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CCITT

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

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SERIES T: TERMINAL EQUIPMENT AND PROTOCOLS FOR TELEMATIC SERVICES

TERMINAL CHARACTERISTICS FOR GROUP 4 FACSIMILE APPARATUS

Reedition of CCITT Recommendation T.563 published in the Blue Book, Fascicle VII.7 (1988)

NOTES

1 CCITT Recommendation T.563 was published in Fascicle VII.7 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

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

Recommendation T.563

TERMINAL CHARACTERISTICS FOR GROUP 4 FACSIMILE APPARATUS

The CCITT,

considering

(a) that Recommendation T.2 refers to Group 1 type apparatus for ISO A4 document transmission over a telephone-type circuit in approximately six minutes;

(b) that Recommendation T.3 refers to Group 2 type apparatus for ISO A4 document transmission over a telephone-type circuit in approximately three minutes;

(c) that Recommendation T.4 refers to Group 3 type apparatus for ISO A4 document transmission over a telephone-type circuit in approximately one minute;

(d) that there is a demand for Group 4 apparatus which incorporates means for reducing the transmission time and assures essentially error-free reception of the document;

(e) that telematic terminals including Group 4 facsimile apparatus are to be standardized, taking into account the commonality among these terminals;

(f) that there is a demand for mixed mode of operation where both facsimile coded information and character coded information can be treated within a page by the same apparatus;

unanimously declares

that Group 4 facsimile apparatus as defined in Recommendation T.0 should be designed and operated according to the following standard.

1 General

1.1 Group 4 facsimile apparatus is used mainly on public data networks (PDN) including circuit-switched, packet-switched, and the integrated services digital network (ISDN). The apparatus may be also used on the public switched telephone network (PSTN) where an appropriate modulation process will be utilized.

1.2 The procedures used with Group 4 facsimile apparatus enable it to transmit and reproduce image coded information essentially without transmission errors.

1.3 Group 4 facsimile apparatus has the means for reducing the redundant information in facsimile signals prior to transmission.

1.4 The basic image type of the Group 4 facsimile apparatus is black and white. Other image types, e.g. grey scale image or colour image are for further study.

1.5 There are three classes of Group 4 facsimile terminals:

- *Class I* – Minimum requirement is a terminal able to send and receive documents containing facsimile encoded information (in accordance with Recommendations T.6, T.503 and T.521).
- *Class II* – Minimum requirement is a terminal able to transmit documents which are facsimile encoded (in accordance with Recommendations T.6, T.503 and T.521). In addition, the terminal must be capable of receiving documents which are facsimile coded (in accordance with Recommendations T.6, T.503 and T.521), teletex coded (in accordance with the basic coded character repertoire as defined in Recommendations T.60 and T.61), and also mixed-mode documents (in accordance with Recommendation T.561).
- *Class III* – Minimum requirement is a terminal which is capable of generating, transmitting and receiving facsimile coded document (in accordance with the Recommendations T.6, T.503 and T.521), teletex coded document (in accordance with the basic coded character repertoire as defined in Recommendations T.60 and T.61), and mixed-mode documents (in accordance with Recommendation T.561), see Note.

Note – The above definitions are extracted from Study Group I where “terminal” is used instead of “apparatus”.

2 Scope of Recommendations concerning Group 4 facsimile apparatus

2.1 This Recommendation defines the general aspects of Group 4 facsimile apparatus.

2.2 The rules to be followed in the Group 4 facsimile services are defined in Recommendation F.184.

2.3 The Group 4 facsimile coding scheme and facsimile control functions are defined in Recommendation T.6.

2.4 Terminal supporting Group 4 facsimile mode of operation communicates with unique procedures that are described as follows:

a) the interface to the physical network is defined in this Recommendation (see Note);

b) the transport end-to-end control procedure is defined in Recommendation T.70;

c) Group 4 facsimile control procedures are defined in Recommendation T.62;

d) Group 4 facsimile communication application profile is defined in Recommendation T.521;

e) Group 4 facsimile document application profile is defined in Recommendation T.503.

Note – Recommendation T.71 may be applicable for PSTN operation.

2.5 When operating as mixed-mode terminals, Recommendation T.561 applies.

2.6 When operating as basic teletex terminals, Recommendations T.60 and T.61 apply.

3 General characteristics of the apparatus

3.1 *Basic characteristics*

3.1.1 The Group 4 facsimile apparatus provides the means for direct document transmission from any subscriber to any other subscriber.

3.1.2 All apparatus participating in the international Group 4 facsimile service has to be compatible with each other at the basic level defined in this Recommendation. Additional operational functions may be invoked.

