



# SLOVENSKI STANDARD SIST ETS 300 155 E1:2003

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**Digitalno omrežje z integriranimi storitvami (ISDN) – Oprema za faksimilno skupino 4, razred 1, v sistemu ISDN – Preskusi po protokolu konec-konec (preskušanje zmožnosti medsebojnega povezovanja)**

Integrated Services Digital Network (ISDN); Facsimile group 4 class 1 equipment on the ISDN; End-to-end protocol tests (Interconnection capability testing)

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**ICS:**

|        |   |  |
|--------|---|--|
| 33.080 | Digitalno omrežje z integriranimi storitvami (ISDN) | Integrated Services Digital Network (ISDN) |
|--------|---|--|

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End-to-end protocol tests  
(Interconnection capability testing)**

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## Foreword

This European Telecommunication Standard (ETS) was produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

The text provides detailed conformance tests for equipment offering group 4 class 1 functionality and is based upon CCITT Recommendation T.64 [1] and ISO 9646 Parts 1 [2] and 2 [3].

This ETS is also closely related to a series of other ETSs which are given in clause 1 (Scope).

| Transposition dates   |                  |
|---|------------------|
| Date of latest announcement of this ETS (doa):  | 31 May 1995      |
| Date of latest publication of new National Standard or endorsement of this ETS (dop/e): | 30 November 1995 |
| Date of withdrawal of any conflicting National Standard (dow):                          | 30 November 1995 |

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## 1 Scope

This ETS contains the details of the Interconnection Capability Tests (ITC) for equipment offering group 4 class 1 facsimile functionality. It is based upon CCITT Recommendation T.64 [1] and ISO 9646, Parts 1 [2] and 2 [3].

The concept of the Interconnection Capability Tests (ITC) is derived from the range of test types defined in CCITT Recommendation X.290. ITC is a subset of the "capability and behaviour" types of test and focuses on checking the basic intercommunication process.

NOTE: Full conformance testing is for further study.

This ETS is closely related to the following ETSs on group 4 class 1 facsimile equipment.

- ETS 300 080 [9]: "Integrated Services Digital Network (ISDN) - ISDN lower layer protocols for telematic terminals".
- ETS 300 112: "Integrated Services Digital Network (ISDN) - Facsimile group 4 class 1 equipment on the ISDN - End-to-end protocols".
- ETS 300 087: "Integrated Services Digital Network (ISDN) - Facsimile group 4 class 1 equipment on the ISDN - Functional specification of the equipment".
- ETS 300 280: "Terminal Equipment (TE) - Facsimile group 4 class 1 equipment on the Integrated Services Digital Network (ISDN) Terminal - testing".

## 2 Normative references

This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriated 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 T.64 (1988): "Conformance testing procedure for the teletex Recommendations".
- [2] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework, Part 1: General concepts".
- [3] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework, Part 2: Abstract test suite specification".
- [4] CCITT Recommendation T.62 (1988): "Control procedures for teletex and Group 4 facsimile service".
- [5] ITU-T Recommendation T.503 (1991): "A document application profile for the interchange of group 4 facsimile documents".
- [6] ITU-T Recommendation T.521 (1992): "Communication application profile BT0 for document bulk transfer based on the session service (according to the rules defined in T.62 bis)".
- [7] CCITT Recommendation T.563 (1988): "Terminal characteristics for group 4 facsimile apparatus".

- [8] CCITT Recommendation F.184 (1988): "Operational provisions for the international public facsimile service between subscriber stations with group 4 facsimile machines (telefax 4)".
- [9] ETS 300 080 (1992): "Integrated Services Digital Network (ISDN) - ISDN lower layer protocols for telematic terminals".

### 3 Definitions and abbreviations

#### 3.1 Definitions

For the purposes of this ETS, the definitions given in CCITT/ITU-T Recommendations T.62 [4], T.64 [1], T.503 [5], T.521 [6], T.563 [7] and F.184 [8] apply. However, for the purposes of this ETS group 4 facsimile terminal equipment is referred to as the "facsimile equipment".

