SLOVENSKI STANDARD

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Intelligent Network (IN); Intelligent Network Capability Set 4 (CS4); Intelligent Network Application Protocol (INAP); Protocol specification; Part 1: Common aspects

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 1 of a multi-part deliverable covering Intelligent Network (IN); Intelligence Network Capability Set 4 (CS4); Intelligent Network Application Protocol (INAP); Protocol specification, as identified below:

    Part 1:   **"Common aspects"**;

    Part 2:   "Service Switching Function - Switching Control Function (SSF-SCF) Interface".

The present document describes the enhancement for IN CS-4 common aspects.

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The present document and EN 302 039-2 [5] define the Intelligent Network (IN) Application Protocol (INAP) for IN Capability Set-4 based and written as delta documents upon ETSI Core INAP CS-3 (EN 301 931-1 [1] and EN 301 931-2 [2]).

This set of documents define enhancements made on the SSF to SCF interface (part 2) as a subset of the ITU-T IN CS4 Recommendations Q.1248.1 [3], Q.1248.2 [4]. For the other interfaces, the ETSI Core INAP CS3 series of EN 301 931 [1] and [2] apply.

In addition to the features supporting IN CS-1, IN CS-2 and IN CS-3 functionalities, the present document and EN 302 039-2 [5] provide:

-    general extensions to the CS-3 INAP in support of IN CS-4 target services;

-    protocol support of IP-based addressing schemes;

-    protocol support of explicit control of the impact of CPH operations on signalling relationships.

National transposition dates	
Date of adoption of this EN:	15 November 2002
Date of latest announcement of this EN (doa):	28 February 2003
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2003
Date of withdrawal of any conflicting National Standard (dow):	31 August 2003

1 Scope

The present document defines enhancements made to EN 301 931-1 [1] for IN-CS4.

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.

[1]   ETSI EN 301 931-1: "Intelligent Network (IN); Intelligent Network Capability Set 3 (CS3); Intelligent Network Application Protocol (INAP); Protocol specification; Part 1: Common aspects".

[2]   ETSI EN 301 931-2: "Intelligent Network (IN); Intelligent Network Capability Set 3 (CS3); Intelligent Network Application Protocol (INAP); Protocol specification; Part 2: SCF-SSF interface".

[3]   ITU-T Recommendation Q.1248.1: "Interface recommendation for Intelligent Network Capability Set 4: Interface Recommendation for Intelligent Network Capability Set 4 - Common aspects".

[4]   ITU-T Recommendation Q.1248.2: "Interface recommendation for Intelligent Network Capability Set 4: SCF-SSF Interface".

[5]   ETSI EN 302 039-2: "Intelligent Network (IN); Intelligent Network Capability Set 4 (CS4); Intelligent Network Application Protocol (INAP); Protocol specification; Part 2: Service Switching Function - Switching Control Function (SSF-SCF) Interface".

[6]   ITU-T Recommendation X.519: "Information technology - Open systems interconnection - The Directory: Protocol specifications".

3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 301 931-1 [1] apply.

