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Foreword

This ETSI Technical Report (ETR) has been produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

ETRs are informative documents resulting from ETSI studies which are not appropriate for European Telecommunication Standard (ETS) or Interim European Telecommunication Standard (I-ETS) status. An ETR may be used to publish material which is either of an informative nature, relating to the use or application of ETSs or I-ETSs, or which is immature and not yet suitable for formal adoption as an ETS or I-ETS.

This ETR describes the additional requirements to basic Teletex terminals for intercommunication with the telex service via a conversion facility. This intercommunication is not a mandatory function of Teletex terminals, but an option. The various national requirements for accessing the conversion facilities, plus an overview on the various types of document types, are also described in this ETR.

For a complete description of Teletex terminals participating in the international Teletex service, this ETR should be used together with ETS 300 015 [11].

Introduction

This ETR defines the service intercommunications requirements for terminal equipment participating in the European teletex service and accessing other text communication services, such as e.g. telex. The additional requirements described herein offer means of preparing character coded text messages and of conveying them to a conversion facility.

In this ETR the requirements of the following ETSI-members have been incorporated:

- | | |
|-------------------------|---|
| Austria (A): | National Requirements for Teletex Terminal Equipment; |
| Denmark (DK): | Nordic Teletex Specification; |
| Federal Republic | |
| of Germany (D): | Teletex terminal specification. |

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1 Scope and field of application

This ETR describes the specifications to be used for basic Teletex terminal equipment for intercommunication purposes.

This ETR is based on the relevant CCITT and ITU-T Recommendations. In addition, it enumerates the various administration specific technical requirements.

European Telecommunication Standards (ETSS) dealing with Teletex terminal equipment or Teletex service are referenced in this ETR.

NOTE: Throughout this ETR, the term "Administration" should be taken to read as either "Administration" or "Recognized Private Operating Agency".

2 References

For the purposes of this ETR, the following references apply.

- [1] ITU-T Recommendation T.60 (1993): "Terminal equipment for use in the teletex service".
- [2] ITU-T Recommendation T.61 (1993): "Character repertoire and coded character sets for the international teletex service".
- [3] CCITT Recommendation T.62 (1988): "Control procedures for teletex and Group 4 facsimile services".
- [4] CCITT Recommendation T.63 (1988): "Provisions for verification of teletex terminal compliance".
- [5] CCITT Recommendation T.64 (1988): "Conformance testing procedures for the teletex Recommendations".
- [6] CCITT Recommendation T.70 (1988): "Network-independent basic transport service for the telematic services".
- [7] CCITT Recommendation T.90 (1988): "Characteristics and protocols for terminals for telematic services in ISDN".
- [8] CCITT Recommendation T.390 (1988): "Teletex requirements for interworking with the telex service".
- [9] ITU-T Recommendation F.200 (1993): "Teletex service".
- [10] CCITT Recommendation F.201 (1988): "Interworking between teletex service and telex service - General principles".
- [11] ETS 300 015: "Terminal Equipment (TE); Basic and recommended additional requirements for terminal equipment supporting Teletex application".
- [12] ETS 300 017: "Terminal Equipment (TE); Test procedures for Teletex".
- [13] CCITT Recommendation F.69 (1988): "Plan for telex destination codes".
- [14] CCITT Recommendation F.80 (1991): "Basic requirements for interworking relations between the international telex service and other services".
- [15] CCITT Recommendation U.201 (1988): "Interworking between the teletex service and the telex service".

3 Definitions

The terms used in this ETR are defined in ITU-T Recommendations T.60 [1] and T.61 [2] and CCITT Recommendations T.62 [3], T.63 [4], T.70 [6] and T.90 [7].

4 Abbreviations

The abbreviations used in this ETR are defined in ITU-T Recommendations T.60 [1] and T.61 [2] and CCITT Recommendations T.62 [3], T.63 [4], T.70 [6] and T.90 [7].

5 Scenario description

Exchange of Teletex documents between two end systems, via a conversion facility, to allow text transfer from a Teletex terminal to another text communication terminal, participating in another service.

The overall operation for the Teletex-Telex-intercommunication case is defined in CCITT Recommendation F.201 [10].

6 Conformity

A Teletex equipment is in conformity with this description, if it follows the requirements that are contained in this description.

