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TELEMATIC SERVICE

SERVICE REQUIREMENTS UNIQUE TO THE PROCESSABLE MODE NUMBER ELEVEN (PM11) USED WITHIN THE TELETEX SERVICE

ITU-T Recommendation F.220

(Previously "CCITT Recommendation")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation F.220 was revised by the ITU-T Study Group I (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Recommendation F.220

SERVICE REQUIREMENTS UNIQUE TO THE PROCESSABLE MODE NUMBER ELEVEN (PM11) USED WITHIN THE TELETEX SERVICE

((Melbourne, 1988; revised Helsinki, 1993)

1 Introduction

1.1 *Scope*

1.1.1 The processable mode number one (PM11) is one of the standardized options of the Teletex service.

1.1.2 Equipments with teletex capabilities providing PM11 belong to the teletex service and shall meet with all the rules expressed in the main body of the Recommendation F.200. Furthermore, they shall meet with the additional rules described in this Recommendation.

1.1.3 The purpose of PM11 is to cater for the interchange of documents such as memoranda, letters and reports that contain characters only. The documents can be interchanged in a form that will enable the recipient:

- either to further process the document;
- or, to display or print the document as intended by the sender.

1.1.4 Questions of an essentially technical nature concerning this processable mode PM11 of the equipments with teletex capabilities are dealt with by the following Recommendations:

- T.400 Series Recommendations: Document Architecture, Transfer and Manipulation.
- Rec. T.502 A document application profile PM11 for the interchange of processable form documents.
- Rec. T.522 Communication application profile BT1 for document bulk transfer.
- Rec. T.562 Terminal characteristics for Teletex processable mode PM11.
- Rec. T.510 General overview of the T.510 sub-Series of Recommendations.

1.2 Definition

1.2.1 General on the processable mode

a) The processable mode of operation provides the user, in addition to the basic features of the Teletex service, with means for interchanging documents containing suitable information to reprocess them efficiently.

b) Several processable modes are being defined within the CCITT depending on the users' needs (number of reprocess functions provided to the user and the ability or not to reprocess text containing graphics or other contents).

c) They all are to be designed as application profiles of the T.400-Series Recommendations. Each new one is a superset of the previous. It is intended that equipments supporting a higher level of processable mode will always support any lower level.

1.2.2 Definition of PM1

PM11 is a processable mode designed to take into account a common set of functions commonly available to wordprocessing softwares.

Its main characteristics are that it allows to reprocess transmitted documents with only a single-column layout and containing only character encoded text. Additional characteristics may be found in 2.

The complete definition of this mode includes:

- the definition of the document features which can be interchanged between equipments supporting PM11. These features are functionally as well as technically defined in Recommendation T.502;
- the definition of the protocol elements to be used for the transfer of documents and for the negotiation of optional features between equipments supporting PM11. This definition is technically specified in Recommendation T.522;
- the specification of the equipment characteristics to be supported for PM11. These characteristics are defined in Recommendation T.562.

1.2.3 Document application profiles (T.500-Series)

The document application profiles defined in the T.500-Series Recommendations may be used by any telematic services. Supplementary constraints may be added by particular services using these document application profiles.

This Recommendation defines in 2.2.4 the constraints unique to the equipments participating in the Teletex service using the application profile PM11 as described in Recommendation T.502.

1.2.4 Communication application profiles (T.520-Series)

A DTAM protocol subset has to be used for the interchange of documents between PM11 equipments with Teletex capabilities. These subsets are defined in the T.520-Series Recommendations as “communication application profiles”.

Subclause 2.3.1 refers to Recommendation T.522 defining the adequate communication application profile (called BT1 for Bulk Transfer 1”) to be used for PM11.

1.2.5 Equipment characteristics (T.560-Series)

The characteristics of equipments using application profiles are defined in the T.560-Series Recommendations.

Subclause 2.4 refers to Recommendation T.562 defining the particular characteristics for equipment with Teletex capabilities supporting PM11.

2 Description

2.1 General

Documents can be interchanged in three principal forms, namely:

- processable form, which allows a document to be revised by a recipient, if required;
- formatted processable form, which allows a recipient to reproduce the document as intended by the sender and/or to revise the document;
- formatted form, which allows a recipient to reproduce the document as intended by the sender.

2.2 Characteristics of a PM11 interchanged document

2.2.1 Logical characteristics

From the logical point of view, the document interchanged between equipments using PM11 consists of a set of paragraphs.

The paragraph refers to an amount of text that is distinct from any other part of the document. The use of such paragraphs is therefore to distinguish between portions of the document content that have different properties.

2.2.2 Layout characteristics

a) A document may be divided into one or more page sets, which are not nested. This allows, for example, sets of pages having different layouts to be distinguished.

b) A page set is considered to consist of a sequence of pages. The first page of this sequence may have a layout different from the other pages of the set.

c) The maximum number of independent and non-overlapping areas which may subdivide a page is three. These areas consist of an area lying at the top of the page that is reserved for header text, an area lying at the bottom that contains footer text and an area lying between the header and footer areas that is reserved for body text.

d) Text designated as header or footer text may consist of one or more paragraphs and these are intended to be laid out entirely in the header or footer area respectively on each page of a document. Header and footer text may not occur in any other area of the page. Header and footer text is optional and therefore may not exist on each page of the document. Also, the header and footer text may not be the same throughout the document.

e) Also, it is possible to specify that the text area is to be laid out on the "recto" or "verso" side of the sheet of paper and to specify the orientation (portrait or landscape) for any page of the document.

2.2.3 Document content

Only a character content shall be used within a document interchanged between equipments with Teletex capabilities supporting PM11.

