



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

T.541

(03/93)

TELEMATIC SERVICES

**TERMINAL EQUIPMENTS AND PROTOCOLS
FOR TELEMATIC SERVICES**

**OPERATIONAL APPLICATION PROFILE
FOR VIDEOTEX INTERWORKING**

ITU-T Recommendation T.541

(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 T.541 was revised by the ITU-T Study Group VIII (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 Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.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 T.541**OPERATIONAL APPLICATION PROFILE FOR VIDEOTEX INTERWORKING***(Melbourne, 1988; revised Helsinki, 1993)***1 Scope**

This Recommendation defines an operational application profile which conforms to the T.400-Series Recommendations.

Its purpose is to specify an operational structure class suitable for videotex interworking as defined in configuration 1 of Recommendation F.300 and in Recommendation T.564.

2 Field of application

This Recommendation defines an operational application profile, that is in conformance with DTAM (see the T.400-Series Recommendations) and that allows operational structures to be interchanged for the purpose of an 000000international videotex interworking.

This operational application profile defines the features of the operational structure that can be interchanged. These features depend on the document structures as specified in the document application profile (see Recommendation T.504).

3 References

- Rec. F.300 *Videotex service.*
- Rec. X.200 (1988) *Reference model of open systems interconnection for CCITT applications.*
- Rec. X.213 (1992) *Information technology – Network service definition for open systems interconnection.*
- Rec. X.214 (1988) *Transport service definition for open systems interconnection for CCITT applications.*
- Rec. X.224 (1988) *Transport protocol specification for open systems interconnection for CCITT applications.*
- Rec. X.215 (1988) *Session service definition for open systems interconnection for CCITT applications.*
- Rec. X.225 (1988) *Session protocol specification for open systems interconnection for CCITT applications.*
- Rec. X.216 (1988) *Presentation service definition for open systems interconnection for CCITT applications.*
- Rec. X.226 (1988) *Presentation protocol specification for open systems interconnection for CCITT applications.*
- Rec. X.217 (1992) *Service definition for the Association Control Service Element.*
- Rec. X.227 (1992) *Connection-oriented protocol specification for the Association Control Service Element.*
- Rec. T.101 *International interworking for videotex services.*
- Rec. T.400 *Introduction to document architecture, transfer and manipulation.*
- Rec. T.411 *Open document architecture (ODA) and interchange format – Introduction and general principles.*
- Rec. T.412 *Open document architecture (ODA) and interchange format – Document structures.*
- Rec. T.414 *Open document architecture (ODA) and interchange format – Document profile.*

- Rec. T.415 *Open document architecture (ODA) and interchange format – Open document interchange format (ODIF).*
- Rec. T.431 *Document transfer and manipulation (DTAM) – Services and protocols – Introduction and general principles.*
- Rec. T.432 *Document transfer and manipulation (DTAM) – Services and protocols – Service definition.*
- Rec. T.433 *Document transfer and manipulation (DTAM) – Services and protocols – Protocol specification.*
- Rec. T.441 *Document transfer and manipulation (DTAM) – Services and protocols – Operational structure.*
- Rec. T.504 *Document application profile for videotex interworking.*
- Rec. T.523 *Communication application profile DM-1 for videotex interworking.*
- Rec. T.564 *Gateway characteristics for videotex interworking.*

4 Definitions

The definitions of the T.400-Series Recommendations apply also to this Recommendation.

5 Characteristics supported by this operational application profile

5.1 Overview

For the purpose of videotex interworking operational structures are associated with a videotex document to provide an environment for interactive communication, necessary for a recipient to handle the user's input data as intended by the originator.

Therefore the purpose of this clause is to specify the functional description of the features supported by this operational application profile.

5.2 Range of operational structures

For the purpose of an international videotex interworking four operational structures are specified, one of each representing the “data entry structure”, the “application control memory”, the “administrative structure” and the “special terminal facilities structure” as defined in Recommendation T.564.

5.3 Generic characteristics

Not used.

5.4 Specific characteristics

Each of the operational structures specified in this operational application profile only supports specific features of operational structures.

6 Definition of the operational application profile

6.1 Complexity level of operational structures

For further study.

6.2 Operational profile level

One operational profile has to be defined for every application using operational structures.

This operational profile specifies:

- Four operational structures are used;
- Each of the operational structures only contains specific features.

Details are for further study.

6.3 Specification of operational structures

Four operational structures are specified by this operational application profile.

6.3.1 Data entry structure

The data entry structure as defined in Recommendation T.564 is mapped onto one specific operational structure. No generic operational structure is present.

The DATA-ENTRY-SE is mapped to the specific operational root. The object identifier of the root of this Operational Structure has an assigned value of 11.

The subordinates of DATA-ENTRY-SE are: DATA-ENTRY-PROGRAM-SE, FIELD-SE, RULES-SE, PROMPT-SE, and RESULT-SE.

DATA-ENTRY-PROGRAM-SE is mapped to composite operational object. FIELD-SE, RULES-SE, PROMPT-SE and RESULT-SE are mapped to basic operational objects.