NOTE: The tests to be passed in order to check the conformance technically are laid down in CCITT Recommendation T.64 [5] and in ETS 300 017 [12].

7 Amendments to CCITT Recommendation T.390 Teletex requirements for interworking with the telex service (CCITT Recommendations F.201, F.80 and U.201)

National requirements and advisory notes.

NOTE: Various items do not relate to terminal specification directly, but clarify what behaviour terminals or terminal-users may expect from the conversion facility.

7.1 Paragraph 1.2/T.390 (DK)

When calling the Danish Conversion Facility (CF) the Teletex terminal shall use the abbreviated address ".01+".

7.2 Paragraph 1.2.1/T.390 (D, A)

After termination of the text call to the telex subscriber, a notification call is always set up to the teletex subscriber.

7.3 Paragraph 1.2.3/T.390 (D, A)

The CF sends notifications to teletex terminals using control documents. As a basic requirement, these notifications shall be stored in a non-volatile memory and shown to the user when requested. If the Teletex terminal is able to process these control documents, the relevant information may be made available to the user by other means (e.g. communications log).

7.4 Paragraph 2.1/T.390 (DK)

During calls to or from the CF the Teletex terminal shall not try to initiate Two Way Simultaneous (TWS) mode of communications (CSTW) or to change source/sink relationship (CSCC).

7.5 Table 1/T.390 (D, A)

During the establishment of a submission, notification, address validation and delivery call the CF identifies itself by a Terminal Identification (TID) which does not comply with the format described in ITU-T Recommendation F.200 [9].

In all cases this TID consists of 24 characters.

Therefore, a called terminal shall never perform a conformity check of the format of the TID.

A calling terminal shall not perform such a check if it establishes a submission call to the CF.

For information, the exact formats of the TID's mentioned above are given in the following table:

Table 1: TID's used by the CF

Submission Call:	(D)	123456.ttu.d.....*)
	(A)	123456.ttu.a.....*)
Notification Call:	(D)	419511.ftz.d.....**)
	(A)	232509.fza.a.....)
Address Validation Call:	(D)	ttu.d.....)
	(A)	ttu.a.....)
Delivery Call:	(D)	419511.ftz.d.....**)
	(A)	232509.fzat.a.....)
NOTE: Each dot in this table represents a space character.		
*) The digits represent the dialling information received by the CF.		
**) This information is derived from the received telex. answerback.		

7.6 Table 2/T.390 (D, A)

The Telex Validation and Telex Message Delivery Control Documents are currently not used.

7.7 Paragraph 3.1.1/T.390 (All)

For formats of various control documents: see Clause 8 of this ETR.

7.8 Paragraph 4.1 and Table 2/T.390 (DK)

The Address Validation Call from the CF does not include a Telex Validation Control Document.

The Teletex terminal shall be able to receive, but not necessarily to present, the Telex Message Delivery Control Document, see "Paragraph 4.6.2/T.390 [8]".

Additional to the control documents in Table 2/T.390 [8] a "Telex Status Enquiry" Control Document may be used to request a status report from the CF concerning a message which has been delivered to the CF for forwarding to telex.

The elements of the control text in the Telex Status Enquiry Control Document shall be unnumbered and shall include the following (see Clause 8)

- a) control document identifier;

- b) one additional element = REFERENCE: with the following parameters separated by slashes (/):
- Terminal Identifier of the CF;
 - Terminal Identifier of the Teletex terminal;
 - Date and Time;
 - Control Document Number;
 - Additional Session Reference Number.

All the parameters contain correlation information and, therefore, shall be identical to the same parameters in the Call Identification Line (CIL) in the related Telex Submission Control Document.

The Teletex terminal shall be able to present unambiguously to the user the control text in the control documents received from the CF except Telex Message Delivery Control Documents.

The control text and formats of the control document used in Denmark are indicated in the Danish subclauses of Clause 8 of this ETR.

When a status request has been received by the CF, the CF initiates a new call to originator of the request, establishes a new session and transmits a status report in an operator-document (Telex Status Report).

The content and format of the Telex Status Report operator document used in Denmark are indicated in the Danish subclauses of Clause 8 of this ETR.

