

TERMINAL CHARACTERISTICS FOR TELETEX PROCESSABLE MODE PM.1

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The CCITT,

considering

(a) that telematic services have been defined or are going to be defined for a number of application;

(b) that these applications, in some cases, can be conveniently combined into one single terminal to give improved performance to the users of these terminals;

(c) that standardization work has been aiming at common protocols and compatible parameters for various equipments and procedures;

unanimously declares

that processable mode characteristics should be designed and operated in accordance with the following standards.

1 Scope

1.1 The international teletex service requirements to the processable mode of operation PM.1 are defined in Recommendation F.220.

1.2 This Recommendation defines terminal characteristics unique to the processable mode of operation PM.1.

2 Field of application

This Recommendation applies to terminal equipment of the teletex service supporting the processable mode of operation PM.1.

3 References

The following CCITT Recommendations also apply to equipments for processable mode of operation:

- Rec. T.60: "Terminal equipment for use in teletex service";
- Rec. T.61: "Character repertoire and coded character sets for the international teletex service";
- Rec. T.62: "Control procedures for the teletex and Group 4 facsimile services";
- Rec. T.70: "Network-independent basic transport service for telematic services";
- Rec. T.400 Series: "Document architecture, transfer and manipulation";
- Rec. T.502: "A document application profile PM.1 for the interchange of processable form documents";
- Rec. T.522: "Communication application profile BT1 for document bulk transfer".

4 Definitions

Terms and their definitions are defined by Recommendations listed above.

5 General characteristics of the equipment

5.1 General

5.1.1 Equipments supporting processable mode of operation PM.1 shall provide a set of basic features. The ability to provide this minimum set of basic features is indicated and negotiated before the document interchange.

5.1.2 These equipments may in addition to the set of basic features provide other facilities. These facilities are negotiated separately from the set of basic features defined below.

5.1.3 Some basic and/or non-basic features are allowed to be approximated by the receiver using fall-back techniques. These features are defined in § 6.1.3.

5.1.4 The negotiation is only allowed to fail when a non-basic feature is required that is not supported by the recipient and for which no suitable fall-back mode is available.

- 5.2 Basic features required for equipments supporting processable PM.1
- The basic features required for equipments supporting processable mode of operation are:
- 5.2.1 The ability to create, transmit and receive document conforming to the document application profile PM.1 defined in Recommendation T.502;
- 5.2.2 The ability to interchange documents by using the application context defined in § 7.1 of this Recommendation;
- 5.2.3 The ability to handle the basic nominal page defined in § 6.1.1.3 and to provide, at least, the assured reproduction area which is defined for the basic nominal page in § 6.1.1.4;
- 5.2.4 For character content, the ability to handle the basic features defined in Recommendation T.502;
- 5.2.5 The ability to handle the call identification line information (see § 6.1.2);
- 5.2.6 A teletex equipment supporting PM.1 shall be able to convert PM.1 documents in formatted and/or formatted processable forms into basic teletex documents.
- 5.3 Non-basic features for processable mode
- One or more additional features listed in this section may be provided by a terminal supporting PM.1.
- 5.3.1 The ability to handle the nominal page and to provide, at least, the assured reproduction area which are defined for North American letter paper size, ISO A3 paper size (see §§ 6.1.1.3 and 6.1.1.4).
- 5.3.2 The ability to negotiate additional presentation characteristics for characters. These non- basic characteristics are specified in Recommendation T.502.

6 Document handling

6.1 Requirements for the imaging process

6.1.1 Dimensions for text presentation

6.1.1.1 Basic measurement unit (BMU)

The size of the basic measurement unit (BMU) is $1/1200 \pm 25.4$ mm if the output medium is paper and the locally defined scaling factor is one.

6.1.1.2 Paper size

Different physical paper sizes can be used for presentation of PM.1 formatted form document. Such paper sizes are ISO A4 paper size (210 ± 297 mm), North American letter paper size (215.9 ± 279.4 mm), ISO A3 paper size (297 ± 420 mm).

Character content may be imaged on those sheets of paper in horizontal as well as in vertical orientation. A single orientation must be used for all characters within one side of the sheet of paper (recto or verso).

6.1.1.3 Pages and nominal pages

As defined in Recommendation T.412, a page is a rectangular area used as the reference area for positioning and

imaging the content of the document. The page is intended to be positioned and imaged on a unit of the presentation surface. The ideal size of the presentation surface, as assumed by the sender of a document is the nominal page.

The basic page dimensions are:

- width 9 240 BMU (195.6 mm);
- height 12 400 BMU (262.5 mm).

Others than the basic page dimensions are optional. These dimensions are given below:

- a) page dimensions for the ISO A4 paper size:
 - width 9 920 BMU (210 mm);
 - height 14 030 BMU (297 mm);
- b) page dimensions for the North American letter paper size:
 - width 10 200 BMU (215.9 mm);
 - height 13 200 BMU (279.4 mm);
- c) page dimensions for the ISO A3 paper size:
 - width 14 030 BMU (297 mm);
 - height 19 840 BMU (420 mm).

