INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

T.503

Amendment 4
(04/99)

SERIES T: TERMINALS FOR TELEMATIC SERVICES

A document application profile for the interchange of Group 4 facsimile documents

Amendment 4

ITU-T Recommendation T.503 – Amendment 4

(Previously CCITT Recommendation)

ITU-T T-SERIES RECOMMENDATIONS

TERMINALS FOR TELEMATIC SERVICES

For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION T.503

A DOCUMENT APPLICATION PROFILE FOR THE INTERCHANGE OF GROUP 4 FACSIMILE DOCUMENTS

AMENDMENT 4

Summary

Amendment 4 introduces higher resolutions of 600 dpi and 1200 dpi to Recommendation T.503.

Source

Amendment 4 to ITU-T Recommendation T.503 was prepared by ITU-T Study Group 8 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 1st of April 1999.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. 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, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation the term *recognized operating agency (ROA)* includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration*, *ROA* and *public correspondence* are defined in the *Constitution of the ITU (Geneva, 1992).*

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

CONTENTS

Introduction and background

To keep consistency between G3 facsimile service and G4 facsimile service, it is important to apply higher resolutions to G4 facsimile.

This Amendment 4 introduces the higher resolutions of 600 dpi and 1200 dpi.

A DOCUMENT APPLICATION PROFILE FOR THE INTERCHANGE OF GROUP 4 FACSIMILE DOCUMENTS

AMENDMENT 4

(Geneva, 1999)

1) Subclause 5.4.1.2

Amend 5.4.1.2 to read as follows:

5.4.1.2 Pel spacing, line spacing and pel transmission density

This property defines the distance between successive pels on a line and between successive lines of pels.

The basic value is 6 BMU, corresponding to 200 pels per 25.4 mm. It is also the default value.

The non-basic values are 1, 2, 3, 4 and 5 BMU, respectively corresponding to 1200, 600, 400, 300 and 240 pels per 25.4 mm.

2) Table 1

Amend Table 1/T.503 to read as follows:

Table 1/T.503 – Document profile attributes

Attribute	Value	Permissible values
Document profile descriptor	M	
Specific layout structure	m	Present
Document characteristics	M	
Document Application Profile	m	Group 4 fax
Document architecture class	m	Formatted
No basic document charact.	NM	
Page dimensions (Note 1)	nm	North American letter = (10 200, 13 200 fixed or variable) ISO B4 = (11 811, 16 677 fixed or variable) ISO B3 = (14 030, 19 840 fixed or variable) Japanese legal = (12 141, 17 196 fixed or variable) Japanese letter = (8598, 12 141 fixed or variable) North American legal = (10 200, 16 800 fixed or variable) North American ledger = (13 200, 20 400 fixed or variable) (Note 2)
Type of coding	nm	T.85 single-progression (Note 3)
Raster graphics coding attributes	NM	
Compression	nm	Uncompressed
Raster graphics presentation features	NM	
Pel transmission density	nm	5 BMU (240 pels/25.4 mm) 4 BMU (300 pels/25.4 mm) 3 BMU (400 pels/25.4 mm) 2 BMU (600 pels/25.4 mm) 1 BMU (1200 pels/25.4 mm)

NOTE 1 – This dimension attribute is represented as a data element which consists of two integers.

Two integers specify width and height of a page in basic measurement units (BMUs).

NOTE 2 – An indefinite page length is represented by a variable measure in the vertical dimension. The value of this data is then arbitrary and should be the nominal page length.

NOTE 3 – If basic Lo is supported, object ID {0020850} shall be indicated.

If optional Lo is supported, object ID {0020851} shall be indicated. When object ID {0020851} is indicated, object ID {0020850} shall also be indicated.

This is the coding scheme defined in clause 4/T.85.

3) Table 5

Amend Table 5/T.503 to read as follows:

Table 5/T.503 – Presentation attributes

Attributes	Basic values	Default values	Non-basic values
Type of content	Formatted raster graphics content architecture	Formatted raster graphics content architecture	None
Raster graphics attributes			
Pel path	0°	0°	None
Line progression	270°	270°	None
Pel transmission density	6 BMU (200 pels/25.4 mm)	6 BMU	5 BMU (240 pels/25.4 mm) 4 BMU (300 pels/25.4 mm) 3 BMU (400 pels/25.4 mm) 2 BMU (600 pels/25.4 mm) 1 BMU (1200 pels/25.4 mm)

4) Subclause B.8.3

Amend B.8.3 to read as follows:

B.8.3 Definition of the APP markers defined for Group 4 Colour Fax

The application code APP1 will initiate identification of the image as a G4FAX application and define the spatial resolution. This code appears directly after the SOI maker. The data format is as follows:

X'FFE1'(APP1), length, G4FAX identifier, version, spatial resolution

The above terms are defined as follows:

– *Length*: (2 octets) Total APP1 field octet count including the octet count itself, but excluding the APP1 marker.