If the Teletex terminal is capable of sending Telex Status Enquiry control documents, it shall also be able to receive Telex Status Report operator documents from the CF. The Teletex terminal shall, as a minimum, treat such operator documents as normal documents.

7.9 Paragraph 4.2.3/T.390 (A, D)

The multi-addressing functionality cannot be used.

7.10 Paragraphs 4.2.2/4.2.3/T.390 (DK)

The elements of the control text in the Telex Submission control document which is used by the Teletex terminal shall be unnumbered and shall include the following, see Danish requirements in Clause 8 this ETR.

- a) Control Document Identifier = TELEX TIL:
- b) Submission Control Information which may contain up to 10 Telex Addresses:
- every Telex Address shall start on a new line;
 - a numerical field (the telex number) shall be first on the line (leading blanks will be discarded) and shall be followed by one or more spaces.

The optional parameters "answerback" and Acknowledgement Request may be used as follows:

- answerback, if included, shall follow on the same line as the related Telex Address and shall be preceded by an equal sign (=). Spaces following the equal sign are ignored;
- Acknowledgement Request, if included, shall be required by adding + ACK as last element value field on the same line as the related Telex Address.

7.11 Paragraph 4.2.4/T.390 (D, A)

Within one session, only one Submission Control Document is accepted by the CF.

7.12 Paragraphs 4.2.4/5.1/5.1.1/T.390 (DK)

Only one message (= one Telex Submission Control Document followed by one or more normal documents) shall be sent from the Teletex terminal within the same session.

7.13 Paragraph 4.3.2/T.390 (DK)

The Teletex terminal shall be able to handle Telex Delivery Notification Control Documents with the elements of control text and the formats indicated in the Danish requirements given in Clause 8 of this ETR.

7.14 Paragraph 4.4.2/T.390 (DK)

The Teletex terminal shall be able to handle Telex Non-Delivery Notification control documents with the elements of control text and the format indicated in the Danish requirements given in Clause 8 of this ETR.

7.15 Paragraph 4.6.2/T.390 (DK)

Telex Message Delivery Control Document is used. Therefore, the Teletex terminal shall be able to receive - but not necessarily to present.

Telex Message Delivery Control Documents with the elements of control text and the format indicated in the Danish requirements given in Clause 8 of this ETR.

7.16 Paragraph 6.1.2/T.390 (D, A, DK)

As the capacity of the text memory accommodated in the telex-Teletex conversion facility is limited to 12 k-octets, a Teletex message sent to the Teletex CF, should not exceed this value.

8 Control document specification

This Clause describes the exact formats and content of each individual control document which is used by various national Teletex-telex conversion facilities.

Operator documents are used in Denmark; see subclause 9.1 for further details.

8.1 Submission control document

8.1.1 Federal Republic of Germany

To initiate an automatic validation by the telex-Teletex conversion facility, the Teletex terminal sends the expected telex identification (or only part of the telex identification relevant for the validation) within a control document to the CF.

The contents of the control document is as follows:

CR FF ttu CR LF 987654 XYZ d.

explanation: CR = Carriage Return
FF = Form Feed
LF = Line Feed
ttu = classification of the control document
987654xyz d = example of a telex-id

Within a session initiated by a Teletex terminal, it is necessary to transmit first a control document and then one or more normal documents to the telex-Teletex conversion facility.

If the telex identification of the called station is unknown to the Teletex subscriber or if he dispenses, for other reasons, with the identification validation by the CF, the control document is filled with blank information.

The control document then is as follows:

CR FF ttu.

8.1.2 Denmark

Danish Telex Submission Control Document.

The note reference "See NOTES 1 and 2" and the drawn upper and lower line are not parts of the control document.

TELEX TIL:

<TELEX ADDRESS><=ANSWERBACK><+ACK> See NOTES 1 and 2

NOTE 1: As a maximum, 10 Telex Addresses are allowed in the same control document.

NOTE 2: <ANSWERBACK> (answerback of the addressed telex terminal) and/or <+ACK> (acknowledgement request) are optional parameters and may be left out.

NOTE 3: A Telex Delivery Notification Call including a telex Delivery Notification control document is always provided.

