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Foreword

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

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

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

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

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1 Scope

This European Telecommunication Standard (ETS) defines the stage 1 specifications of the Short Number Addressing (SNA) supplementary service for the Trans-European Trunked RAdio (TETRA) 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 Short Number Addressing (SNA) supplementary service enables the served user to send an abbreviated number instead of a full identity to the infrastructure and additionally SNA may either invoke or suppress other supplementary services.

2 Normative references

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

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

3 Definitions and Abbreviations

3.1 Definitions

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

authorized user: A user who is authorized to defined short numbers.

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

served user: The user who uses short number addressing.

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

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.

3.2 Abbreviations

3.2.1 General abbreviations

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

GTSI	Group TETRA Subscriber Identity
ISDN	Integrated Services Digital Network
ITSI	Individual TETRA Subscriber Identity
SDL	(Functional) Specification and Description Language
SS	Supplementary Service

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

SwMI	Switching and Management Infrastructure
TETRA	Trans-European Trunked RAdio

3.2.2 Supplementary service abbreviations

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

DGNA	Dynamic Group Number Assignment
LSC	List Search Call
SNA	Short Number Addressing
TC	Transfer of Control

4 SS-SNA stage 1 specification

4.1 Description

4.1.1 General description

Short number addressing service contains two parts:

The first part of the service (SNA-1) shall be defined as the facility whereby the served user shall be able to use a pre-defined abbreviated address (short number) instead of a full address. The service provider or optionally the authorized users shall be able to define short numbers.

As a network option the second part of the service (SNA-2) shall be defined as the functionality by which either other supplementary services shall be invoked or other already invoked supplementary services shall be suppressed when the user sets up a call. The service provider and/or the authorized users shall be able to define invocation and suppression profile if this option is supported.

4.1.2 Qualifications on applicability to telecommunication services

Short number addressing shall be applicable to circuit mode TETRA teleservices and bearer services and to short data services and to certain supplementary services.

4.2 Procedures

4.2.1 Provision/Withdrawal

Short numbers and supplementary service invocation and suppression profiles shall be defined upon provision and/or later by the authorized users.

Authorized users shall be identified upon provision and served users may be identified upon provision.

The service provider may withdraw these services at any time without a prior announcement.

4.2.2 Normal procedures

4.2.2.1 Activation/Deactivation, definition, registration, interrogation, cancellation

4.2.2.1.1 Activation/Deactivation

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

4.2.2.1.2 Definition

Both parts of SNA may be defined by authorized users. Upon definition the authorized user shall provide to the service provider the following information for SNA-1 and SNA-2:

- 1) list of short numbers with corresponding internal or external identities;
- 2) number complete indication;
- 3) list of served users.

In addition the authorized user shall provide the following information for SNA-2:

- 1) list of supplementary service invocations and invocation suppressions associated to each short number for SNA-2.

4.2.2.1.3 Registration

Authorized users shall be registered upon provision.

4.2.2.1.4 Interrogation

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

- 1) list of short numbers with corresponding internal or external identities;
- 2) list of supplementary service invocations and invocation suppressions associated to each short number;
- 3) list of served users.

4.2.2.1.5 Cancellation

Shall not be applicable.

4.2.2.2 Invocation and operation

The SNA-1 shall be invoked when the infrastructure receives a service request incorporating a short number identity. Upon acceptance of the invocation the infrastructure shall convert the short number into the corresponding (full) address and the requested action shall proceed with the full identity.

If SNA-2 is activated then it shall be invoked in addition to SNA-1, when the infrastructure receives a short number identity and if SNA-2 is applicable to the requested service (normal call set-up, include call, short data service etc.). The associated supplementary services shall either be invoked or suppressed as appropriate and the requested service shall proceed with the full identity.

It is a network option which supplementary services from the service request and/or from the SNA-2 can be invoked or suppressed and which parameters can be applied to the invoked supplementary services.

These network options are outside the scope of this ETS.

4.2.3 Exceptional procedures

4.2.3.1 Activation/Deactivation, Definition, Registration, Interrogation, Cancellation

4.2.3.1.1 Activation/Deactivation

Shall not be applicable.