3.1.3 The range of data rates is described in § 6. Detailed arrangements on a national level are left to the Administrations concerned, as it is recognized that national implementation of the Group 4 facsimile service on various types of network may involve national operation at different data throughput rates.

3.1.4 The page is the basis for facsimile message formatting and transmission. Both A4 and North American paper formats are taken into account.

3.1.5 Facsimile coding schemes are applies in order to reduce the redundant information in facsimile signals prior to transmission.

3.1.6 The apparatus must have to ability to reproduce facsimile messages. The content, layout and format of facsimile messages must be identical at the transmitting and receiving apparatus.

3.1.7 The reproducible area is defined within which facsimile messages are assured to be reproduced (see § 3.2.6).

3.1.8 The Group 4 facsimile apparatus should provide means for automatic reception. In addition Class II/III apparatus should provide means for automatic reception of teletex and mixed mode docu- ments.

3.1.9 All classes of Group 4 facsimile apparatus shall incorporate the functions defined as basic for the Group 4 facsimile service in § 3.2 below. In addition, optional functions can be incorporated. In this Recommendation, the optional functions are divided into CCITT standardized options and nationally and/or privately specified options.

3.2 *Basic functions*

3.2.1 Group 4 facsimile mode of operation shall be capable of handling:

a) communication application profile as defined in Recommendation T.521;

b) document application profile as defined in Recommendation T.503;

c) the basic facsimile coding scheme as defined in Recommendation T.6;

d) the control function associated with the basic facsimile coding scheme as defined in Recommendation T.6.

3.2.2 All classes of Group 4 apparatus shall have the following provisions for facsimile messages:

a) provision for scanning the documents to be transmitted (see § 3.2.5);

b) provision for receiving and presenting hard or soft copies of the documents.

3.2.2.1 In addition Group 4 class II apparatus shall have provision for receiving and displaying basic teletex and mixed mode documents.

3.2.2.2 In addition to the requirements for Group 4 Class II apparatus, Class III apparatus shall have provisions for generating and transmitting basic teletex and mixed mode documents.

3.2.3 *Basic page formatting functions are as follows*

a) vertical page orientation;

b) paper size of ISO A4;

c) reproducible area/printable area is defined taking into account ISO A4 and North American paper formats and ISO standard 3535.

3.2.4 *Terminal identification*

Each Group 4 facsimile apparatus should be equiped with a unique identification. Details of the identification are given in Recommendation F.184.

3.2.5 *Scanning*

The message area should be scanned in the same direction in the transmitter and receiver. Viewing the message area in a vertical plane, the picture elements shall be processed as if the scanning direction were from left to right with subsequent scans adjacent to and below the previous scan.

3.2.6 *Page size and reproducible area*

3.2.6.1 Sometimes paper length may not be specified, because the paper end is detected by paper scanning.

3.2.6.2 The size of the guaranteed reproducible area for ISO A4 paper size is shown in Annex A to this Recommendation.

3.2.7 *Group 4 facsimile transmission pel density (resolution) requirements*

The Group 4 facsimile resolution requirements and their tolerances are given in Table 1/T.563.

TABLE 1/T.563

Resolution (pels/25.4 mm)	Horizontal and vertical tolerance %
200 × 200	± 1
240 × 240	± 1
300 × 300	± 1
400 × 400	± 1

Centre line referencing will be sued for paper positioning. Each page will be positioned on the scanner so that the centre line is in registration with the value: (number of pels/line)/2. (For further study.)

Specific values for the number of pels per line, scan line length and nominal number of scan lines per page are given in Tables 2a/T.563 and 2b/T.563 for all the Group 4 resolutions for ISO A4, North American, ISO B4, ISO A3, Japanese legal and Japanese letter paper.

TABLE 2a/T.563

Number of pels and can line length for different paper sizes

		ISO A4	North American	ISO B4	ISO A3	Japanese legal	Japanese letter
Number of picture elements along a scan line	Resolution (pels/25.4 mm)						
	200	1728	1728	2048	2432	2048	1728
	240	2074	2074	2458	2918	2458	2074
	300	2592	2592	3072	3648	3072	2592
	400	3456	3456	4096	4864	4096	3456
Scan line length (mm) (P)		219.46	219.46	260.10	308.86	260.10	219.46
Paper width (mm) (Q)		210	215.9	250	297	257	182
P - Q		9.46	3.56	10.10	11.86	3.10	37.46

TABLE 2b/T.563

Nominal number of scan lines for different paper sizes

		ISO A4	North American	ISO B4	ISO A3	Japanese legal	Japanese letter
Nominal number of scan lines per page for each pel-transmission density	Resolution (pels/25.4 mm)						
	200	2339	2200	2780	3307	2866	2024
	240	2806	2640	3335	3969	3439	2428
	300	3508	3300	4169	4961	4299	3035
	400	4677	4400	5559	6614	5732	4047
Nominal paper length (mm)		297	279.4	353	420	364	257

Table 3/T.563 specifies the blanking procedure for all of the Group 4 paper sizes. An equal number of pels on the left and right side of the page are set to white to fit the paper format. Figure 1/T.563 illustrates the blanking procedure for ISO A4 and North American paper. The same procedure is used for the other paper formats.