#### 3.2 Abbreviations

For the purposes of this ETS, the abbreviations given are those stated in the relevant CCITT/ITU-T Recommendations (T.62 [4], T.64 [1], T.503 [5], T.521 [6], T.563 [7] and F.184 [8]) and ETS 300 280 plus the following:

|      |                                     |
|------|-------------------------------------|
| DTAM | Data Transfer Access Management     |
| ITC  | Interconnection Capability Tests    |
| IUT  | Implementation Under Test           |
| ISDN | Integrated Services Digital Network |
| SPDU | Session Protocol Data Unit          |

### 4 Session tests

Tests for the lower layers of the protocol, up to and including the Transport layer, are contained in ETS 300 080 [9].

Tests for the session functions are given in subclause 4.1, for the document functions in subclause 4.2 and for the application service functions in subclause 4.3.

#### 4.1 Session function tests

The following tests detailed in CCITT Recommendation T.64 [1], annex C, shall be performed with the following modifications:

the tables of SPDUs for commands and responses:

CSS,  
RSSP,  
RSSN,  
CSE,  
RSEP,  
CSUI,  
RSUI,

shall be replaced by the modified tables given in annex A of this ETS.

The following tests shall not be performed as they are concerned with "non-basic terminal capabilities" which are not appropriate to group 4 class 1 facsimile terminals:

CDN 1/0;  
CGN 0/0;  
CGN 0/1;  
CGN 0/2;  
CGN 0/3;  
CGN 91/0.

The following test has a typographical error in CCITT Recommendation T.64 [1]:

DE 0/2 calls for the tester to issue CDS I1-I7, this should read CSS I1-I7.

#### 4.2 Document function tests

The tests detailed in CCITT Recommendation T.64 [1], annex C (normative), shall be performed with the following modifications:

the tables of SPDUs for commands and responses:

CDS,  
CDCL,  
RDCLP,  
CDC,  
CDE,  
RDEP,  
CDPB,  
RDPBP,  
CDUI,

shall be replaced by the modified tables contained in this ETS.

The following tests shall not be performed as they are concerned with "non-basic terminal capabilities" which are not appropriate to group 4 class 1 terminals:

CDN 21/1;  
CDN 21/2;  
CDN 21/3;  
CDN 21/4.

### 4.3 Application service tests

The tests detailed in CCITT Recommendation T.64 [1], annex D (normative), shall be performed with the following exceptions:

MG 4;  
MG 5;  
MG 6.

Of tests MD 2 only Part (A) shall be performed and note 2 is not applicable.

MD 3  
MD 4  
MD 5  
MD 6

MD 8  
MD 9  
MD 10  
MD 11

CG 1  
CG 2  
CG 3  
CG 4

CD 1  
CD 2  
CD 3  
CD 4  
CD 5

ED 4  
ED 7

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## 5 Application layer tests

Annex B (normative) contains the Abstract Test Suite for the application layer.

**Annex A (normative): Session Protocol Data Unit (SPDU) list**

See CCITT Recommendation T.64 [1] for an introduction to, and explanation of, the terminology used.

In the tables, figures underlined represent number of characters not values.

**A.1 Session protocol element**

| <b>Table</b> | <b>Protocol element</b> |                                   |
|--------------|-------------------------|-----------------------------------|
| A.1          | CSS                     | Command Session Start             |
| A.2          | RSSP                    | Response Session Start Positive   |
| A.3          | RSSN                    | Response Session Start Negative   |
| A.4          | CSE                     | Command Session End               |
| A.5          | RSEP                    | Response Session End Positive     |
| A.6          | CSA                     | Command Session Abort             |
| A.7          | RSAP                    | Session protocol element          |
| A.8          | CSUI                    | Command Session User Information  |
| A.9          | RSUI                    | Response Session User Information |

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Table A.1: < CSS > Session protocol element (Valid cases)