6.1.1.4 Assured reproduction area

Hard-copy devices must allow for the possibility of edge losses caused, for example by the optional printing of a call identification line at the receiver, by tolerances on the physical paper size, and by equipment tolerance (see Annex A of Recommendation T.60). In order to cater for these edge losses, an assured reproduction area is defined which is the rectangular area that remains on the nominal page after deducting an agreed allowance for edge losses.

For the option of printing a call identification line, an area at the top of the page is reserved. The same area is used for both vertical and horizontal image orientations. If used, the call identification line is to be printed on the second character baseline which is 400 BMU (8.466 mm) from the X-axis. The reserved area consists of 72 character boxes, each 120 BMU in width and 200 BMU in height, starting at 945 BMU (20 mm) from the Y-axis and extending for 8 640 BMU. The maximum permitted character baseline offset of these character boxes is 72 BMU, so that the area of assured reproduction starts at 472 BMU (10 mm) from the X-axis. Any interchanged text in the area of these character boxes may be suppressed, to avoid obscuring the image of the call identification line.

The assured reproduction areas are defined as follows:

- a) ISO A4 assured reproduction area:
 - width = 9 240 BMU;
 - height = 13 200 BMU;
 - top margin = 472 BMU;
 - left margin = 345 BMU;
- b) North American letter assured reproduction area:
 - width = 9 240 BMU;
 - height = 12 400 BMU;
 - top margin = 472 BMU;
 - left margin = 345 BMU;
- c) ISO A3 assured reproduction area:
 - width = 13 200 BMU;
 - height = 18 480 BMU;
 - top margin = 472 BMU;
 - left margin = 345 BMU.

The assured reproduction areas for ISO A4, North American letter, and ISO A3 are illustrated in Figure 1/T.562, Figure 2/T.562, Figure 3/T.562, respectively, showing the maximum edge losses on each paper edge. The indicated edge losses are based on the idealized or nominal paper sizes as defined in § 6.1.1.2 and do not take account of paper size tolerances.

Note -These edge margin values are shown for reference only and do not take account of tolerances on either paper sizes or insertion angles.

FIGURE 1/T.562

Nominal page and assured reproduction area for ISO A4 paper size

Note - The indicated size and location of the assured reproduction area accommodates ISO 3535 forms, UN/ECE Trade Documents, and the printed line lengths of the basic teletex service (i.e. 77 characters per 25.4 mm) for the ISO A4 paper size. For the North American letter paper size, it also accommodates ISO 3535 forms and UN/ECE Trade Documents, as used for that paper size.

FIGURE 2/T.562

Nominal page and assured reproduction area for the North American letter paper size

FIGURE 3/T.562

Nominal page and assured reproduction area for ISO A3 paper size

6.1.1.5 Positioning of the page relative to the nominal page

The rules defined in Recommendation T.412, § 7.3.2 apply.

6.1.1.6 Positioning of pages on soft copy media

The rules defined in Recommendation T.412, § 7.3.5 apply.

6.1.2 Call identification line (CIL)

6.1.2.1 The basic CIL presentation rules as defined in Recommendation F.200 should apply with the restriction specified in Recommendation F.220 (deletion of the page number from the CIL).

6.1.2.2 For printing the CIL, an area as defined in § 6.1.1.4 is provided.

6.1.3 Fall-back techniques

Some basic and non-basic features described in Recommendation T.502 are allowed to be approximated using fall-back techniques.

This paragraph determines the fall-back procedure which may be used by the recipient if features present in the interchanged document are not locally available.

Table 1/T.562 below identifies the features for which fall-back procedure may be used. All other features, not listed in this table, must not be approximated.

TABLE 1/T.562

Features	Fall-back modes
<u>w</u> Document layout featuresw	
Separation	IGNORE
Widows and orphans	IGNORE
Association of paragraphs	IGNORE
Recto/verso pages	RECTO
<u>w</u> Content layout and imaging featuresw	
Emphasis	
- italicized	Bold or underlined
- bold	Italicized or underlined
<u>w</u> Document management featuresw	IGNORE

6.2 Requirements for the formatting process

The formatting process shall be capable to format locally a processable PM.1 document into the formatted or the formatted-processable form before the document is sent. Additional requirements are for further study.

6.3 Requirements for the editing process

For further study.

6.4 Requirements for the imaging process

The rules for printing or displaying on screen described in Recommendation T.60 only apply to PM.1 documents in formatted and/or formatted-processable forms. Additional requirements are for further study.

7 **Communication aspects**

7.1 Application context for interchange of PM.1 documents

The application context to be used for the interchange of PM.1 documents is defined in Recommendation T.561, § 7.1.

7.2 Coding schemes available

7.2.1 Recommendation T.61 defines the coding scheme to be used for character content.

7.3 Receiving capabilities

7.3.1 The negotiation of the storage capacity by the DTAM protocol is mandatory for equipments providing processable mode of operation.

8 Interworking between basic teletex equipments and teletex equipments supporting PM.1

The rules defined in Recommendation T.561, § 8 apply.