TABLE 3/T.563

Blanking and address reference point for different paper sizes

Paper size	Resolution (pels/25.4 mm)	Pels per line	Pels per each paper size line	Blanking margin (pels)	Reference point	Total line length (mm)
				(B)		
ISO A4	200 × 200	1728	1654	37	(38.1)	219.46
	240 × 240	2074	1984	45	(46.1)	219.46
	300 × 300	2592	2480	56	(57.1)	219.46
	400 × 400	3456	3308	74	(75.1)	219.46
				(A)		
North American	200 × 200	1728	1700	14	(15.1)	219.46
	240 × 240	2074	2040	17	(18.1)	219.46
	300 × 300	2592	2550	21	(22.1)	219.46
	400 × 400	3456	3400	28	(29.1)	219.46
ISO B4	200 × 200	2048	1968	40	(41.1)	260.10
	240 × 240	2458	2362	48	(49.1)	260.10
	300 × 300	3072	2952	60	(61.1)	260.10
	400 × 400	4096	3936	80	(81.1)	260.10
ISO A3	200 × 200	2432	2338	47	(48.1)	308.86
	240 × 240	2918	2806	56	(57.1)	308.86
	300 × 300	3648	3508	70	(71.1)	308.86
	400 × 400	4864	4676	94	(95.1)	308.86
Japanese legal	200 × 200	2048	2024	12	(13.1)	260.10
	240 × 240	2458	2428	15	(16.1)	260.10
	300 × 300	3072	3036	18	(19.1)	260.10
	400 × 400	4096	4048	24	(25.1)	260.10
North American	200 × 200	1728	1434	147	(148.1)	219.46
	240 × 240	2074	1720	177	(178.1)	219.46
	300 × 300	2592	2150	221	(222.1)	219.46
	400 × 400	3456	2868	294	(295.1)	219.46

Note – The pels as defined in the blanking margin section (blanking margin A and B are shown in Figure 1/T.563) are equivalent to the discarded pels defined in Recommendation T.503.

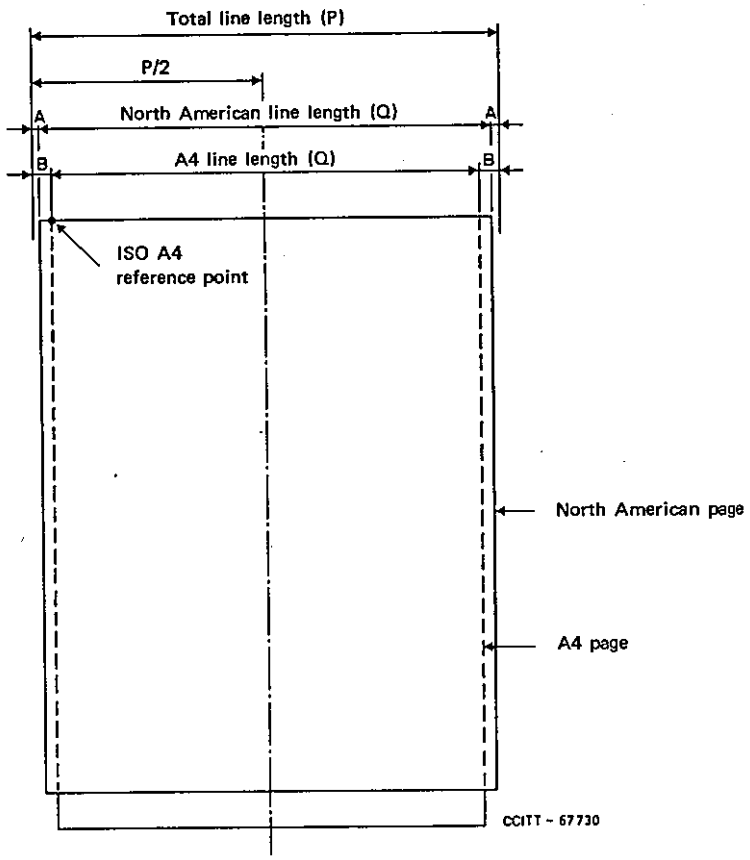


FIGURE 1/T.563

Reference point and blanking margins

The raster point is the upper left corner of an ISO page is used as a reference for portrait mode character printing. This raster point, termed the (1,1) raster reference point, is used as a starting point for determining character margins and positions. This is also illustrated in Figure 1/T.563.

