A.2.4Application defined attribute list

Defaultable for operational object descriptions and operational element descriptions; default value: NULL. NULL means that no default value list is present.

This attribute allows for the definition of application specific information to be included in any operational component or operational element description.

The value of the attribute is a set of application defined values, i.e., the applications define the contents of the lists.

Non-mandatory may be specified for any component description. There is no constraint as to where this attribute may be specified. i.e., at what level or for what component descriptions.

This attribute establishes the relationship between constituents of the operational structure and constituents of the logical and layout structures and their associated content portions, thereby defining the document fragments as such.

The value of this attribute is a pair of parameters. The first parameter is the fragment name. The fragment name is to be provided by the application. The second parameter is a sequence of one or more identifiers of the referenced document constituents.

The interpretation of this attribute (e.g., if the reference to an object of the specific document includes the reference to all subordinate objects) is application dependent.

A.2.2.5Reference attribute

Non-mandatory; may be specified for any operational object description, or operational element description. The value of this attribute is a sequence of pairs of parameters. The first parameter is the reference name. The reference name is to be provided by the application. The second parameter is a sequence of identifiers of operational object descriptions, or operational element descriptions.

This attribute permits to reference from one constituent of the operational structure to other constituents. This reference can only be interpreted in the specific context of the application.

Maintaining consistency when using this attribute has to be provided by the

application and is not within the scope of this Annex.

A.2.3Miscellaneous attribute

A.2.3.1Operational element content type

Defaultable; to be specified for any operational element description, if present. This attribute specifies the type of the content contained in the relevant operational element. The operational application profile shall specify the set of permissible values of this attribute, according to the relevant content architecture.

A.2.3.2Operational element content

Defaultable; to be specified for any operational element description, if present. The value of this attribute is a string in accordance with the value of the rel-

evant operational element content type.

A.2.3.3Default value lists

Non-mandatory; may be specified for composite component description.
This attribute defines default values for attributes of subordinate object descriptions.
The value of the attribute is a sequence of one or more lists of attributes, each

ite operational object.

The value of the attribute is a sequence of one or more numbers. Each number corresponds to an immediately subordinate object description and consists of the last number of identifier of that object description. The same number may not occur more that once in the sequence.

The order of the appearance of the numbers in the sequence - and the order of their numeric values - defines the sequential order among the immediately subordinate objects.

A.2.2.3Operational elements

Non-mandatory for basic component descriptions.

This attribute links operational elements to a particular basic component. There maybe zero, one or more operational elements per basic object description.

The value of this attribute is the sequence of the second parts of the identifiers of the corresponding operational element descriptions.

Mandatory for all operational object descriptions. For the same exceptions as specified in Recommendation T.412, § 5.3.1.3, the object identifier may be omitted.

This attribute uniquely identifies an operational object description.

The object identifier consists of a sequence of numbers. Each number in the sequence corresponds to a hierarchical level of the specific operational structure and identifies one specific object description at that level (see Recommendation T.412).

The first number in the sequence identifies the object description of the operational root.

An object identifier consisting of just this first number identifies the object description of the operational root.

The operational application profile (T.540 Series of Recommendations) defines the assignment of integers to the operational structures used by the application.

The value of the subsequent numbers in the sequence is not significant. It is required, however, that the sequence of numbers assigned to an object description must distinguish it from all other object descriptions among the operational structures used by the relevant application.

The object identifier is represented as a character string of decimal-coded numerals with a space character as separator between each pair of numerals.

A.2.1.3Operational element identifier

Mandatory for all operational object descriptions. In the same exceptional cases as specified in Recommendation T.412, § 5.3.1.3, the operational element identifier may be omitted.

This attribute uniquely identifies an operational element description.

The value of the operational element identifier consists of a sequence of numbers which is composed of two parts. In the first part, it is identical to the identifier of the basic operational component that the operational element is associated with. The second part is a number appended to this identifier which identifies this operational element.

The operational element identifier is presented as a character string of decimal-coded numerals with a space character as separator between each pair of numerals.

A.2.2Relationship attributes

A.2.2.1Operational object class

Non-mandatory; may be specified for all operational object descriptions.

This attribute is not supported by this Annex, as videotex interworking makes no use of generic structures.

A.2.2.2Subordinates

Non-mandatory for composite operational object descriptions.

A.2.1 Identification attributes

A.2.1.1 Object type

Mandatory for all operational object class descriptions, defaultable for operational object descriptions.

This attribute must be specified for an operational object description, unless generic structures are used.

The attribute specifies the object type whose value is an integer.

The relevant operational application profile shall specify the values for this attribute and shall identify for each of the relevant objects if it is a:

- operational root;
- composite operational object;
- basic operational object.

From this specification it can be derived which attributes are applicable to the relevant object (see Table A-1/T.541).

Operational elements are associated with basic operational objects. They describe application specific data, which are specified in the appropriate Recommendation of the application.

A.2Definitions of attributes

This clause defines the attributes and their applicability to the operational objects. Each attribute has a name and a value by which it describes a characteristic of a structure element or the relationship to another structure element. Table A-1/T.541 shows which attribute can be specified for each type of constituent.