FIELD-SE, PROMPT-SE and RESULT-SE may have associated operational elements.

Subordinate to DATA-ENTRY-PROGRAM-SE is DATA-ENTRY-SUBPROGRAM-SE. DATA-ENTRY-SUBPROGRAM-SE is mapped to basic operational object.

For each of the SEs specified above, constraints are defined on the number of SEs which may exist at one time. These constraints are defined in Recommendation T.564.

6.3.2 Application Control Memory Structure

The Application Control Memory Structure as defined in Recommendation T.564 is mapped onto one specific Operational Structure. No generic Operational Structure is present.

The APPLICATION-CONTROL-MEMORY-SE is mapped to the specific operational root. The object identifier of the root of this Operational Structure has an assigned value of 12.

Subordinate to the APPLICATION-CONTROL-MEMORY-SE is the RECORD-SE. The RECORD-SE is mapped to basic operational object.

For each of the SEs specified above, constraints are defined on the number of SEs which may exist at one time. These constraints are defined in Recommendation T.564.

6.3.3 The Administrative Structure

The Administrative Structure as defined in Recommendation T.564 is mapped onto one specific Operational Structure. No generic Operational Structure is present.

The ADMINISTRATIVE-INFORMATION-SE is mapped to the specific operational root. The object identifier of the root of this Operational Structure has an assigned value of 13.

6.3.4 Special Terminal Facilities Structure

The Special Terminal Facilities Structure as defined in Recommendation T.564 is mapped onto one specific Operational Structure. No generic Operational Structure is present.

The SPECIFIC-TERMINAL-FACILITIES-SE is mapped to the specific operational root. The object identifier of the root of this Operational Structure has an assigned value of 14.

Subordinate to the SPECIAL-TERMINAL-FACILITIES-SE is the REDEFINITION-ENTITY-SE. REDEFINITION-ENTITY-SE is mapped to basic operational object.

For each of the SEs specified above, constraints are defined on the number of SEs which may exist at one time. These constraints are defined in Recommendation T.564.

6.4 Specification of attributes

The attributes applicable to constituents of the operational structure are defined in the following tables, using the following notation:

- attribute not applicable;
- M attribute is mandatory;
- Nm attribute is non-mandatory;
- D attribute is defaultable;

From the attributes specified for Operational Structures in Annex A, Videotex Interworking will not use the attributes Operational Object Class and Subordinates.

The use of the attribute Document Fragment is for further study.

6.4.1 Attributes of the Data Entry Structure

Table 1 shows the use of attributes defined for objects of Operational Structures.

TABLE 1/T.541

Attributes	DATA-ENTRY-SE						
	DATA-ENTRY-PROGRAM-SE						
	DATA-ENTRY-SUBPROGRAM-SE						
	FIELD-SE						
	RULES-SE						
	PROMPT-SE						
	RESULT-SE						
Object type	M	M	M	M	M	M	M
Object identifier (Note)	M	M	M	M	M	M	M
Reference attribute	-	D	D	-	-	-	Nm
Application defined attribute lists	D	D	D	D	D	D	D
Default value lists	Nm	-	-	-	-	-	-
NOTE – This attribute may be omitted when the value can be ambiguously derived from the transmission sequence of the relevant objects.							

Values for the attribute object-type:

- DATA-ENTRY-SE: 0;
- DATA-ENTRY-PROGRAM-SE: 1;
- DATA-ENTRY-SUBPROGRAM-SE: 2;
- FIELD-SE: 3;
- RULES-SE: 4;
- PROMPT-SE: 5;
- RESULT-SE: 6.

Table 2 shows the use of attributes defined for operational elements.

TABLE 2/T.541

	Field-content portion		
		Prompt-content portion	
		Result-content portion	
Operational element identifier (Note)	M	M	M
Operational element content type	D	D	D
Operational element content	D	D	D
NOTE – This attribute may be omitted when the value can be unambiguously derived from the transmission sequence of the relevant elements.			

6.4.1.1 DATA-ENTRY-SE

6.4.1.2 DATA-ENTRY-PROGRAM-SE

The attribute first-subprogram, defined in Recommendation T.564, is mapped to the reference attribute, defined in Recommendation T.441 (or currently in Annex A).

This application profile specifies the use of this attribute as defaultable. Currently no default value is defined within this standard.

The application defined attribute list for the DATA-ENTRY-PROGRAM-SE contains the following attributes.

Data-Entry-Type	D
Allowed-characters-for-keyword-access	Nm
Character-list-for-keyword-access	Nm
Max-length-keyword-access	D
Allowed-characters-for-a-direct-access-command	Nm
Max-length-direct-access	D

6.4.1.3 RESULT-SE

The attribute Last-subprogram defined in Recommendation T.564 is mapped to the reference attribute defined in Recommendation T.441 (or currently in Annex A). The application defined attribute-list for the RESULT-SE contains the following attribute.

Termination reason	D
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