4.2.3.1.2 Definition

If the infrastructure cannot accept a definition a cause shall be returned to the authorized user. Examples of possible causes can be:

- 1) the service or option is not provided, (general interrogation);
- 2) insufficient information;
- 3) the number of short addresses exceed the maximum allowed to that user.

4.2.3.1.3 Registration

Shall not be applicable.

4.2.3.1.4 Interrogation

If the Switching and Management Infrastructure (SwMI) cannot accept an interrogation request, the interrogating user shall receive a notification that a SNA interrogation was unsuccessful. Possible causes for rejection can be:

- 1) the service or option is not provided, (general interrogation);
- 2) the user is not an authorized user, (general interrogation);
- 3) insufficient information.

4.2.3.1.5 Cancellation

Shall not be applicable.

4.2.3.2 Invocation/Operation

If the infrastructure cannot invoke the service the cause shall be returned to the subscriber. Examples of possible causes can be:

- 1) SNA is not provided to that user;
- 2) short number address is not valid;
- 3) service is withdrawn.

4.3 Interactions with other supplementary services

4.3.1 Calling line identification presentation

Short number addressing shall not have any interaction with calling line identification presentation. The full identity is presented.

4.3.2 Connected line identification presentation

Short number addressing shall not have any interaction with connected line identification presentation.

4.3.3 Calling/Connected line identification restriction

Short number addressing shall not have any interaction with calling/connected line identification restriction.

4.3.4 Call report

Short number addressing shall not have any interaction with call report.

4.3.5 Talking party identification

Short number addressing shall not have any interaction with talking party identification.

4.3.6 Call forwarding unconditional

Short number addressing shall not have any interaction with call forwarding unconditional.

4.3.7 Call forwarding on busy

Short number addressing shall not have any interaction with call forwarding on busy.

4.3.8 Call forwarding on no reply

Short number addressing shall not have any interaction with call forwarding on no reply.

4.3.9 Call forwarding on not reachable

Short number addressing shall not have any interaction with call forwarding on not reachable.

4.3.10 List search call

Short number addressing shall not have any interaction with list search call. SS-LSC shall invoke only SNA-1.

4.3.11 Call authorized by dispatcher

Short number addressing shall not have any interaction with call authorized by dispatcher.

4.3.12 Short number addressing

Not applicable.

4.3.13 Area selection

Short number addressing shall not have any interaction with area selection.

4.3.14 Access priority

Short number addressing shall not have any interaction with access priority.

4.3.15 Priority call

Short number addressing shall not have any interaction with priority call.

4.3.16 Call waiting

Short number addressing shall not have any interaction with call waiting.

4.3.17 Call hold

Short number addressing shall not have any interaction with call hold.

4.3.18 Call completion on busy subscriber

Short number addressing shall not have any interaction with call completion on busy subscriber.

4.3.19 Late entry

Short number addressing shall not have any interaction with late entry.

4.3.20 Transfer of control

Short number addressing shall not have any interaction with transfer of control. SS-TC shall invoke only SNA-1.

4.3.21 Pre-emptive priority call

Short number addressing shall not have any interaction with pre-emptive priority call.

4.3.22 Include call

Short number addressing shall not have any interaction with include call.

4.3.23 Advice of charge

Short number addressing shall not have any interaction with advice of charge.

4.3.24 Barring of outgoing calls

Short number addressing shall not have any interaction with barring of outgoing calls.

4.3.25 Barring of incoming calls

Short number addressing shall not have any interaction with barring of incoming calls.

4.3.26 Discreet listening

Short number addressing shall not have any interaction with discreet listening.

4.3.27 Ambience listening

Short number addressing shall not have any interaction with ambience listening.

4.3.28 Dynamic group number assignment

Short number addressing shall not have any interaction with dynamic group number assignment. SS-DGNA shall invoke only SNA-1.

4.3.29 Call completion on no reply

Short number addressing shall not have any interaction with call completion on no reply.

4.3.30 Call retention priority

Short number addressing shall not have any interaction with call retention priority.