3.2.8 *Group 4 facsimile class structure*

Table 4/T.563 shows the class structure of Group 4 facsimile apparatus.

TABLE 4/T.563

Class structure

Class	I (see Note 1)	II (see Note 1)	III (see Note 1)
Standard pel transmission density (pels/25.4 mm)	200	200 and 300 (see Note 2)	200 and 300 (see Note 2)
Optional pel transmission density (pels/25.4 mm)	200 and/or 300 and/or 400	240 and/or 400 (see Note 3)	240 and/or 400 (see Note 3)
Pel conversion capability in standard	not required	yes	yes
Teletex	not required	reception only	yes
Mixed mode	not required	reception only	yes
Page memory	not required	yes	yes
Use of document application profile	see Table 5/T.563		
Use of communication application profile	see Table 5/T.563		

Note 1 – Administrations may determine which class with options to be used for their national service. Standardization work has to continue with the goal of achieving a uniform standard.

Note 2 – When operating as a mixed mode terminal per Recommendation T.561, the pel receiving density of 240 pels/25.4 mm is required.

Note 3 – To achieve a high service quality, the pel density of the scanner and printer should be grater that or equal to the transmission pel density. This requirement is waived for a terminal which has a scanner or printer with a pel density of 240 + 240 pels per 25.4 mm and can communicate at 300 pels per 25.4 mm. In this case, the 240 + 240 pels per 25.4 mm terminal will exceptionally meet the standard Class II/III requirement.

Note 4 – When a resolution conversion is necessary, the conversion is performed by the apparatus which minimizes the transmission cost and time. An exception would be a 240 + 240 pels per 25.4 mm terminal transmitting to a 300 + 300 pels per 25.4 mm terminal which is operating at the standard transmission quality.

Note 5 – Pel conversion algorithms should aim at low impairment of the quality and are for further study.

3.2.9 *Facsimile coding scheme*

3.2.9.1 In order to reduce the redundant information in facsimile signals, the basic facsimile coding scheme is defined in Recommendation T.6. This coding scheme is used assuming that transmission errors are corrected by control procedures in lower levels.

3.2.9.2 On an optional basis an apparatus can use other CCITT standardized coding schemes defined in Recommendation T.6.

3.3 *CCITT-standardized optional functions of Group 4 facsimile mode of operation*

3.3.1 The possibility of using optional functions can be negotiated during a handshaking procedure in the communication application profile (see Recommendation T.521).

3.3.2 The optional functions are invoked by the communication application profile (see Recommendation T.521).

3.3.3 As the service develops, additions and changes to the CCITT-standardized optional function listed below may be needed:

a) optional coding schemes defined in Recommendation T.6;

b) control functions associated with optional coding schemes;

c) grey scale images;

d) colour images;

e) resolution conversion algorithms.

3.3.4 Optional page formatting functions are as follows:

a) page sizes of ISO B4, ISO A3, Japanese legal and Japanese letter;

b) other page formats are for further study.

3.4 *Optional functions of Group 4 facsimile mode of operation for national standardization or private use*

The CCITT standardization includes the necessary rules and means for indication of, or escape into, functions specified nationally of for private use (see Recommendations T.62, T.521).

3.5 *Default conditions for Group 4 facsimile mode of operation*

In the absence of specific indications, the receiving apparatus shall assume the following conditions:

a) communication (as specified in Recommendation T.521):
   – one way (calling apparatus transmitting the facsimile message);
   – normal document;

b) coding scheme:
   – basic facsimile coding scheme;

c) image type:
   – black and white two-level image;

d) presentation:
   - paper size of ISO A4;
   - pel transmission density of 200 pels per 25.4 mm;
   - number of picture elements along scan line of defined values in Table 3/T.563,
   - blanking margin of defined values in Table 3/T.563,
   - vertical page orientation.

4 Mixed mode capabilities

For mixed mode of operation, requirements for Group 4 class II and III terminals are specified in Recommendation T.561.

5 Communications

5.1 *Storage*

Receiving storage is not required for Group 4 class I terminals. The minimum storage requirement for Group 4 Class II and III is 128 K octets. This value is based on a pel transmission density of 300 pels per 25.4 mm for an ISO A4 document. However, this does not cover the worst case situation for dense documents. Additional memory may be required and can be negotiated.

5.2 *Call identification*

The control procedures include the exchange of reference information prior to sending any document. Details of the call identification line are covered in Recommendation F.184.

Printing capability of the call identification line (CIL) is mandatory. The printing of the CIL is selected by the user.