4 Common Definitions

4.1 Object identifiers

The following ASN.1 module defines the object identifiers assigned to modules, packages and application contexts for EN 301 931-2 [2].

```
IN-object-identifiers {itu-t(0) identified-organization(4) etsi(0) inDomain(1) in-network(1) cs4(40)
modules(1) in3-object-identifiers(0) version1(0)}
DEFINITIONS ::=
BEGIN
-- For Modules from TCAP, ROS,
tc-Messages
    OBJECT IDENTIFIER ::= {itu-t recommendation q 773 modules(2) messages(1) version3(3)}
tc-NotationExtensions
    OBJECT IDENTIFIER ::= {itu-t recommendation q 775 modules(2)  notation-extension (4)
version1(1)}
ros-InformationObjects
    OBJECT IDENTIFIER ::= {joint-iso-itu-t remote-operations(4) informationObjects(5) version1(0)}
ros-genericPDUs
    OBJECT IDENTIFIER ::= {joint-iso-itu-t remote-operations(4) generic-ROS-PDUs(6) version1(0)}
ros-UsefulDefinitions
    OBJECT IDENTIFIER ::= {joint-iso-itu-t remote-operations(4) useful-definitions(7) version1(0)}
-- For IN CS3 SCF-SRF related Modules
id-cs3              OBJECT IDENTIFIER ::= { itu-t(0) identified-organization(4) etsi(0) inDomain(1)
in-network(1) cs3(30)}
modules-cs3          OBJECT IDENTIFIER ::= {id-cs3 modules(1)}
id-ac-cs3            OBJECT IDENTIFIER ::= {id-cs3 ac(3)}
id-at-cs3            OBJECT IDENTIFIER ::= {id-cs3 at(4)}
id-as-cs3            OBJECT IDENTIFIER ::= {id-cs3 as(5)}
id-rosObject-cs3    OBJECT IDENTIFIER ::= {id-cs3 rosObject(25)}

id-contract-cs3      OBJECT IDENTIFIER ::= {id-cs3 contract(26)}
id-package-cs3       OBJECT IDENTIFIER ::= {id-cs3 package(27)}
-- For IN CS4 Modules
id              OBJECT IDENTIFIER ::= { itu-t(0) identified-organization(4) etsi(0) inDomain(1)
in-network(1) cs4(40)}
modules              OBJECT IDENTIFIER ::= {id modules(1)}
id-ac                OBJECT IDENTIFIER ::= {id ac(3)}
id-at                OBJECT IDENTIFIER ::= {id at(4)}
id-as                OBJECT IDENTIFIER ::= {id as(5)}
id-rosObject         OBJECT IDENTIFIER ::= {id rosObject(25)}
id-contract          OBJECT IDENTIFIER ::= {id contract(26)}
id-package           OBJECT IDENTIFIER ::= {id package(27)}

object-identifiers  OBJECT IDENTIFIER ::= {modules in-object-identifiers(0) version1(0)}
common-datatypes    OBJECT IDENTIFIER ::= {modules in-common-datatypes(1) version1(0)}
errortypes          OBJECT IDENTIFIER ::= {modules in-errortypes(2) version1(0)}
operationcodes      OBJECT IDENTIFIER ::= {modules in-operationcodes (3) version1(0)}
errorcodes          OBJECT IDENTIFIER ::= {modules in-errorcodes(4) version1(0)}
common-classes      OBJECT IDENTIFIER ::= {modules in-common-classes(5) version1(0)}
ssf-scf-datatypes   OBJECT IDENTIFIER ::= {modules in-ssf-scf-datatypes(6) version1(0)}
ssf-scf-classes     OBJECT IDENTIFIER ::= {modules in-ssf-scf-classes(7) version1(0)}
ssf-scf-Operations  OBJECT IDENTIFIER ::= {modules in-ssf-scf-ops-args(8) version1(0)}
ssf-scf-Protocol    OBJECT IDENTIFIER ::= {modules in-ssf-scf-pkgs-contracts-acs(9) version1(0)}
scf-srf-datatypes   OBJECT IDENTIFIER ::= {modules-cs3 in-cs3-scf-srf-datatypes(10) version1(0)}