TABLE A-1/T.541

Attribute name	Operational root	Composite operational object	Basic operational object	Operational element
Object type	D	D	D	-
Object identifier	M*	M*	M*	-
Operational element identifier	-	-	-	M*
Operational object class	NM	NM	NM	-
Subordinates	NM	NM	-	-
Operational elements	-	-	NM	-
Document fragment	NM	NM	NM	-
Reference attribute	-	NM	NM	NM
Operational element content type	-	-	-	D
Operational element content	-	-	-	D
Default value lists	NM	NM	-	-
Application defined attribute lists	NM	NM	NM	NM

M Mandatory
D Defaultable
NM Non-mandatory
- Not applicable

and combination of composite and basic operational objects. Operational elements cannot be directly associated with a composite operational object.

A.1.3Basic operational objects

A basic operational object is a basic object of the operational structure. A basic operational object can be immediately subordinate to the operational root or to a composite operational object.

A basic operational object has no subordinates. It is directly associated with the opera- tional elements if any are present.

Some constituents of the display structure or operational structures are implicitly created at connection establishment time (see Annex A of Recommendation T.564 or Table 1/T.532).

To ensure that manipulation of these constituents during association is always possible, the following values for the object identifier shall be used:

- "11 0" for Result-SE
- "11 0 0" for Result-Content-Portion
- "13 0" for Local-Host-Information-SE
- "13 1" for External-Host-Information SE
- "13 2" for Document-Information-SE

ANNEX A

(to Recommendation T.541)

Operational structure

This Annex is an integral part of this Recommendation. It specifies details on operational structures currently not covered by Recommendation T.441. It is intended that future work on operational structures will be compatible with the specifications of this annex.

A.1Constituents of the operational structure

The operational structure is used (in addition to the specific document) for describing application defined structures in terms of operational objects and operational elements. The following constituents occur in this structure:

- operational root;
- composite operational object;
- basic operational object;
- operational elements.

A.1.1Operational root

The operational root is the highest level object in the hierarchy of this structure. It is a composite object whose immediate subordinates can be any number and combination of composite and basic operational objects.

A.1.2Composite operational objects

A composite operational object is a composite object of the operational structure.

A composite operational object can be immediately subordinate to the operational root or to another composite operational object of one hierarchy level above. (Only one level of composite operational objects will be used by videotex interworking.)

List of attributes	Default value
wSpecial-Terminal-Facilities-SE attributes:w	
Measurement-unit	Characterbox
Dimensions	(40,24)
wRedefinition-Entity-SE attributes:w	
Redefinition-coding	Nil
Redefinition-content	Nil

The default value nil indicates that no default value is defined within this standard. In these cases steps 1 and 2 of the defaulting mechanism specified in § 9.2.4 of Recommendation T.564 shall uniquely derive the default value for the relevant attribute.

6.6.1Data entry structure

w

List of attributes	Default value
wData-Entry-Program-SE attributes:w	
Data-Entry-Type	Nil
Max-Length-Keyword-Access	0
Max-Length-Direct-Access	0
wResult-SE attributes:w	
Termination reason	Nil
wField-SE attributes:w	
Field-Layout	(0,0), (40,24)
wData-Entry-Program-SE attributes:w	
Echo	"normal"
Echoed character	Nil
wRules-SE attributes:w	
Time-Out	600 seconds
Valid-Commands	Nil
Length-Of-Valid-Choices	Nil
List-Of-Enabled-Choices	Nil
wPrompt-SE attributes:w	
Position	(0,0)
Dimensions	(40,24)

6.6.2Application control memory structure

w

List of attributes	Default value
Record-contents	Nil

6.6.3Special terminal facilities structure

w

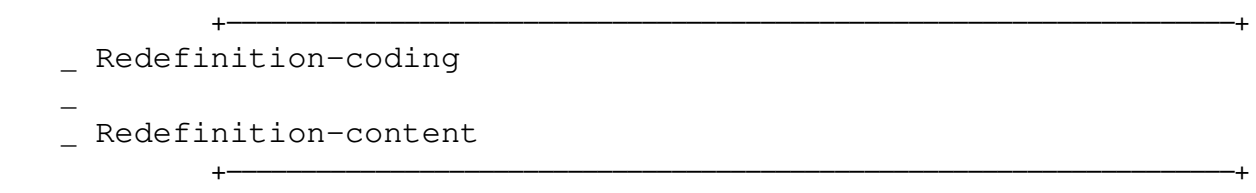
The attribute type-of-coding, specified in Recommendation T.564, is mapped to the attribute operational element content type, specified in Recommendation T.441 or in Annex A of this Recommendation). Recommendation T.564 specifies the values for this attribute.

6.5.7Operational element content

The attribute content-information, specified in Recommendation T.564, is mapped to the attribute operational element content, specified in Recommendation T.441 or in Annex A of this Recommendation). Recommendation T.564 specifies the values for this attribute.

The application defined attribute-list for the Redefinition-Entity-SE contains the following attributes:

w



Note – Specifying the redefinition content by using operational elements is for further study.