If printing is selected, the CIL is printed on a reserved area at either the top of the page or the bottom. Refer to Figure A-1/T.563. The reserved area is 4.23 mm (200 BMU) in height and 183 mm (8640 BMU) in width. The size of the basic measurement unit (BMU) is 1/1200 per 25.4 mm.

5.3 *Interworking*

There are three document types, namely “facsimile”, “mixed mode” and “basic teletex”. These are shown in Table 5/T.563. A terminal can transfer one or more documents of the same type in a single association. In this case of “facsimile” or “mixed mode”, the document type is indicated in D-INITIATE service primitive using the parameter “document application profile”. If the document type is not supported by the called terminal, this will be indicated by the “result” parameter of the D-INITIATE service confirmation.

TABLE 5/T.563

Document type

Document type	Group 4 facsimile	Mixed mode	Basic teletex
Class of Group 4 facsimile apparatus	Class I, II and III	Class II and III	Class II and III
Document architecture class	FDA	FDA	None (see Note 2)
Document application profile	Rec. T.503 (see Note 1)	Rec. T.501	Non-profile (see Note 2)
Communication application profile	Rec. T.521	Rec. T.522	Non-profile (see Note 2)

Note 1 – When using the Group 4 facsimile mode, document profile descriptor defined in Recommendation T.503 is not transmitted using session protocol data unit (SPDU).

Note 2 – Basic teletex documents are transmitted outside DTAM application.

The negotiation and indication mechanism is defined in Recommendation T.433. Appendix I illustrates some examples of the session establishment phase. Table 6/T.563 specifies the interworking matrix among Group 4 facsimile apparatus based on negotiation result.

TABLE 6/T.563

Interworking matrix among Group 4 facsimile apparatus

Sender / Receiver	Class I	Class II	Class III
Class I	Group 4 facsimile	Group 4 facsimile	Group 4 facsimile
Class II	Group 4 facsimile	Group 4 facsimile	Group 4 facsimile Mixed mode Basic teletex
Class III	Group 4 facsimile	Group 4 facsimile	Group 4 facsimile Mixed mode Basic teletex

5.4 *Communication application profile for Group 4 facsimile document*

The communication application profile to be used is BT 0, specified in Recommendation T.521.

Specific parameter values to be used in the D-INITIATE and D-CAPABILITY service primitive are:

– the parameter value for document application profile is “Recommendation T.503”;

– the parameter value for document architecture class is “FDA (formatted)”.

6 Network-related requirements

6.1 *Networks*

The Group 4 facsimile transport service can be provided using a circuit-switched public data network (CSPDN), a packet-switched public data network (PDPDN), a public switched telephone network (PSTN), or an integrated services digital network (ISDN). In all types of network the Group 4 facsimile apparatus will provide automatic answering, transmission, reception and clearing.

6.2 *Circuit-switched public data network (CSPDN)*

a) Function and procedural aspect of the interface: Recommendation X.21;

b) With external data circuit terminating equipment (DCE) – mechanical and electrical and characteristics of the interface: Recommendation X.21;

c) Bit rates: user classes of service 4 to 7 in Recommendation X.1;

d) Link procedure: LAPB/Recommendation X.75.

6.3 *Packet-switched public data network (PSPDN)*

a) Function and procedure aspects of the interface: Recommendation X.25, levels 1, 2, 3;

b) Duplex transmission;

c) Bit rates: user classes of services 8 to 11 in Recommendation X.1;

d) Number of logical channels at a time: one or more.

6.4 *Public switched telephone network (PSTN)*

a) Modulation/demodulation schemes are for further study;

b) Function and procedural aspects of the interface: for further study;

c) Link procedure: Recommendation T.71 may be applicable;

d) Bit rate: for further study;

e) Automatic response: Recommendation V.25.

6.5 *Integrated services digital network (ISDN)*

The operations and rules of Group 4 facsimile apparatus on the ISDN are defined in Recommendation T.90.

7 Indicators

7.1 Indicators should inform users about situations in which negative effects on the grade of service can be expected.

7.2 The following indicator are required:

a) Apparatus unable to transmit (e.g. paper jam at transmitting end);

b) Apparatus unable or soon unable to receive (e.g. paper jam or receiving memory nearly full);

c) Operator assistance required;

d) Message received in store.

8 Access to facsimile MHS

Users of Group 4 facsimile apparatus may wish to have access to the services offered by message handling system (MHS). This requires the ability to generate control documents (see Recommendation T.300 Series). The details are left for further study.

