

ANNEX B

(to Recommendation T.541)

B.1 Operational data formats

Operational-

Descriptor ::= CHOICE {

[0] IMPLICIT Operational-Class-Descriptor,
-- not used by the videotex interworking application;
-- therefore not specified in this document

operational-object

[1] IMPLICIT Operational-Object-Descriptor,
[2] IMPLICIT Operational-Element }

operational-element

Information-Identifier ::= Object-or-Class-Identifier

-- used in the case of the delete operation

B.1.1 Operational object descriptor

Operational-Object-
Descriptor ::= SEQUENCE {

object-type
descriptor-body
Operational-Object-
Type ::= INTEGER {

Operational-Object-Type OPTIONAL,
Operational-Object-Descriptor-Body OPTIONAL}

data-entry (0),
data-entry-program (1),
data-entry-subprogram (2),
field (3),
rules (4),
prompt (5),
result (6),
application-control-memory (7),
record (8),
document-information (12),
special-terminal-facilities (13),
redefinition-entity (14) }

Operational-Object
Descriptor-Body ::= SET {

object-identifier
subordinates

Object-Or-Class-Identifier OPTIONAL,

[0] IMPLICIT SEQUENCE OF Numeric-String OPTIONAL,
-- not used by the videotex interworking application;
-- therefore not specified in this document

operational-elements
object-class

[1] IMPLICIT SEQUENCE OF Numeric-String, OPTIONAL,
[2] IMPLICIT Object-Or-Class-Identifier OPTIONAL,
-- not used by the videotex interworking application;
-- therefore not specified in this document

-- document-fragment

[3] IMPLICIT Document-Fragment OPTIONAL,
-- not used by the videotex interworking application;
-- therefore not specified in this document

reference-attribute

[4] IMPLICIT Reference-Attribute OPTIONAL,

default-value-lists
application-defined-
attribute-lists

[5] IMPLICIT Default-Value-Lists OPTIONAL,
[6] IMPLICIT Application-Defined-Attribute-Lists OPTIONAL }

B.1.2 Operational elements

Operational-Element ::= SET {
operational-element-
identifier
reference-attribute
[4] Object-or-Class-Identifier OPTIONAL,
IMPLICIT Reference-Attribute OPTIONAL,
-- not used by the videotex interworking application}

application-defined-attribute-lists	[6] IMPLICIT Application-Defined-Attribute-Lists OPTIONAL,
operational-element-content-type	[7] Operational-Content-Type OPTIONAL,
operational-element-content	[8] IMPLICIT OCTET STRING OPTIONAL }
B.1.3 Common attributes	
Reference-Attribute ::=	SEQUENCE OF SEQUENCE {
reference-name	[0] IMPLICIT OCTET STRING OPTIONAL, -- '00'H reference to a rules SE -- '01'H reference to a prompt-in SE -- '02'H reference to a prompt-out SE -- '03'H reference to a field SE -- in the case of first subprogram and last subprogram no -- reference name is used
referenced-constituent	Object-Or-Class Identifier }
Default-Value-Lists	::= Operational-Object-Descriptor-Body
B.1.4 Application defined attributes	
Application-Defined-Attribute-List	::= SET { -- DATA ENTRY STRUCTURE
data-entry-type	[0] IMPLICIT INTEGER { information-retrieval (1), data-collection (2), on-the-fly (3) duplex (4)} OPTIONAL,
allowed-characters-for-a-keyword-access-command	[1] IMPLICIT BOOLEAN OPTIONAL, -- true = yes -- false = no
character-list-for-keyword-access	[2] Character-List OPTIONAL,
max-length-keyword-access	[3] IMPLICIT INTEGER OPTIONAL,
allowed-character-for-a-direct-access-command	[4] IMPLICIT BOOLEAN OPTIONAL, -- true = yes -- false = no
termination-reason	[5] IMPLICIT Termination-Reason OPTIONAL,
field-layout	[6] IMPLICIT Field-Layout OPTIONAL,
field-text-marking	CHOICE {
echo	[7] IMPLICIT NULL, [8] Appearance } OPTIONAL,
echoed-character	[9] IMPLICIT INTEGER { normal-echo (0), fixed-echo (1), null (2) } OPTIONAL,
echo-parameter	[10] G0G2-Character OPTIONAL,
time-out	[11] Appearance OPTIONAL, [12] IMPLICIT INTEGER OPTIONAL