| Command<br>Session<br>Start (CSS)    | Session reference |      |      |   |      |      |   |   |   | NonBasicSession |   |   | Servic<br>-ce<br>ID | Inact<br>-ive<br>timer | Session<br>service<br>funct. | Non-<br>basic<br>term<br>capab | Session user<br>data |   |   | Priv<br>-ate<br>use | Non-<br>std<br>capab |        |   |   |      |      |   |   |   |   |   |
|--------------------------------------|-------------------|------|------|---|------|------|---|---|---|-----------------|---|---|---------------------|------------------------|------------------------------|--------------------------------|----------------------|---|---|---------------------|----------------------|--------|---|---|------|------|---|---|---|---|---|
|                                      | C                 | L    | G    | L | P    | L    | P | P | L | P               | G | L |                     |                        |                              |                                | P                    | P | P |                     |                      | L      | P                                       | P | L    | P    |   |   |   |   |   |
| Tester<br>sends                      | C                 | L    | G    | L | P    | L    | P | P | L | P               | G | L | P                   | P                      | P                            | L                              | P                    | P | L | P                   | Not<br>used<br>in G4 | G      | L                                       | P | P    | G    | L | P | P |   |   |
| Testcase                             | I                 | I    | I    | I | I    | I    | V | I | I | V               | I | I | I                   | V                      | I                            | I                              | V                    | I | I | V                   | Cl 1<br>fax          | I      | I                                       | I | V    | I    | I | I | V |   |   |
|                                      | 0                 | x    | 0    | x | 0    | 1    | 2 | 0 | 1 | 1               | 0 | 0 | 0                   | 0                      | 0                            | 0                              | 0                    | 1 | x | x                   | 1 0 04               | C      | 0                                       | 0 | 2,81 | E    | x | E | x | x |   |
|                                      | D                 | x    | 1    | x | A    | 8    | 4 | B | 8 | 4               | C | 2 | 2                   | 2                      | x                            | D                              | x                    | x | E | 1                   | 1                    | 4 2 39 | 1                                       | 8 | 0    | 1,00 | x | x | 8 | x | x |
|                                      | M                 | M    | M    | M | M    | M    | M | M | M | M               | M | M | M                   | M                      | M                            | M                              | M                    | M | M | M                   |                      | M      | M                                       | M |      |      |   |   |   |   |   |
| V1 With all<br>defined<br>parameters | 0                 | x    | 0    | x | 0    | 1    | 2 | 0 | 0 | 1               | 0 | 0 | 2                   | 0                      | x                            | 0                              | x                    | x | 0 | 0                   | 0                    |        | The same SUD<br>is used for<br>all PDUs | E | x    | E    | x | x |   |   |   |
|                                      | D                 | x    | 1    | x | A    | 8    | 4 | B | E | 4               | C | 2 | 2                   | 2                      | x                            | D                              | x                    | x | E | 1                   | 1                    | 4 2 39 |   | x | x    | 8    | x | x |   |   |   |
| V2 With P12<br>p. ex.                | 0                 | x    | 0    | x | 0    | 1    | 2 | 0 | 0 | 1               | 0 | 0 | 0                   | 0                      | 0                            | 0                              | 0                    | 1 | x | x                   |                      |        | E                                       | x |      |      |   |   |   |   |   |
|                                      | D                 | x    | 1    | x | A    | 8    | 4 | B | E | 4               | 2 | 3 | 2                   | 2                      | x                            | E                              | 1                    | 1 | 2 | x                   | x                    | 4 2 39 |   | x | x    |      |   |   |   |   |   |
| V3 With<br>P OC and<br>PG 02         | 0                 | x    | 0    | x | 0    | 1    | 2 | 0 | 0 | 1               | 0 | 0 | 2                   | 0                      | x                            | 0                              | x                    | x | 0 | 0                   | 0                    |        |   |   |      |      |   |   |   |   |   |
|                                      | D                 | x    | 1    | x | A    | 8    | 4 | B | E | 4               | C | 2 | 2                   | 2                      | x                            | D                              | x                    | x | E | 1                   | 1                    |        |   |   |      |      |   |   |   |   |   |
| V4 LI defn<br>on 3<br>octets         | 0Fxx              | 0Fxx | 0F01 | 2 | 4    | 0F00 | 1 | 4 |   |                 | 0 | 0 | 0                   | 0                      | 0                            | 0                              | 0                    | 0 | 0 | 0                   |                      |        |   |   |      |      |   |   |   |   |   |
|                                      | DFxx              | 1Fxx | AF08 |   | BF0E |      |   |   |   |                 | 2 | 3 |                     |                        |                              |                                |                      | E | 1 | 1                   |                      |        |   |   |      |      |   |   |   |   |   |

