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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: "Interworking - 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
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## 1 Scope

This European Telecommunication Standard (ETS) defines the stage 1 specifications of the Call Report (CR) supplementary service for the Trans-European Trunked RAdio as provided by European operators. 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 the ETS specifies the interactions with other TETRA supplementary services and inter-working considerations.

Charging principles are outside the scope of this ETS.

The CR supplementary service enables the call originator to leave his/her identity for the called party.

## 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): "CCITT 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.

**busy:** A property of a user for whom a network determined user busy condition applies (see ITU-T Recommendation Z.100 [2]).

**identity presentation:** The stored/displayed identification provided to the called party for subsequent call back.

**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 (MRS).

**CC-SS retention timer:** A timer started by the infrastructure upon disconnection of the call, which allows the user to use the call Identification in order to invoke/activate/interrogate a supplementary service related to that call. After expiry of the timer, the user is no longer able to use the call Identification in order to carry out supplementary service procedures.

**SS-CR message validity timer:** A timer controlled by the infrastructure but defined by the served user, which determines how long a message can be stored in the infrastructure. After expiry of the timer the message is deleted.

**supplementary service:** 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.

**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.

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

**user A:** The specific user that originated the call and requested the supplementary service.

**user B:** The user that was initially addressed in the original call set up.

**user C:** The user who is the diverted-to user.

## 3.2 Abbreviations

### 3.2.1 General abbreviations

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

ISDN	Integrated Services Digital Network
ITSI	Individual TETRA Subscriber Identity
MS	Mobile Station
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
V+D	Voice Plus Data

### 3.2.2 Supplementary service abbreviations

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

BIC	Barring of Incoming Calls
CFB	Call Forwarding on Busy
CFNRy	Call Forwarding on No Reply
CFNRc	Call Forwarding on Not Reachable
CFU	Call Forwarding Unconditional
CR	Call Report

## 4 SS-CR stage 1 specification

### 4.1 Description

#### 4.1.1 General description

Call Report (CR) is a supplementary service which is offered to a calling user A. On encountering a busy called user B, or a called user B which does not answer, it shall deliver the identity presentation. If a called user B which is not reachable, it allows user A to request that the SwMI monitors user B until user B is reachable. The SwMI shall then send the identity presentation information to user B.

#### 4.1.2 Qualifications on applicability to telecommunication services

This supplementary service shall be applicable to all TETRA individual speech teleservices and to TETRA individual circuit mode bearer services.

## 4.2 Procedures

### 4.2.1 Provision/Withdrawal

SS-CR shall be available either to all TETRA users which have subscribed to this service, or generally available to all users within a system. SS-CR may be withdrawn for administrative reasons.

The subscription parameters and values offered by a SwMI shall be an implementation matter. A SwMI may offer more or less parameters and values than those specified below. The SwMI shall send the identity presentation. Other information may be associated to the identity presentation mode.

Possible subscription options are summarised in table 1.

**Table 1: SS-CR subscription parameters**

Subscription parameter	Values
Identity presentation	- Contains SS-CR subscriber Individual TETRA Subscriber Identity (ITSI) and/or - Contains predefined SS-CR subscriber information
Priority	- Indicates the priority of the reported call
Time information	- Indicates the time and date of the SS-CR invocation

### 4.2.2 Normal procedures

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

##### 4.2.2.1.1 Activation/deactivation

SS-CR is activated upon provision and may be deactivated upon withdrawal.

##### 4.2.2.1.2 Definition

Shall not be applicable.

##### 4.2.2.1.3 Registration

Shall not be applicable.

##### 4.2.2.1.4 Interrogation

Shall not be applicable.

##### 4.2.2.1.5 Cancellation

As an implementation option, a user A shall be able to send a cancellation message. If SS-CR information has been already sent to user B a cancellation message shall be sent to user B. If the message has not been sent, then the invocation shall be cancelled and the SS shall be considered to be complete.

#### 4.2.2.2 Invocation and operation

When a call from user A fails because the destination user, user B, is busy, user A shall be able to request SS-CR before he/she disconnects. Otherwise, after disconnection, the Switching and Management Infrastructure (SwMI) should retain the call information for a period governed by the CC-SS retention timer. User A shall be able to request SS-CR during that period. On receipt of a request for SS-CR during that period, the SwMI shall send the SS-CR information to user B.

When a call from user A fails because the destination user, user B, does not answer, user A shall be able to request SS-CR before he/she disconnects. Otherwise, after disconnection, the SwMI should retain the call information for a period governed by the CC-SS retention timer. User A shall be able to request SS-CR during that period. On receipt of a request for SS-CR during that period, the SwMI shall send the SS-CR information to user B.

When a call from user A fails because the destination user, user B, is not reachable, the SwMI shall retain the call information for a period governed by the CC-SS retention timer. User A shall be able to request SS-CR during that period. On receipt of a request for SS-CR during that period, the SwMI shall start monitoring user B and start the SS-CR message validity timer. When the monitoring of user B indicates that user B has become reachable, the SwMI shall send the SS-CR information to user B. When the SS-CR message validity timer expires before user B has become reachable, the SS-CR shall be completed without any further action. The served user shall be able to define the time of the SS-CR message validity timer upon invocation.