8.1.3 Austria

To initiate an automatic validation by the telex-Teletex conversion facility, the Teletex terminal sends the expected telex identification (or only part of the telex identification relevant for the validation) within a control document to the CF.

The content of the control document is as follows:

CR FF ttu CR LF <telex answerback>

explanations: CR = Carriage Return
FF = Form Feed
LF = Line Feed
ttu = classification of the control document

telex answerback

eg. 1) 123456 xyz a
2) ccirf 12345 f

Within a session initiated by a Teletex terminal it is necessary to transmit first a control document and then one or more normal documents to the telex-Teletex conversion facility.

8.2 Notification control document

8.2.1 Federal Republic of Germany

By means of a notification control document the CF informs the Teletex subscriber about the extent to which documents have or have not been transmitted to the telex service.

8.2.2 Denmark

Danish telex delivery Notification Control Document.

The note references "See NOTE..." and the drawn upper and lower line are not parts of the control document.

1.2: TELEX - KVITTERING:

- 1: REFERENCE:
<CF TID> </TTX TID> </YY-MM-DD-HH:MM/>
<CD No> </ADD'L SESSION REF No/> See NOTE 1
- 2: ADDRESSERET TIL
<TELEX ADDRESS> < = ANSWERBACK> < + ACK> See NOTE 2
- 3: SENDT TIL:
<TELEX ADDRESS> < = ANSWERBACK>
- 4: SENDETIDSPUNKT: <YY-MM-DD-HH:MM>
- 5: ANVENDT OPKALDSTID: <HH:MM:SS>
- 6: OBS: See NOTE 3
- 7: MODTAGET TEKST
<TEXT> See NOTE 4

NOTE 1: If ADD'L SESSION REF No is not used a space is present.

NOTE 2: < = ANSWERBACK> and/or < + ACK> are present only if present in the related Telex Submission control document.

NOTE 3: Element 6 has no parameter normally. However, if the Telex Submission control document or the telex message was in some way incorrect, the text string PROCEDUREFEJL is present.

NOTE 4: <TEXT> is present only if text has been received from the telex terminal and is then a text string containing up to 80 characters.

Danish telex non-delivery Notification Control Document.

The note references "See NOTE..." and the drawn upper and lower line are not parts of the control document.

1.3: IKKE-LEVERET TELEXMEDDELELSE:

1: REFERENCE:

<CF TID> </TTX TID> </YY-MM-DD-HH:MM/>
<CD No> </ADD'L SESSION REF No/> See NOTE 1

2: ADDRESSERET TIL:
<TELEX ADDRESS> < = ANSWERBACK> < + ACK> See NOTE 2

3: SENDT TIL:
<TELEX ADDRESS> < = ANSWERBACK> See NOTE 3

4: SENDETIDSPUNKT: <YY-MM-DD-HH:MM> See NOTE 4

5: ANVENDT OPKALDSTID: <HH:MM:SS> See NOTE 4
See NOTE 5

9: FEJLÅRSAG: <CAUSE> See NOTE 6

6: OBS: See NOTE 7

7: MODTAGET TEKST:
<TEXT> See NOTE 8

NOTE 1: If ADD'L SESSION REF No is not used a space is present.

NOTE 2: < = ANSWERBACK> and/or < + ACK> is present only if present in the related Telex Submission control document.

NOTE 3: Parameters to element 3 are present only if an answerback from the called telex terminal has been received by the CF.

NOTE 4: Parameters to element 4 and 5 are present only if a partial delivery of the telex message has been made.

NOTE 5: Element 8 is not used and is, therefore, not present.

NOTE 6: <CAUSE> is one of the following text strings:

ANNULLERET AF CF
ANNULLERET AF OPERATOR
DOKUMENT UFULDSTÆNDIGT
FEJL I TELEXNUMMER
FORKERT TILBAGESVAR
INGEN LEDIG LINIE
MAX LAGRINGSTID OVERSKREDET
MODSKRIFT FRA KALDT ABN
NEDBRYDNING FRA KALDT ABN
NEDBRYDNING UNDER SENDING
PROCEDUREFEJL
RETNINGSNUMMER UKENDT
SELVVALG IKKE MULIG
SELVVALG MIDLERTIDIG LUKKET

or a text string translated from a telex service signal:

ABONNENT IKKE-TIL STEDE (= ABS)
DIALOG IKKE MULIG (= CI)
ABONNENTEN UDE AF DRIFT (= DER)
KALD OPLYSNINGEN (= INF)
LUKKET P.G.A. FERIE (= JFE)
OPKALD IKKE TILLADT (= NA)
INGEN LEDIG LINIE (= NC)
NUMMERÆNDRING (= NCH)
NYT NUMBER : X ...X (= NCH : X ...X +)
INGEN ABN. PA NUMMERET (= NP)
ABONNENTEN OPTAGET (= OCC)
OMDIRIGERING (= RDI)
OMDIRIGERING : X ...X (= RDI : X ... X +)

NOTE 7: Element 6 has no parameter normally. However, if the Telex Submission control document or the telex message was in some way incorrect, the text string PROCEDUREFEJL is present.

NOTE 8: <TEXT> is present only if text has been received from the telex terminal and is then a text string containing up to 80 characters.

8.2.3 Austria

By means of a notification control document the CF informs the Teletex subscriber about the extent to which documents have or have not been transmitted to the telex service.

The content of this control document is as follows:

CR FF ttu CR LF "acknowledgement information".

Explanations: CR = Carriage Return
FF = Form Feed
LF = Line Feed
ttu = Classification of the control document

Example:

a: 232 - 3222600 = FZAedsA /112600 fzawn a /88 - 05 - 03 - 10:05/1 - 00001
b: ttu
c: 112600 ttu a/212 - 3222600 = FZAedsA /88 - 05 - 03 - 10:
d: telex erfolgreich abgesetzt 112600 fzawn a

Explanations:

Line a:
CIL of the actual call from the CF to Ttx. The CF's TID is either the TID of the called telex-terminal, or "ttu a", if send from the overflow-position.

Line b:
classification text "ttu".

Line c:
CIL of the last page of the document sent from Ttx to the CF.

Line d:
Information including the TID of the reached telex-terminal or other short information (service signals) or information texts.

These may be:

- "telex erfolgreich abgesetzt 112600 fzawn a".

The text was transmitted.

- "telex nicht abgesetzt der".

The text could not be transmitted. "der" is a service signal from the telex network.

- "telex nicht abgesetzt.
Ansagetext"

The text could not be transmitted for technical reasons at the telex customers premises, additional information is contained in plain text in the "Ansagetext".

- "telex abgebrochen bei 059 - 001/13, 987654 xyz a".

The text transmission was interrupted, interruption took place at line 13 on page 001 of document 59. The telex TID received at the beginning of text transmission was 987654 xyz d.

The mentioned document-, page- and line-numbers are those of the text sent from Ttx to the CF.

9 Validation control documents

9.1 Denmark

Danish Telex Message Delivery control document

The note references "See NOTE..." and the drawn upper and lower line are not parts of the control document.

1.5: ANKOMMENDE TELEX:

10:	LØBENUMMER: <REFERENCE>	See NOTE 1
11:	MODTAGETIDSPUNKT: <YY-MM-DD-HH:MM>	See NOTE 2
6:	OBS: <TEXT>	See NOTE 3

NOTE 1: <REFERENCE> is 4 digits followed by a letter (assigned by the CF).

NOTE 2: Element 12 is not used and therefore is not present.

NOTE 3: <TEXT> is a text string as follows:

KVITTERET MED OVENSTAENDE LØBENUMMER

or

MEDDELELSEN KAN VÆRE UFULDSTÆNDIG

Danish TELEX STATUS REPORT operator document (unsuccessful enquiry)

The note references "see NOTE..." and the drawn upper and lower line are not parts of the operator document.

TELEX STATUSRAPPORT:

REFERENCE:

<CF TID> </TTX TID> </YY-MM-DD-HH:MM/>
<CD No> </ADD'L SESSION REF No/> See NOTE 1

<TEXT> See NOTE 2

NOTE 1: The parameters contain correlation information and are identical to the same parameters in the related TELEX STATUS ENQUIRY control document.

NOTE 2: <TEXT> is one of the following text strings:

FEJL I REFERENCENUMMERET
OPTAGET - PROV SENERE
IKKE-TILLADT STATUSFORESPORGSEL
MEDDELELSE UKENDT

History

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