4.4 Inter-working considerations

The short number addressing as an operator agreement may be available across the intersystem interface.

4.5 Overall SDL

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

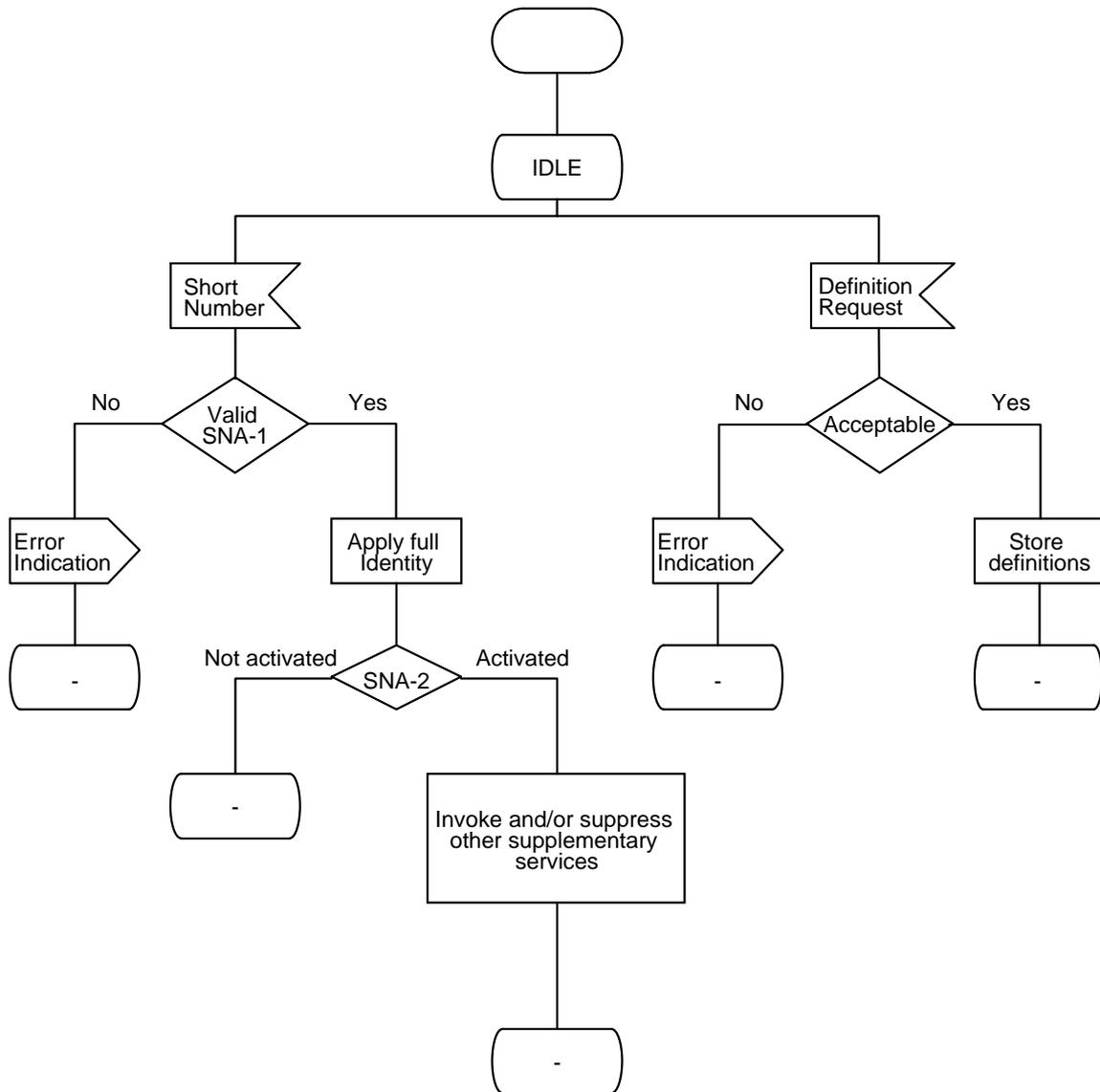


Figure 1: SS-SNA overview SDL

History

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