6.5Attribute values for constituents of the operational structures

6.5.1Object type

The value of the attribute object type is given by the relevant value of the operational structure (see Recommendation T.441 or Annex A of this Recommendation) and §§ 6.4.1, 6.4.2 and 6.4.4 of this Recommendation.

6.5.2Object identifier

The assignment of values to the operational roots is specified in this Recommendation.

The procedure of assigning values to the subordinate constituents of the operational structure is specified in Recommendation T.441 or in Annex A of this Recommendation).

6.5.3Reference attribute

The reference attribute is used in the context of the Data-Entry-Program-SE and Data-Entry- Subprogram-SE and Result-SE. The assignment of values to the reference attribute is specified in Recommendation T.564.

6.5.4Application defined attribute lists

The values of attributes, mapped to the application defined attribute lists, are specified in Recommendation T.564.

This Recommendation specifies the mapping of the attributes defined in Recommendation T.564 to the application defined attribute lists.

6.5.5Default value lists

For the application defined attributes of each of the SE:

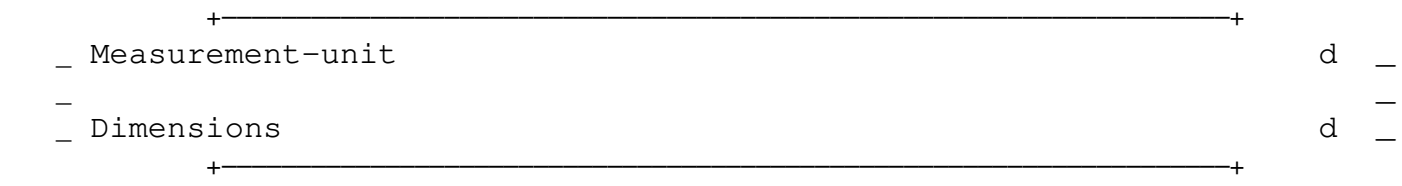
- Data-Entry-SE
- Application-Control-Memory-SE
- Administrative-Information-SE
- Special-Terminal-Facilities-SE

default values for the application defined attributes are specified in this Recommendation.

The default values of each of the concerned SE are mapped to the attribute default value lists of the relevant operational root.

The application defined attribute-list for the Special-Terminal-Facilities-SE contains the following attributes:

w



The application defined attribute list for the Document-Information-SE contains the following attributes:

Application-Time-based-charging-period	d
Application-price-Frame-based	d
Application-price-Transaction-based	d
Application-Time-based-charging-price	d
Communication-Cost-Time-based-charging-period	d
Communication-Cost-Time-based-charging-price	d

6.4.4Attributes of the special terminal facilities structure

Table 5/T.541 shows the use of attributes defined for operational structures:

TABLE 5/T.541

Attributes	Special-Terminal-Facilities-SE	
		Redefinition-Entry-SE
Object type	m	m
Object identifier (Note)	m	m
Reference attribute	--	--
Application defined attribute lists	d	d
Default value lists	nm	--

Note – This attribute may be omitted when the value can be unambiguously derived from the transmission sequence of the relevant objects.

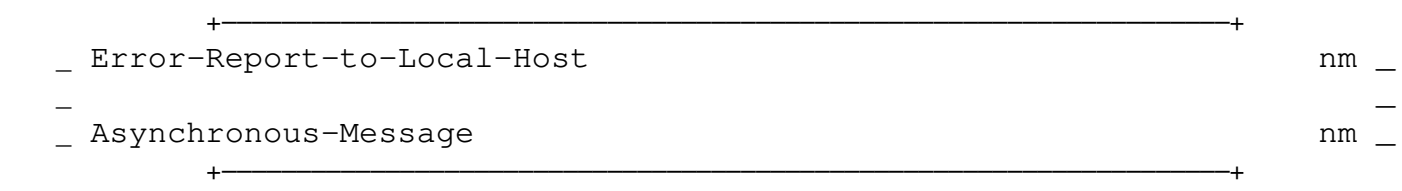
Values for the attribute object-type

Special-Terminal-Facilities-SE: 13

Redefinition-Entry-SE: 14

6.4.4.1Special-Terminal-Factilities-SE

The application defined attribute list for the External-Host-Information-SE contains the following attribute:



w

Attributes	Administrative-Information-SE	Local-Host-Information-SE	External-Host-Information-SE	Document-Information-SE
Object type	m	m	m	m
Object identifier (Note)	m	m	m	m
Reference attribute	--	--	--	--
Application defined attribute list		nm	nm	d
Default value list	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

Administrative-Information-SE: 9
Local-Host-Information-SE: 10
External-Host-Information-SE: 11
Document-Information-SE: 12

6.4.3.1Administrative-Information-SE

The application defined attribute list for the Administrative-Information-SE:
w

External-Host-Id	m
Local-Host-Id	m
Bilateral-Management-Parameter	nm

6.4.3.2Local-Host-Information-SE

The application defined attribute list for the Local-Host-Information-SE contains the following attribute:
w

Error-Report-to-External-Host	nm