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Table A.1: &lt; CSS &gt; Session protocol element (Valid cases) (concluded)

| Command<br>Session<br>Start (CSS)  | Session reference |   |   |   |   |   | NonBasicSession |                   |              | Servi-<br>ce<br>ID | Inact-<br>ive<br>timer | Session<br>service<br>funct. | Non-<br>basic<br>term<br>capab | Session user<br>data |             |   | Priv-<br>ate<br>use  | Non-<br>std<br>capab |    |   |   |   |       |       |   |   |   |   |   |
|------------------------------------|-------------------|---|---|---|---|---|-----------------|-------------------|--------------|--------------------|------------------------|------------------------------|--------------------------------|----------------------|-------------|---|----------------------|----------------------|----|---|---|---|-------|-------|---|---|---|---|---|
|                                    | C                 | L | G | L | P | L | P               | Date<br>&<br>time | Addit<br>ref |                    |                        |                              |                                | Misc<br>capab        | Windo<br>-w | P |                      |                      | L  | P | G                                       | L | P     |       |   |   |   |   |   |
| Tester<br>sends                    | C                 | L | G | L | P | L | P               | P                 | L            | P                  | P                      | L                            | P                              | P                    | L           | P | Not<br>used<br>in G4 | G                    | L  | P | A4,06                                   | G | L     | P     | P | L | P |   |   |
|                                    | I                 | I | I | I | I | I | V               | I                 | I            | V                  | I                      | I                            | V                              | I                    | I           | V |                      | I                    | I  | I | 80,01                                   | I | I     | I     | I | V |   |   |   |
|                                    | 0                 | x | 0 | x | 0 | 1 | <u>2</u>        | 0                 | 1            | <u>1</u>           | 0                      | 0                            |                                | 0                    | 0           | 0 | 1                    | 0                    | 04 |   | C                                       | 0 | 02,81 | E     | x | E | x | x |   |
| Testcase                           | D                 | x | 1 | x | A | 8 | <u>4</u>        | B                 | 8            | <u>4</u>           | C                      | 2                            | 2                              | 2                    | x           |   | 4                    | 2                    | 39 | C | 1                                       | 1 | 8     | 01,00 | x | x | 8 | x | x |
|                                    | M                 | M | M | M | M | M | M               | M                 | M            | M                  | M                      | M                            | M                              | M                    | M           | M | fax                  | M                    | M  | M |   |   |       |       |   |   |   |   |   |
| V5 Undefin-<br>ed P and<br>PLI = 0 | 0                 | x | 0 | x | 0 | 1 | <u>2</u>        | 0                 | 0            | <u>1</u>           | 0                      | 0                            |                                | 0                    | 0           | 0 |                      |                      |    |   | The same<br>SUD is used<br>for all PDUs |   |       |       | E | 0 |   |   |   |
|                                    | D                 | x | 1 | x | A | 8 | <u>4</u>        | B                 | E            | <u>4</u>           | C                      | O                            |                                | 2                    | 6           |   | F                    | 1                    | 1  | * | E                                       | 1 | 1     | 8     | 1 | 1 | 8 | 0 |   |
| V6 Without<br>options              | 0                 | x | 0 | x | 0 | 1 | <u>2</u>        | 0                 | 0            | <u>1</u>           |                        |                              |                                | 0                    | 0           | 0 |                      |                      |    |   |   |   |       |       |   |   |   |   |   |
|                                    | D                 | x | 1 | x | A | 8 | <u>4</u>        | B                 | E            | <u>4</u>           |                        |                              |                                | 2                    | 3           |   | E                    | 1                    | 1  |   |   |   |       |       |   |   |   |   |   |
| V7<br>Separator<br>"-" in PV<br>OB | 0                 | x | 0 | x | 0 | 1 | <u>2</u>        | 0                 | 0            | <u>1</u>           |                        |                              |                                | 0                    | 0           | 0 |                      |                      |    |   |   |   |       |       |   |   |   |   |   |
|                                    | D                 | x | 1 | x | A | 8 | <u>4</u>        | B                 | E            | <u>4</u>           |                        |                              |                                | 2                    | 3           |   | E                    | 1                    | 1  |   |   |   |       |       |   |   |   |   |   |
| V8 Wrong PV<br>in service<br>ID    |                   |   |   |   |   |   |                 |                   |              |                    |                        |                              |                                |                      |             |   |                      |                      |    |   |   |   |       |       |   |   |   |   |   |
|                                    |                   |   |   |   |   |   |                 |                   |              |                    |                        |                              |                                |                      |             |   |                      |                      |    |   |   |   |       |       |   |   |   |   |   |