-- measured in seconds

entry.Invoke-character
local-editing

[13] G0G2-Character OPTIONAL,
[33] IMPLICIT INTEGER OPTIONAL,
-- details for further study

length-of-valid-choices

[15] IMPLICIT INTEGER {
one-digit (1)
two-digits (2) } OPTIONAL,

list-of-enabled-choices

[16] List-of-Choices OPTIONAL,

allowed-characters-for-data-collection	[17] IMPLICIT INTEGER { forbidden (0), allowed (1), alphabetic (2), alphanumeric (3), numeric (4) } OPTIONAL,
character-list list-of-valid-commands	[18] Character-List OPTIONAL, [19] OCTET STRING OPTIONAL, -- the OCTET STRING is encoded in a way that the bits are -- representing the commands as follows: -- bit 0: time-out, bit 2 = V2, bit 3: V3, bit 8: D1a, -- bit 9: D1b, bit 10: D1c, bit 11: D1d, bit 14: D4, bit 15: D5, -- bit 16: D6, bit 17: D7, bit 19: D9, bit 20: D10, bit 21: D11, -- bit 22: D12, bit 23: D13, bit 24: D14, bit 27: D17, bit 28: -- D18, bit 29: end-of-field, -- a command is enabled by setting the bit to 1 and disabled by -- setting the bit to 0.
field-type	[20] IMPLICIT INTEGER { data-collection-field (0), country-code-field (1), tel-number-field (2), subscr-number-field (3), co-user-suffix-field (4), user-number-field (5), subscr-title-field (6), subscr-name-field (7), additional-name-field (8), street-field (9), town-field (10), postcode-field (11), date-field (12), time-field (13), date-and-time field (14) } OPTIONAL,
system-field-attributes	[21] IMPLICIT System-Field-Attributes OPTIONAL, -- the following two attributes are used for prompts, the -- second also for the SPECIAL TERMINAL-FACILITIES-SE
position dimension	[22] IMPLICIT Measure-Pair OPTIONAL; [23] IMPLICIT Measure-Pair OPTIONAL, -- APPLICATION CONTROL MEMORY STRUCTURE
record-content	[14] IMPLICIT Record-Content OPTIONAL, -- SPECIAL TERMINAL FACILITIES STRUCTURE
measurement-unit redefinition-coding redefinition-content	[31] IMPLICIT Measurement-Unit OPTIONAL, [25] IMPLICIT Redefinition-Coding OPTIONAL, [26] IMPLICIT OCTET STRING OPTIONAL, -- ADMINISTRATIVE STRUCTURE
a-price-frame-based a-price-transaction-based a-time-based-charging-price a-time-based-charging-period c-cost-tbc-period c-cost-tbc-price	[27] IMPLICIT Real-Number OPTIONAL, [32] IMPLICIT Real-Number OPTIONAL, [28] IMPLICIT Real-Number OPTIONAL, [29] IMPLICIT INTEGER OPTIONAL, [30] IMPLICIT INTEGER OPTIONAL, [24] IMPLICIT Real-Number OPTIONAL,

-- OPERATIONAL ELEMENTS

coding attributes

- [8] IMPLICIT Videotex-Coding-Attributes
 - coding attributes are to be specified for prompt content
 - portions by the relevant content architecture; coding
 - attributes are the same as for blocks