– *FAX identifier*: (6 octets) X'47', X'34', X'46', X'41', X'58', X'00'. This X'00'-terminated string "G4FAX" uniquely identifies this APP1 marker.

– *Version*: (2 octets) X'07CA'. This string specifies the year of approval of the standard, for identification in the case of future revision (for example, 1994).

– *Spatial resolution*: (2 octets) Lightness pixel density in pels/25.4 mm. The basic value is 200. Allowed values are 200, 240, 300, 400, 600 and 1200.

This is an example of the string including the SOI and APP1 codes for a baseline JPEG encoded 1994 G4FAX application at 200 pels/25.4 mm:

X'FFD8', X'FFE1', X'000C', X'47', X'34', X'46', X'41', X'58', X'00', X'07CA', X'00C8'

5) Subclause B.9.2

Amend B.9.2 to read as follows:

B.9.2 User data conveyed by SUD in CDCL/RDCLP

```
APDU                ::= CHOICE  {
                                [4] IMPLICIT ApplicationCapabilities }

ApplicationCapabilities ::= SET  {
    documentApplicationProfile    [0] IMPLICIT OCTET STRING,
        -- '0205'H document application profile for T.503 and this annex
    documentArchitectureClass     [1] IMPLICIT OCTET STRING,
        -- '00'H FDA --
    nonBasicDocCharacteristics    [2] IMPLICIT NonBasicDocCharacteristics,        -- (see Note)
    additional-doc-characteristics [9] IMPLICIT Additional-Doc-Characteristics   OPTIONAL }

NonBasicDocCharacteristics ::= SET  {
    page-dimensions               [2] IMPLICIT SET OF Dimension-Pair             OPTIONAL,
    ra-gr-coding-attributes       [3] IMPLICIT SET OF Ra-Gr-Coding-Attribute     OPTIONAL,
    ra-gr-presentation-features   [4] IMPLICIT SET OF Ra-Gr-Presentation-Features OPTIONAL,
    types-of-coding               [29] IMPLICIT SET OF Type-of-Coding             }  -- (see Note)
```

NOTE – These attributes are mandatory for this annex.

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```
Ra-Gr-Presentation-Features ::= CHOICE  {
    pel-transmission-density      [11] IMPLICIT Pel-Transmission-Density }

Pel-Transmission-Density  ::= INTEGER {
                                        p5 (2),     -- 5 BMU (240 pels/25.4 mm)
                                        p4 (3),     -- 4 BMU (300 pels/25.4 mm)
                                        p3 (4),     -- 3 BMU (400 pels/25.4 mm)
                                        p2 (5),     -- 2 BMU (600 pels/25.4 mm)
                                        p1 (6),     -- 1 BMU (1200 pels/25.4 mm)
                                        (p6 (1))}   -- 6 BMU (200 pels/25.4 mm)
                    -- default and basic value is p6 (1)
```

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6) Subclause C.7.1

Amend C.7.1 to read as follows:

C.7.1 User data conveyed by SUD in CDCL/RDCLP

```
APDU            ::= CHOICE    {
                [4] IMPLICIT ApplicationCapabilities }

ApplicationCapabilities   ::= SET  {
    documentApplicationProfile    [0]   IMPLICIT OCTET STRING,
      -- '0208'H document application profile for T.503 and this annex
    documentArchitectureClass     [1]   IMPLICIT OCTET STRING,
      -- '00'H FDA --
    nonBasicDocCharacteristics    [2]   IMPLICIT NonBasicDocCharacteristics,
    additional-doc-characteristics [9]  IMPLICIT Additional-Doc-Characteristics   OPTIONAL }
```

```
NonBasicDocCharacteristics::= SET  {
     page-dimensions              [2]   IMPLICIT SET OF Dimension-Pair                  OPTIONAL,
     ra-gr-coding-attributes      [3]   IMPLICIT SET OF Ra-Gr-Coding-Attribute          OPTIONAL,
     ra-gr-presentation-features  [4]   IMPLICIT SET OF Ra-Gr-Presentation-Features     OPTIONAL,
     types-of-coding              [29]  IMPLICIT SET OF Type-of-Coding  }
```

. . . . . .

```
Ra-Gr-Presentation-Features  ::= CHOICE  {
     pel-transmission-density     [11]  IMPLICIT Pel-Transmission-Density }

Pel-Transmission-Density  ::= INTEGER {
                                        p4 (3),        -- 4 BMU (300 pels/25.4 mm)
                                        p3 (4),        -- 3 BMU (400 pels/25.4 mm)
                                        p2 (5),        -- 2 BMU (600 pels/25.4 mm)
                                        p1 (6),        -- 1 BMU (1200 pels/25.4 mm)
                                        (p6 (1))}      -- 6 BMU (200 pels/25.4 mm)
                    -- default and basic value is p6 (1)
```

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