9 Implementation of apparatus

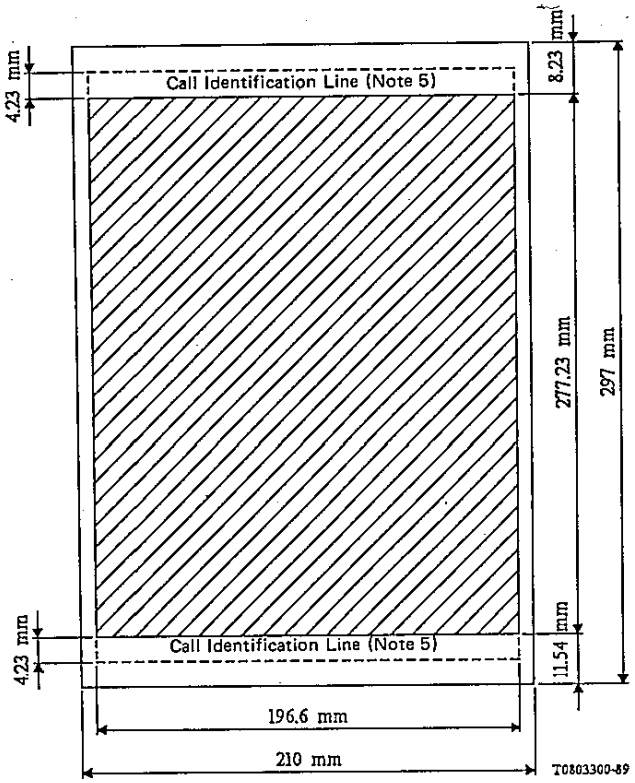
Although paper sizes are referred to, this does not always require physical paper scanner and/or printer to be implemented. Details may be defined by Administrations.

If the message is not generated from a physical scanner of displayed on paper then the signals appearing across the network interface shall be identical to those which would be generated if paper input and/or output has been implemented.

ANNEX A

(to Recommendation T.563)

Guaranteed reproducible area for Group 4 apparatus conforming to Recommendation T.563



Note 1 – Paper characteristics (i.e weight) are important parameters. Lightweight paper may cause additional paper handling errors and may result in a reduced guaranteed reproducible area.

Note 2 – Sheet feed mechanisms may reduce the guaranteed reproducible area.

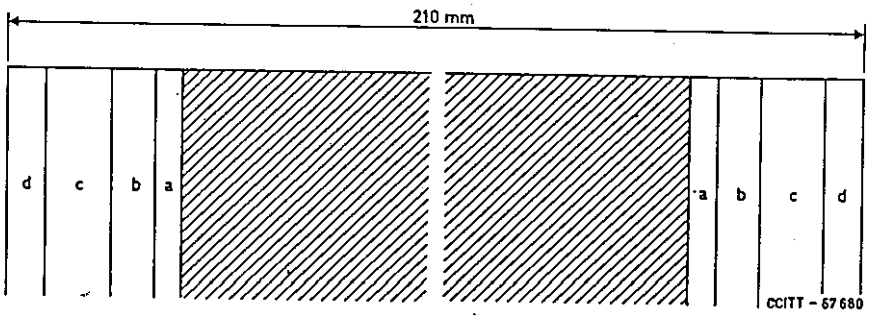
Note 3 – All calculations were done using worst case values. Using nominal values increases the reproducible area.

Note 4 – The exact horizontal position of this area within the ISO A4 paper size as well as sizes larger than the above are subject to national recommendations and/or definitions.

Note 5 – The call identification line is printed either above or below the guaranteed reproducible area.

FIGURE A-1/T.563

Guaranteed reproducible area for Group 4 apparatus for use on facsimile services referring to ISO A4 paper size



a Printer/scanner tolerances
b Loss caused by the enlarging effect due to TLL tolerance
c Loss caused by skew
d Record medium positioning errors

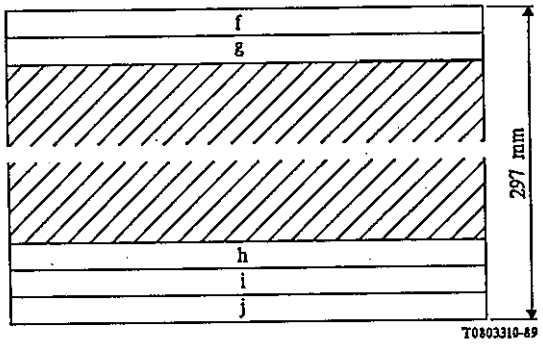
FIGURE A-2/T.563

Horizontal loss

TABLE A-1/T.563

Horizontal losses

Printer/scanner	a	±0.5 mm
Enlarging	b	±2.1 mm
Skew	c	±2.6 mm
Positioning errors	d	±1.5 mm



f Paper insertion loss
g Loss caused by CIL printing at the top of the page
h Loss caused by skew
i Scanning density tolerance
j Gripping loss