scf-srf-classes     OBJECT IDENTIFIER ::= {modules-cs3 in-cs3-scf-srf-classes(11) version1(0)}
scf-srf-Operations  OBJECT IDENTIFIER ::= {modules-cs3 in-cs3-scf-srf-ops-args (12) version1(0)}
scf-srf-Protocol    OBJECT IDENTIFIER ::= {modules-cs3 in-cs3-scf-srf-pkgs-contracts-acs(13)
version1(0)}
-- Application Context
-- SSF/SCF Application Context
id-ac-ssf-scfGenericAC
    OBJECT IDENTIFIER ::= {id-ac ssf-scfGenericAC(4) version1(0)}
id-ac-ssf-scfAssistHandoffAC
    OBJECT IDENTIFIER ::= {id-ac ssf-scfAssistHandoffAC(6) version1(0)}
id-ac-ssf-scfServiceManagementAC
    OBJECT IDENTIFIER ::= {id-ac ssf-scfServiceManagementAC(7) version1(0)}
id-ac-scf-ssfGenericAC
    OBJECT IDENTIFIER ::= {id-ac scf-ssfGenericAC(8) version1(0)}
id-ac-scf-ssfINTrafficManagementAC
    OBJECT IDENTIFIER ::= {id-ac scf-ssfINTrafficManagementAC(10) version1(0)}
id-ac-scf-ssfServiceManagementAC
    OBJECT IDENTIFIER ::= {id-ac scf-ssfServiceManagementAC(11) version1(0)}
```

```
id-ac-scf-ssfStatusReportingAC
    OBJECT IDENTIFIER ::= {id-ac scf-ssfStatusReportingAC(12) version1(0)}
id-ac-scf-ssfTriggerManagementAC
    OBJECT IDENTIFIER ::= {id-ac scf-ssfTriggerManagementAC(13) version1(0)}
id-ac-scf-ssfTrafficManagementAC
    OBJECT IDENTIFIER ::= {id-ac scf-ssfTrafficManagementAC(35) version1(0)}
-- SRF/SCF Application Context
id-ac-srf-scfAC OBJECT IDENTIFIER ::= {id-ac-cs3 srf-scfAC(14) version1(0)}
-- Abstract Syntaxes
-- SSF/SCF Abstract Syntaxes
id-as-ssf-scfGenericAS              OBJECT IDENTIFIER ::= {id-as ssf-scfGenericAS(4)}
id-as-assistHandoff-ssf-scfAS       OBJECT IDENTIFIER ::= {id-as assistHandoff-ssf-scfAS(6)}
id-as-scf-ssfGenericAS              OBJECT IDENTIFIER ::= {id-as scf-ssfGenericAS(7)}
id-as-scf-ssfINTrafficManagementAS  OBJECT IDENTIFIER ::= {id-as scf-ssfINTrafficManagementAS(9)}
id-as-scf-ssfServiceManagementAS    OBJECT IDENTIFIER ::= {id-as scf-ssfServiceManagementAS(10)}
id-as-ssf-scfServiceManagementAS    OBJECT IDENTIFIER ::= {id-as ssf-scfServiceManagementAS(11)}
id-as-scf-ssfStatusReportingAS      OBJECT IDENTIFIER ::= {id-as scf-ssfStatusReportingAS(12)}
id-as-scf-ssfTriggerManagementAS    OBJECT IDENTIFIER ::= {id-as scf-ssfTriggerManagementAS(13)}
id-as-scf-ssfTrafficManagementAS    OBJECT IDENTIFIER ::= {id-as scf-ssfTrafficManagementAS(33)}
-- SRF/SCF Abstract Syntaxes
id-as-basic-srf-scf                 OBJECT IDENTIFIER ::= { id-as-cs3 basic-srf-scf(14)}
id-as-basic-scf-srf                 OBJECT IDENTIFIER ::= { id-as-cs3 basic-scf-srf(15)}
-- ROS Objects
id-rosObject-scf                    OBJECT IDENTIFIER ::= {id-rosObject scf(1)}
id-rosObject-ssf                    OBJECT IDENTIFIER ::= {id-rosObject ssf(2)}
id-rosObject-srf                    OBJECT IDENTIFIER ::= {id-rosObject-cs3 srf(3)}
-- Contracts
-- SSF/SCF Contracts
id-inSsfToScfGeneric            OBJECT IDENTIFIER ::= {id-contract inSsfToScfGeneric(3)}
id-inAssistHandoffSsfToScf  OBJECT IDENTIFIER ::= {id-contract inAssistHandoffSsfToScf(5)}
id-inScfToSsfGeneric            OBJECT IDENTIFIER ::= {id-contract inScfToSsfGeneric(6)}
id-inScfToSsfINTrafficManagement
                OBJECT IDENTIFIER ::= {id-contract inScfToSsfINTrafficManagement(8)}