B.1.5 Basic types

Object-or-Class-

Identifier	::=	[APPLICATION 1] IMPLICIT Printable-String -- only digits and space are used in the present version of -- the standard -- a "null" value is represented by an empty string -- the first digit identifies the relevant root: -- data entry root "0", application -- control memory root "1", administrative -- information root "2", special terminal -- facilities root "3"
Character-List	::=	CHOICE {
bit-8-character-list	[0]	IMPLICIT SET OF G0G2-Bit-8-Character,
bit-7-character-list	[1]	IMPLICIT SET OF G0G2-Bit-7-Character }
G0G2-Character	::=	CHOICE {
bit-8-character	[0]	IMPLICIT G0G2-Bit-8-Character,
bit-7-character	[1]	G0G2-Bit-7-Character }
G0G2-Bit-8-Character	::=	INTEGER -- G0 or G2 character included. Space with 8-bit encoding; -- values between 20H-7FH and A0H-FFH
G0G2-Bit-7-Character	::=	CHOICE {
g0-character	[0]	IMPLICIT INTEGER { -- G0 character included. Space with 7-bit encoding; -- values between 20H-7FH}
g2-character	[1]	IMPLICIT INTEGER { -- G2 character included. Space with 7-bit encoding; -- values between 20H-7FH}
Field-Layout	::=	SEQUENCE OF SEQUENCE { Measure-Pair, Measure-Pair }
List-of-Choices	::=	BIT STRING -- the length of the string is equal to 10 bits if the length -- of choices is 1, equal to 100 bits if the length is 2 -- the bit position is representing actual choice value
Appearance	::=	IMPLICIT SET {
foreground-colour	[0]	IMPLICIT INTEGER OPTIONAL,
background-colour	[1]	IMPLICIT INTEGER OPTIONAL,
underline	[2]	IMPLICIT BOOLEAN OPTIONAL, -- true means on; false means off
reverse-video	[3]	IMPLICIT BOOLEAN OPTIONAL, -- true means on; false means off
flashing	[4]	IMPLICIT BOOLEAN OPTIONAL, -- true means on; false means off
-- the following parameters are only used for the echo parameter		
height	[5]	IMPLICIT BOOLEAN OPTIONAL, -- true means double; false means normal
width	[6]	IMPLICIT BOOLEAN OPTIONAL, -- true means double; false means normal }

Termination-Reason ::= INTEGER {
 time-out (0), V2 (2),
 V3 (3), D1a (8),
 D1b (9), D1c (10), D1d (11),
 D4 (14), D5 (15), D6 (16),
 D7 (17), D9 (19), D10 (20),
 D11 (21), D12 (22), D13 (23),
 D14 (24), D17 (27), D18 (28),
 end-of-field (29)}

Real-Number ::= SEQUENCE {
 [0] IMPLICIT INTEGER DEFAULT 0,
 [7] IMPLICIT INTEGER DEFAULT 2 }
 -- the encoded real number is obtained by dividing the
 -- integer-part by 10**decimal-exponent

Measurement-Unit ::= INTEGER {
 character-box (0) }

Measure-Pair ::= SEQUENCE {
 horizontal INTEGER,
 vertical INTEGER }

Redefinition-Coding ::= SEQUENCE {
 redefinition-type [0] IMPLICIT INTEGER {
 drcs (0),
 colour-redefinition (1),
 reset-sequence (2),
 syntax [1] IMPLICIT OBJECT IDENTIFIER } }

Record-Content ::= SET OF CHOICE {
 D-CREATE,
 D-DELETE,
 D-MODIFY }
 -- these operations are defined in Recommendations T.432
 -- and T.433

Operational-Content-Type ::= CHOICE {
 [0] IMPLICIT INTEGER {
 g0g2-bit-8 (0),
 -- G0/G2 character included. Space with 8-bit encoding
 g0g2-bit-7 (1),
 -- G0/G2 character included. Space and SS2 with
 -- 7-bit encoding
 ascii 1³ (3)
 -- T.50 (international reference version)
 -- character
 } OPTIONAL,
 -- the integer value is used in the cases of a field
 -- content portion and a result content portion
 [1] IMPLICIT OBJECT IDENTIFIER OPTIONAL }
 -- the OBJECT IDENTIFIER is used in the case of a prompt
 -- content portion

System-Field-Attributes ::= SEQUENCE {
 protected [0] IMPLICIT BOOLEAN OPTIONAL,
 -- true = protected
 -- false = not protected
 data-source [1] IMPLICIT BOOLEAN OPTIONAL,
 -- true = data supplied by local host
 -- false = data supplied by the user }

ANNEX C

(to Recommendation T.541)

This Annex is an integral part of this Recommendation.

Summary of ASN.1 object identifiers

ASN.1 object identifier value	Description	Section
0 1 8 16 2	Object identifier for this operational application profile	Annex C of this Recommendation

¹⁾ American standard code for information interchange.