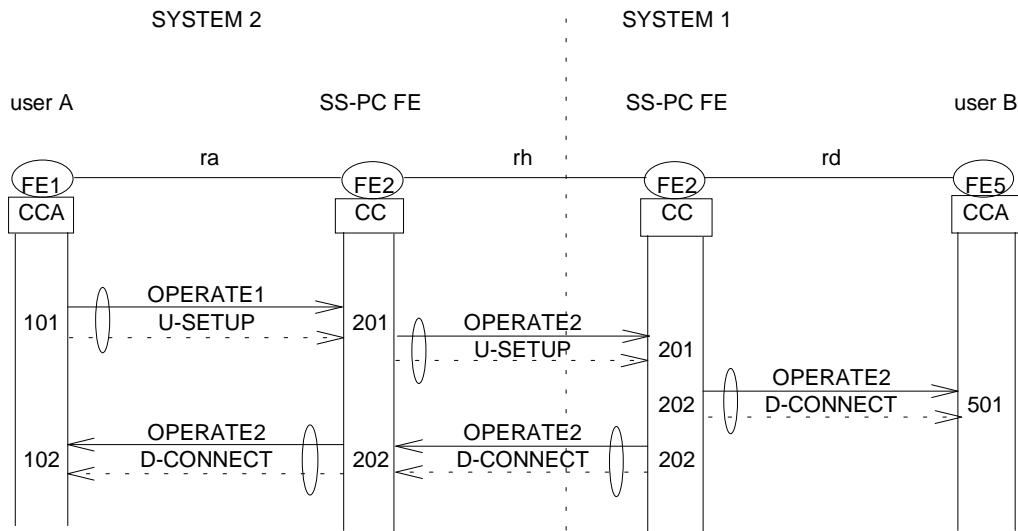


NOTE: Only the call related messages that convey SS-PC information are shown.

Figure 8: Operation of SS-PC for multipoint call within one TETRA system

4.2.7 Operation for call initiated over Inter-System Interface (ISI)

Figure 9 shows the information flow sequence for normal operation of SS-PC in a call initiated over the ISI. The figure applies for both point-to-point and point-to-multipoint call. User A in system 2 requests the priority and FE2 in system 1 verifies the priority for the call and indicates the priority to user B(s) in system 1 and to FE2 in system 2. FE2 may change the priority applied for the call in system 2. FE2 indicates the priority to user A. In case of point-to-multipoint call, there are several user B(s), however, only one user B is shown in the figure.



NOTE: Only the call related messages that convey SS-PC information are shown.

Figure 9: Operation of SS-PC for multipoint call initiated over ISI

4.2.8 Functional entity actions

4.2.8.1 Functional entity actions of FE1

- 101 At the reception of basic service request from served user, FE1 shall verify and set the call priority as defined for the basic service.
- 102 At the reception of the basic service invocation, FE1 and CCA shall receive the call priority value and shall act upon that. FE1 can display the call priority to the user.

4.2.8.2 Functional entity actions of FE2

- 201 At the reception of basic service request, FE2 should verify and/or assign the call priority that will be applied for the basic service.
- 202 At basic service invocation, FE2 should send the call priority to the parties that participate the call.

4.2.8.3 Functional entity actions of FE5

- 501 At the reception of the basic service invocation, FE5 and CCA shall receive the call priority value and shall act upon that. FE5 may display the call priority to the user.

4.3 Allocation of FEs to physical equipment

The allocation of FEs to physical equipment is described in table 9.

Table 9: Allocation of FEs to physical equipment

FE/PE	SwMI	LS	MS
FE1	-	+	+
FE2	+	-	-
FE3	-	+	+
FE4	+	-	-
FE5	-	+	+
KEY: + = applicable; - = not applicable			

4.4 Inter-working considerations

The SS-PC may extend to several TETRA networks. The requirements for the management part from the system 2, in which the authorized user and/or user A can be located, are to deliver and receive SS-PC definition information over the ISI and to the user(s) located in system 2.

The requirements for the operational part of SS-PC include the capability to support the functions of FE2 in call set-up.

History

Document history	
August 1996	Public Enquiry PE 111: 1996-08-05 to 1996-11-29