NOTE: The handling of multiple requests against the same user B is an implementation matter, typically involving some sort of queue arranged in chronological or priority order.

The value of the SS-CR retention timer is implementation dependent.

#### **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**

Shall not be applicable.

###### **4.2.3.1.4 Interrogation**

Shall not be applicable.

###### **4.2.3.1.5 Cancellation**

Shall not be applicable.

##### **4.2.3.2 Invocation and operation**

###### **4.2.3.2.1 Rejection of SS-CR service request**

If user A is not permitted to request SS-CR, the SwMI shall reject the SS-CR request. Examples of conditions that may result in a denial may be:

- service withdrawn;
- service not subscribed to;
- completion failure;
- limit of requests against user B already reached; or
- inter-working with a network which does not support SS-CR;
- the CC-SS retention timer has expired.

#### **4.3 Interactions with other supplementary services**

Interactions with other TETRA supplementary services are specified below.

#### **4.3.1 Calling line identification presentation**

Call report shall not have any interaction with calling line identification presentation.

#### **4.3.2 Connected line identification presentation**

Call report shall not have any interaction with connected line identification presentation.

#### **4.3.3 Calling/connected line identification restriction**

Call report shall not have any interaction with calling/connected line identification restriction.

#### **4.3.4 Call report**

Not applicable.

#### **4.3.5 Talking party identification**

Call report shall not have any interaction with talking party identification.

#### **4.3.6 Call forwarding unconditional**

If the call to user B is diverted to user C by SS-Call Forwarding Unconditional (CFU) and user C is busy or does not answer or is not reachable, then a SS-CR request from user A shall be applied to the diverted-to user C. As an implementation option, the request may be accompanied by an identification of the original called user B.

#### **4.3.7 Call forwarding on busy**

If the call from user A to user B is diverted to user C by SS-Call Forwarding on Busy (CFB) and user C is busy or does not answer or is not reachable, then a SS-CR request made by user A shall be applied either to the diverted-to user C or to the originally called user B, depending on system implementation. As an implementation option, the request may be accompanied by an identification of the original called user B.

#### **4.3.8 Call forwarding on no reply**

If the call from user A to user B is diverted to user C by SS-Call Forwarding on No Reply (CFNRy) and user C is busy or does not answer or is not reachable, then a SS-CR request made by user A shall be applied either to the diverted-to user C or to the originally called user B, depending on system implementation. As an implementation option, the request may be accompanied by an identification of the original called user B.

#### **4.3.9 Call forwarding on not reachable**

If the call from user A to user B is diverted to user C by SS-Call Forwarding on Not Reachable (CFNRc) and user C is busy or does not answer or is not reachable, then a SS-CR request made by user A shall be applied either to the diverted-to user C or to the originally called user B, depending on system implementation. As an implementation option, the request may be accompanied by an identification of the original called user B.

#### **4.3.10 List search call**

Call report shall not have any interaction with list search call.

It is an implementation option which attendant is sent the SS-CR information.

#### **4.3.11 Call authorized by dispatcher**

If, in the case when the dispatcher has not answered the intercepted call and subsequently, the served user has invoked the SS-CR, then the invocation shall be rejected.

In the case where the dispatcher has previously authorized the call, then there shall be no interaction.

**4.3.12 Short number addressing**

Call report shall not have any interaction with short number addressing.

**4.3.13 Area selection**

If user B is outside of the selected area, there is no call set up and the invocation of SS-CR shall not be possible.

If user B is not reachable, but subsequently reappears outside the selected area, then the SS-CR information may be forwarded.

If user B is not reachable, but subsequently reappears within the selected area, then the SS-CR information shall be forwarded.

**4.3.14 Access priority**

Call report shall not have any interaction with access priority.

**4.3.15 Priority call**

Call report shall not have any interaction with priority call.

**4.3.16 Call waiting**

Call report shall not have any interaction with call waiting.

**4.3.17 Call hold**

Call report shall not have any interaction with call hold.

**4.3.18 Call completion to busy subscriber**

Call report shall not have any interaction with call completion to busy subscriber.

**4.3.19 Late entry**

Call report shall not have any interaction with late entry.

**4.3.20 Transfer of control**

Call report shall not have any interaction with transfer of control.

**4.3.21 Pre-emptive priority call**

Call report shall not have any interaction with pre-emptive priority call.

**4.3.22 Include call**

Call report shall not have any interaction with include call.

**4.3.23 Advice of charge**

Call report shall not have any interaction with advice of charge.

**4.3.24 Barring of outgoing calls**

Call report shall not have any interaction with barring of outgoing calls.

#### **4.3.25 Barring of incoming calls**

Call report shall not have any interaction with barring of incoming calls.