FIGURE A-3/T.563

Vertical loss

TABLE A-2/T.563

Vertical losses

Paper insertion	f	4.0 mm
CIL printing	g	4.23 mm
Skew	h	±1.8 mm
Scan line tolerance (see Note)	i	±2.97 mm
Gripping loss	j	2.0 mm

Note – Scanning density tolerance will reduce to 0 mm on roll-fed machines

APPENDIX I

(to Recommendation T.563)

Ccommunication environment establishment

I.1 Table I-1/T.563 summarizes the selection of communication application profile and initial

TABLE I-1/T.563

Selection of communication application profile

Called / Calling	G-4 Class I	G-4 Class II	G-4 Class III	Basic teletex
G4 Class I	T.521 CSS/RSSP	T.521 CSS/RSSP	T.521 CSS/RSSP	T.521 CSS/RSSP (no SUD) (Calling terminal: disconnect)
G4 Class II	T.521 CSS/RSSP	T.521 CSS/RSSP	T.521 CSS/RSSP	T.521 CSS/RSSP (no SUD) (Calling terminal: disconnect)
G4 Class III	T.522 CN[a])/RSSP T.521 selection (fall-back)	T.522 CN/AC	T.522 CN/AC	T.522 CN[a])/RSSP T.62 selection
Basic teletex	T.62 (no SUD) CSS/RSSN (calling terminal: disconnect)	T.62 (no SUD) CSS/RSSP	T.62 (no SUD) CSS/RSSP	T.62 (no SUD) CSS/RSSP

CN CONNECT SPDU defined in Recommendation X.225
AC ACCEPT SPDU defined in Recommendation X.225

a) When interworking with Recommendation T.62 based equipment, service identifier parameter defined in Recommendation T.62 is present in the CONNECT SPDU.

I.2 Some examples of the session establishment phase are as follows:

I.2.1 *In case of Group 4 Class I terminal calling* (see Figure I-1/T.563)

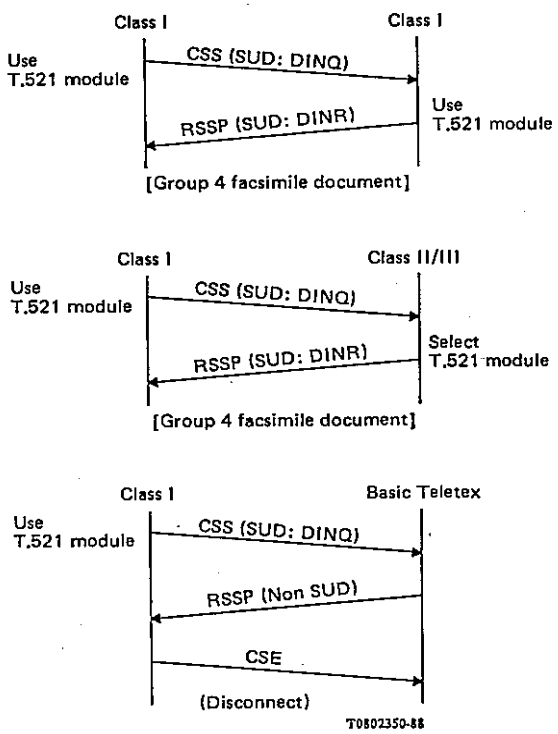


FIGURE I-1/T.563

I.2.2 *In case of Group 4 Class II terminal calling* (see Figure I-2/T.563)

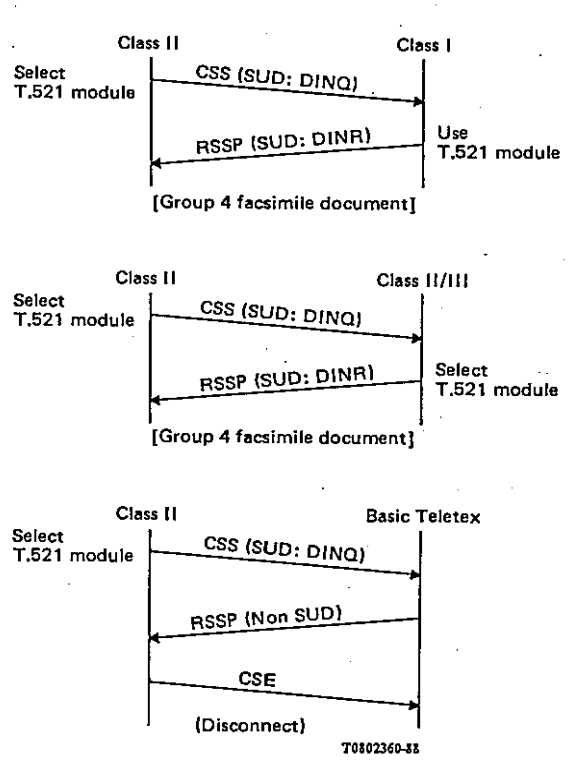


FIGURE I-2/T.563

I.2.3 *In case of Group 4 Class III terminal calling* (see Figure I-3/T.563)

