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**OPEN DOCUMENT ARCHITECTURE (ODA) AND  
INTERCHANGE FORMAT - OPEN DOCUMENT  
INTERCHANGE FORMAT (ODIF)**

Reedition of CCITT Recommendation T.415 published in  
the Blue Book, Fascicle VII.6 (1988)

## NOTES

- 1 CCITT Recommendation T.415 was published in Fascicle VII.6 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.415

# OPEN DOCUMENT ARCHITECTURE (ODA) AND INTERCHANGE FORMAT – OPEN DOCUMENT INTERCHANGE FORMAT (ODIF)<sup>1)</sup>

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## 1 **Scope**

1.1 The purpose of the T.410 Series of Recommendations is to facilitate the interchange of documents.

In the context of the T.410 Series, documents are considered to be items such as memoranda, letters, invoices, forms and reports, which may include pictures and tabular material. The content elements used within the documents may include graphic characters, geometric graphics elements and raster graphics elements, all potentially within one document.

*Note* – The T.410 Series is designed to allow for extensions, including typographical features, colour, spreadsheets and additional types of content such as sound.

1.2 The T.410 Series applies to the interchange of documents by means of data communications or the exchange of storage media.

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<sup>1)</sup> This text is aligned with the final text of the corresponding International Standard ISO 8613-5.

The T.410 Series provides for the interchange of documents for either or both of the following purposes:

- to allow presentation as intended by the originator;
- to allow processing such as editing and reformatting.

The composition of a document in interchange can take several forms:

- formatted form, allowing presentation of the document;
- processable form, allowing processing of the document;
- formatted processable form, allowing both presentation and processing.

The T.410 Series also provides for the interchange of ODA information structures used for the processing of interchanged documents.

Furthermore, the T.410 Series allows for the interchange of documents containing one or more different types of content such as character text, images, graphics and sound.

### 1.3 This Recommendation

- defines the format of the data stream used to interchange documents structured in accordance with Recommendation T.412;
- defines the representation of the constituents which may appear in an interchanged document.

Annex A is a summary of an encoding scheme that may be used for interchanging documents.

Annex B is a summary of the application class tag assignments made in this Recommendation.

Annex C is a summary of the ASN.1 object identifier value assignments made in this Recommendation.

Annex D contains examples of data streams.

*Note 1* – This Recommendation does not specify the coded representation of content elements.

*Note 2* – Data formats for presentation attributes and coding attributes are defined in other Recommendations of the T.410 Series.

## 2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Recommendation are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

- Rec. X.208 (1988): Specification of abstract syntax notation one (ASN.1).
- Rec. X.209 (1988): Specification of basic encoding rules for abstract syntax notation one (ASN.1).
- ISO 8601: Data elements and interchange formats – Information interchange – Representation of dates and times.<sup>2)</sup>
- ISO 9541-6: Information processing – Font and character information interchange – Part 6: Font and character attribute subsets and applications.<sup>2)</sup>

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<sup>2)</sup> To be published.

### 3 Definitions

For the purpose of this Recommendation, the definitions given in Recommendation T.411 apply.

### 4 Document representation

A document structured in accordance with the T.410 Series of Recommendations is represented for interchange by the open document interchange format (ODIF). ODIF is an abstract data syntax in which the constituents and attributes of the document are represented by a hierarchy of data structures and data items, specified using the abstract syntax notation ASN.1 defined in Recommendation X.209.

The coded representation of each data structure or data item is obtained by applying a set of encoding rules.

ODIF is specified in 5.

*Note* – ASN.1 is a formal description method that allows data types relevant to an application to be specified in terms of other data types, including basic types such as "integer" and "octet string" which are defined in Recommendation X.208 itself. Basic encoding rules for ASN.1 are defined in Recommendation X.209 and are summarized in Annex A.

### 5 Open document interchange format (ODIF)

#### 5.1 General description

A document structured in accordance with the T.410 Series of Recommendations is represented by a data stream consisting of one or more data structures of the following types:

- document profile descriptor;
- layout object descriptor;
- layout object class descriptor;
- logical object descriptor;
- logical object class descriptor;
- presentation style descriptor;
- layout style descriptor;
- text unit.

These data structures are called interchange data elements.

Within a data stream, the interchange data elements are ordered in accordance with certain rules which are specified below. This Recommendation defines two such sets of rules; they are called *interchange format class A* and *interchange format class B*.