id-inScfToSsfServiceManagement
                OBJECT IDENTIFIER ::= {id-contract inScfToSsfServiceManagement(9)}
id-inSsfToScfServiceManagement
                OBJECT IDENTIFIER ::= {id-contract inSsfToScfServiceManagement(10)}
id-inScfToSsfStatusReporting
                OBJECT IDENTIFIER ::= {id-contract inScfToSsfStatusReporting(11)}
id-inScfToSsfTriggerManagement
                OBJECT IDENTIFIER ::= {id-contract inScfToSsfTriggerManagement(12)}
id-inScfToSsfTrafficManagement
                OBJECT IDENTIFIER ::= {id-contract inScfToSsfTrafficManagement(28)}
-- SRF/SCF Contracts
id-contract-srf-scf             OBJECT IDENTIFIER ::= {id-contract-cs3 srf-scf(13)}
-- Operation Packages
id-package-emptyConnection      OBJECT IDENTIFIER ::= { id-package emptyConnection(60)}
-- SSF/SCF Operation Packages
id-package-scfActivation        OBJECT IDENTIFIER ::= {id-package scfActivation(11)}
id-package-srf-scfActivationOfAssist
    OBJECT IDENTIFIER ::= {id-package srf-scfActivationOfAssist(15)}
id-package-assistConnectionEstablishment
    OBJECT IDENTIFIER ::= {id-package assistConnectionEstablishment(16)}
id-package-genericDisconnectResource
    OBJECT IDENTIFIER ::= {id-package genericDisconnectResource(17)}
id-package-nonAssistedConnectionEstablishment
    OBJECT IDENTIFIER ::= {id-package nonAssistedConnectionEstablishment(18)}
id-package-connect                  OBJECT IDENTIFIER ::= {id-package connect(19)}
id-package-callHandling             OBJECT IDENTIFIER ::= {id-package callHandling(20)}
id-package-bcsmEventHandling        OBJECT IDENTIFIER ::= {id-package bcsmEventHandling(21)}
id-package-dpSpecificEventHandling  OBJECT IDENTIFIER ::= {id-package dpSpecificEventHandling(22)}
id-package-chargingEventHandling    OBJECT IDENTIFIER ::= {id-package chargingEventHandling(23)}
id-package-ssfCallProcessing        OBJECT IDENTIFIER ::= {id-package ssfCallProcessing(24)}
id-package-scfCallInitiation        OBJECT IDENTIFIER ::= {id-package scfCallInitiation(25)}
id-package-timer                    OBJECT IDENTIFIER ::= {id-package timer (26)}
id-package-billing                  OBJECT IDENTIFIER ::= {id-package billing(27)}
id-package-charging                 OBJECT IDENTIFIER ::= {id-package charging(28)}
id-package-inTrafficManagement      OBJECT IDENTIFIER ::= {id-package inTrafficManagement(29)}
id-package-serviceManagementActivate
    OBJECT IDENTIFIER ::= {id-package serviceManagementActivate(30)}
id-package-serviceManagementResponse
    OBJECT IDENTIFIER ::= {id-package serviceManagementResponse(31)}
id-package-callReport               OBJECT IDENTIFIER ::= {id-package callReport(32)}
id-package-signallingControl        OBJECT IDENTIFIER ::= {id-package signallingControl(33)}
id-package-activityTest             OBJECT IDENTIFIER ::= {id-package activityTest(34)}
id-package-statusReporting          OBJECT IDENTIFIER ::= {id-package statusReporting(35)}
id-package-cancel                   OBJECT IDENTIFIER ::= {id-package cancel(36)}
id-package-cphResponse              OBJECT IDENTIFIER ::= {id-package cphResponse(37)}
```