Characters rendition are: normal rendition, bold, italicized, underlined and crossed out (this last is non-basic).

2.2.4 Features supported by PM11

The features supported by PM11 are described by Recommendation T.502: "Document application profile PM11 for the interchange of processable form documents". The purpose of this paragraph is to give an overview of these features.

2.2.4.1 The features which can be interchanged using PM11 mode fall into the following categories:

– Page format features: these relate to how the layout of each page of a document will appear when reproduced (e.g. left and right margins, headers and footers).

– Character content layout and imaging features: these relate to how the document content will appear within the page of the reproduced document (e.g. first line indentation, alignment).

– Character repertoire: this relates to the character sets and control functions that make up the document content.

– Document management features: these concern the information associated with the document that relates to the document as a whole, such as its title, history and creation date. This information can be used in applications such as filing and retrieval.

2.2.4.2 Paper formats and assured reproduction areas

a) *Paper formats*

Different paper formats can be declared by the sender for the presentation of the interchanged document.

The two principal paper formats which can be used without any negotiation are:

– ISO A4 paper format (210 × 297 mm);

– North American letter paper format (215.9 × 279.4 mm).

The following paper formats may also be used, but need a negotiation:

– ISO A3 paper format (297 × 420 mm);

– Japanese legal paper format (257 × 364 mm);

– Japanese letter paper format (182 × 257 mm).

b) *Assured reproduction areas*

Recommendation T.562 specifies the assured reproduction areas for the paper formats listed above.

The presentation of the document layout and content by the recipient is guaranteed if the dimensions of the interchanged page do not exceed the dimensions of the assured reproduction area.

c) *Page dimensions*

The page dimensions are always smaller than the paper formats.

The maximum dimensions of the basic interchanged page correspond to the common area between the assured reproduction areas of A4 and North American paper formats.

These dimensions are given in Recommendation T.562. This allows any PM11 document to be printed by using one of the two principal paper formats. The use of larger page dimensions must be negotiated.

2.2.4.3 Fall-back techniques

a) Some basic and non-basic features described in Recommendation T.562 are allowed to be approximated using fall-back techniques.

b) This Recommendation determines the fall-back procedure which may be used by the recipient if features present in the interchanged document are not locally available (see Table 1).

c) All other features, not listed in Table 1, must not be approximated.

TABLE 1/F.220

Features	Fall-back modes
Document layout	
Separation	Ignore
Widows and orphans	Ignore
Association of paragraphs	Ignore
Recto/verso pages	Recto
Content layout and imaging	
Emphasis	
– Italicized	Bold or underlined
– Bold	Italicized or underlined
Document management (e.g.: title, subject, etc.)	Ignore

2.3 Communication aspects

2.3.1 All the non-basic features defined for PM11 in Recommendation T.502 must be negotiated before the interchange of the document. Negotiation is only allowed to fail when a required non-basic feature is not supported by the recipient's system and that this system does not support any suitable fall-back mode for this feature.

2.3.2 A processable mode document can only be sent as a unit. If an equipment tries, for any reason, to send one document in different parts, the contribution of the document is not accepted by the recipient because it is not possible to provide an automatic linkage for PM11 documents. Consequently, the sender has to retransmit the whole document.

2.3.3 Direct communication of basic teletex documents between a teletex equipment supporting only the basic mode and a teletex equipment supporting both the basic and the processable mode PM11 is provided. Technical communication rules are defined in 8/T.562, taking into account the case where an equipment tries to send a PM11 document to an equipment supporting only the basic mode.

2.3.4 If the transmission of a PM11 document fails, the user should always be informed of the reason of the failure.

NOTE – The consultation, before the communication, of the teletex service directory allows to know the nature of the receiving equipment and so, allows to avoid communication failures due to incompatible modes.

Some local mechanisms may also be implemented to check the nature of the receiving equipment by consulting a local directory before any communication. The process may be useful when the recipient belongs to a list of usual addressees.

2.3.5 Generally, equipment will provide an automatic conversion from a PM11 document to a basic teletex document if the PM11 document is in a formatted form.

2.4 Equipment characteristics

2.4.1 Equipments with Teletex capabilities supporting PM1 must provide the user with the ability:

- To create, transmit, receive the three forms of documents defined in 2.1. The sender's intention, concerning the transmitted document, is expressed by the particular form of this document.
- To present (print or display on screen) the received document when it has been transmitted in the formatted processable form or the formatted form. If printed, the receiving user is furnished with a document identical with that produced by the sending subscriber as far as its contents, layout and format are concerned.

  NOTE – If sent in a processable form, the layout of the document between the sending and the receiving sides may differ.
- To reprocess the received document when it has been transmitted in the processable or the formatted processable form.

2.4.2 Other characteristics of equipments with teletex capabilities supporting the processable mode PM11 are described in Recommendation T.562.

2.4.3 The CIL presentation rules, as defined in Recommendation F.200, apply with the restriction that there is no page number in the field 4 of the CIL.

3 Intercommunication with other services

Equipment belonging to the processable mode PM11 of the Teletex service has the ability to intercommunicate with equipment belonging to any other services that incorporate the PM11 document application profile, BT1 communication profile, and PM11 terminal characteristics.

4 Quality of service

For further study.

5 Customer's information

5.1 Directories

5.1.1 In the Teletex directory published by each Administration, the special symbol PM11, the meaning of which is "Processable Mode number 11", shall be inserted when an equipment with Teletex capabilities provides this processable mode in order to give some guidance to the users.

5.1.2 This symbol should be placed so that it could not be understood as a part of the equipment identification.