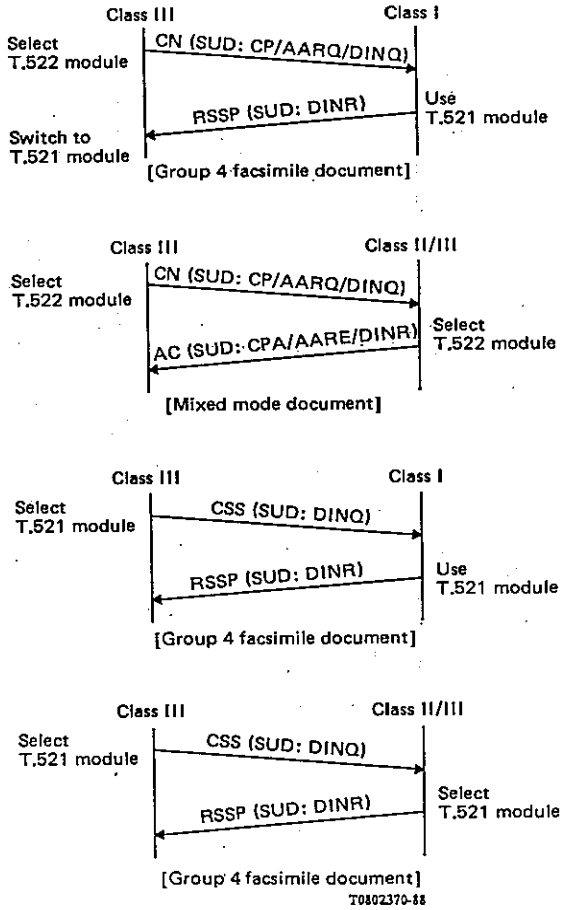


FIGURE I-3/T.563 (sheet 1 of 2)

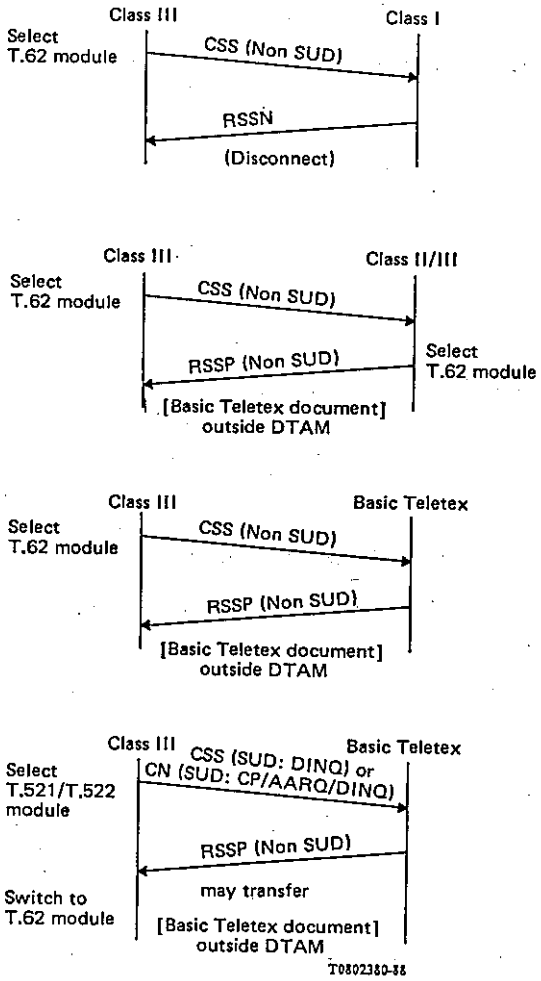


FIGURE I-3/563 (sheet 2 of 2)

I.2.4 *In case of basic teletex terminal calling* (see Figure I-4/T.563)

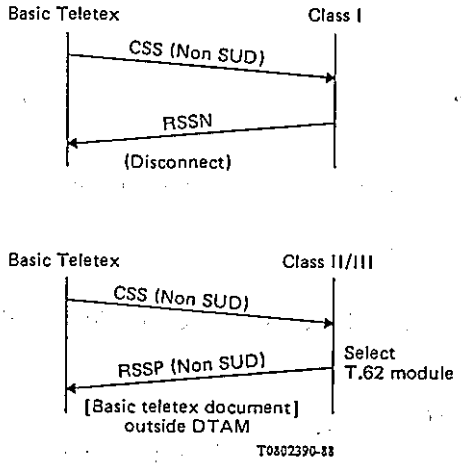


FIGURE I-4/T.563

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