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Digitalno omrežje z integriranimi storitvami (ISDN) – Dopolnilna storitev: zaprta skupina uporabnikov (CUG) – Opis storitve

Integrated Services Digital Network (ISDN); Closed User Group (CUG) supplementary service; Service description

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#### **Foreword**

This European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

In accordance with CCITT Recommendation I.130 [1], the following three level structure is used to describe the supplementary telecommunications services as provided by European public telecommunications operators under the pan-European Integrated Services Digital Network (ISDN):

- Stage 1: is an overall service description, from the user's standpoint;
- Stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1; and
- Stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This standard details the stage 1 aspects (overall service description) for the Closed User Group (CUG) supplementary service. The stage 2 and stage 3 aspects are detailed in ETS 300 137 (1992) and ETS 300 138 (1992), respectively.

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### 1 Scope

This standard defines the stage one of the Closed User Group (CUG) supplementary service for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators. Stage one is an overall service description from the user's point of view (see CCITT Recommendation I.130 [1]), but does not deal with the details of the human interface itself.

This standard defines the interworking requirements of private ISDNs with the public ISDN.

In addition this standard specifies the base functionality where the service is provided to the user via a private ISDN.

This standard does not specify the additional requirements where the service is provided to the user via a telecommunications network that is not an ISDN, but it does include interworking requirements of other networks with the public ISDN.

Interactions with supplementary services not listed in Clause 8 are outside the scope of this standard.

Charging principles are outside the scope of this standard.

The CUG supplementary service enables users to form groups to and from which access is restricted. A specific user may be a member of one or more closed user groups. Members of a specific closed user group can communicate among each other but not, in general, with users outside the group.

Some networks may permit closed user group members to make special calls which are outside that user's closed user group requirements (e.g., calls to emergency services). This functionality and associated procedures are outside the scope of this standard.

The CUG supplementary service is applicable to all telecommunications services.

This standard is applicable to the stage two and stage three standards for the ISDN CUG supplementary service. The terms "stage two" and "stage three" are also defined in CCITT Recommendation I.130 [1]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorisation leaving freedom, or as a capability or possibility), this shall be reflected in the text of the relevant stage two and stage three standards.

Furthermore, conformance to this standard is met by conforming to the stage three standards with the field of application appropriate to the equipment being implemented. Therefore no method of testing is provided for this standard.

#### 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] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".
- [3] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means used to describe them".

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[4] CCITT Recommendation E.164 (1988): "Numbering plan for the ISDN era".

[5] CCITT Recommendation X.180 (1988): "Administrative arrangements for

international closed user groups".

[6] CCITT Recommendation Q.9 (1988): "Vocabulary of switching and signalling

terms".

[7] ETS 300 089 (1992): "Integrated Services Digital Network (ISDN); Calling Line

Identification Presentation (CLIP) supplementary service; Service description".

#### 3 Definitions

For the purposes of this standard the following definitions apply:

**Integrated Services Digital Network (ISDN):** see CCITT Recommendation I.112 [2], § 2.3, definition 308.

(Basic) service; telecommunications service: see CCITT Recommendation I.112 [2], § 2.2, definition 201.

**Supplementary service:** see CCITT Recommendation I.210 [3], § 2.4.

**ISDN number:** a number conforming to the numbering plan and structure specified in CCITT Recommendation E.164 [4].

Closed user group (CUG) member: a user who has subscribed to the CUG supplementary service and is one of the users in the group formed by a particular closed user group.

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Closed user group (CUG) index: a value assigned by the network to identify a closed user group. This value is used in closed user group calls at the user's access.36 E1:2003

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**Preferential CUG:** a preferential closed user group is the nominated default group to be used when no closed user group or explicit outgoing access request is received by the network.

**Incoming access:** an arrangement which allows a member of a closed user group to receive calls from outside the closed user group.

**Outgoing access:** an arrangement which allows a member of a closed user group to place calls outside the closed user group.

**Incoming calls barred within a closed user group:** an access restriction that prevents a closed user group member from receiving calls from other members of that group.

**Outgoing calls barred within a closed user group:** an access restriction that prevents a closed user group member from placing calls to other members of that group.

Closed user group call: a closed user group call is a call which is restricted to a pre-defined group of users.

Basic access: see CCITT Recommendation Q.9 [6], § 1, definition 1551.

Primary rate access: see CCITT Recommendation Q.9 [6], § 1, definition 1552.

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### 4 Symbols and abbreviations

CUG Closed User Group

ISDN Integrated Services Digital Network

PSTN Public Switched Telephone Network

### 5 Description

The CUG supplementary service shall apply to the basic access and to the primary rate access.

The CUG supplementary service enables users to form groups to and from which access is restricted. A specific user may be a member of one or more closed user groups. Members of a specific closed user group can communicate among each other but not, in general, with users outside the group.

A closed user group consists of a number of users. A closed user group can have members from one or more public networks. In the ISDN, each member of a closed user group is identified by their ISDN number (see also subclauses 8.9 and 8.13).

Subscription to a closed user group shall be defined for all basic services, or in relation to one, or to a list of basic services.

Closed user group members can have additional capabilities that allow them to originate calls outside the group, and/or to receive calls from outside the group. Closed user group members can have additional restrictions that prevent them from originating calls to other members of the closed user group, or from receiving calls from other members of the closed user group.

### 6 Procedures (standards.iteh.ai)

#### 6.1 Provision and withdrawa SIST ETS 300 136 E1:2003

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The CUG supplementary service shall be provided after prior afrangement with the service provider.

As a network option, the CUG supplementary service can be offered with several subscription options. For a particular closed user group, the associated set of general subscription options can apply to one basic service, to a particular set of basic services, or to all basic services (see table 1A).

A user may subscribe to one of two additional restrictions applying to each particular closed user group:

- incoming calls barred within a closed user group;
- outgoing calls barred within a closed user group.

A user can be a member of several closed user groups. Each network operator shall define the maximum number of closed user groups which can be allocated to an individual user.

When a user subscribes to the CUG supplementary service, a network operator shall also register one of the following service arrangements as requested by the user (see table 1B):

- closed user group calls only;
- closed user group with incoming access, i.e. can also receive calls which are not subject to closed user group restrictions; or
- closed user group with outgoing access, i.e. can also make calls which are not subject to closed user group restrictions; or