If SS-Barring of Incoming Calls (BIC) was activated at user B, then no call was set-up and the invocation of SS-CR shall not be possible.

#### **4.3.26 Discreet listening**

Call report shall not have any interaction with discreet listening.

#### **4.3.27 Ambience listening**

Call report shall not have any interaction with ambience listening.

#### **4.3.28 Dynamic group number assignment**

Call report shall not have any interaction with dynamic group number assignment.

#### **4.3.29 Call completion on no reply**

Call report shall not have any interaction with call completion on no reply.

#### **4.3.30 Call retention**

Call report shall not have any interaction with call retention.

### **4.4 Inter-working considerations**

When users A and B are on a different network, the availability of SS-CR to user A shall be limited by the capabilities of both networks and the inter-working functions between them.

### **4.5 Overall SDL**

Figure 1 contains the dynamic description of SS-CR 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-CR.

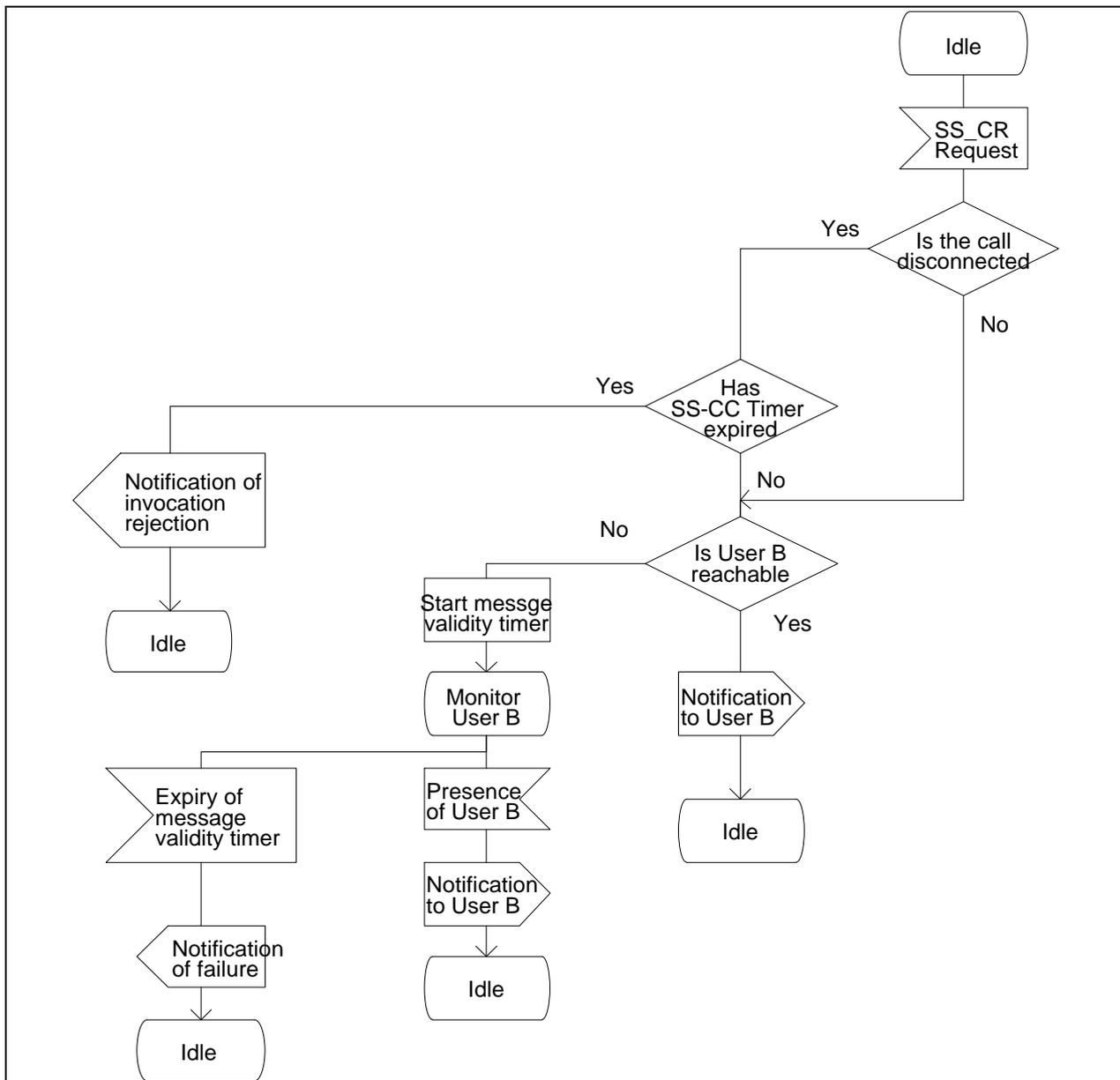


Figure 1: SS-CR, overall SDL

## History

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November 1994	Public Enquiry	PE 73:	1994-11-07 to 1995-03-03
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