Which of these sets of rules applies to a given data stream is indicated in the document profile descriptor. In all cases, a data stream contains one and only one document profile descriptor which is always the first interchange data element in the data stream. The document profile descriptor may be the only data structure in the data stream.

When an ODIF data stream is used as part of an ASN.1 external data type, the abstract system shall be formed by an ASN.1 sequence-of-type, referring to the interface data element type and the encoding of the data value shall consist of an integral number of octets, formed by applying the ASN.1 basic encoding rules, and the value of the associated ASN.1 object identifier shall be { 2 8 0 0 }

*Note* – The manner of incorporating the interchange data elements, or the external data type, in an application protocol or the manner of mapping them on service data units (in an OSI environment) is not defined by this Recommendation.

## 5.2 *Interchange format class A*

According to interchange format class A, a data stream consists of one document profile descriptor and, optionally, one or more interchange data elements of the following types:

- layout object descriptor;
- layout object class descriptor;
- logical object descriptor;
- logical object class descriptor;
- presentation style descriptor;
- layout style descriptor;
- text unit.

The order of the interchange data elements is as follows:

- a) document profile descriptor;
- b) layout object class descriptor;
- c) logical object class descriptor;
- d) text units representing generic content portions;
- e) presentation style descriptor;
- f) layout style descriptor;
- g) layout object descriptor;
- h) logical object descriptor;
- i) text units representing specific content portions.

Within each of the groups of layout object descriptors and logical object descriptors, the order of the descriptors is equal to the sequential order defined in Recommendation T.412.

If the data stream contains layout object descriptors, the text units representing specific content portions are ordered according to the sequential layout order; otherwise, they are ordered according to the sequential logical order.

Within each of the other groups of interchange data elements, the order is arbitrary.

## 5.3 *Interchange format class B*

According to interchange format class B, a data stream consists of one document profile descriptor and, optionally, one or more interchange data elements of the following types:

- layout object descriptor;
- layout object class descriptor;
- presentation style descriptor;
- text unit.

Interchange format class B can be used only to represent documents that do not contain any specific or generic logical structure, i.e. documents that conform to the formatted document architecture class.

The order of the interchange data elements is as follows:

- a) document profile descriptor;
- b) layout object class descriptors and associated text units;
- c) presentation style descriptors;
- d) layout object descriptors and associated text units.

Within the group of layout object class descriptors and associated text units, the order is such that a group of descriptors that have identical identifiers, except for the last number of each identifier, follow each other in the data stream without any other descriptor between them. However, each descriptor of an object class for a basic layout object is followed immediately by the associated text units.

Within the group of layout object descriptors and associated text units, the order of the descriptors is equal to the sequential order defined in Recommendation T.412. However, each descriptor of a basic layout object is followed immediately by the associated text units.

Within the group of presentation style descriptors, the order is arbitrary.

#### 5.4 *Descriptors and text units*

A document profile descriptor, layout object descriptor, layout object class descriptor, logical object descriptor, logical object class descriptor, presentation style descriptor or layout style descriptor consists of simple and composite data items representing the attributes of the constituent concerned.

The document profile, each object class, each style and each object is represented by one descriptor.

A text unit consists of two parts:

- a) an attribute field, i.e. a data structure consisting of simple and composite data items representing the attributes of the content portion concerned.
- b) an information field, i.e. a data structure that is either a data item or a set of data items representing the content elements making up the content portion concerned.

Each content portion is represented by one text unit.

The data formats of the interchange data elements are specified in 5.5 to 5.12, using the abstract syntax notation ASN.1 defined in Recommendation X.208.

*Note* – Paragraphs 5.5 to 5.12 by themselves do not completely define the data stream format; additional rules are specified in 5.1 to 5.4 of this Recommendation and in other Recommendations of the T.410 Series. For example, the keyword OPTIONAL merely indicates that a particular data structure or data item is not part of every instance of the containing data structure; the conditions controlling the presence or absence of the data structure or data item are specified in Recommendations T.412 and T.414.

#### 5.5 *Interchange data elements*

Interchange-Data-Elements { 2 8 1 5 5 }

DEFINITIONS ::= BEGIN

EXPORTS Interchange-Data-Element;

IMPORTS Document-Profile-Descriptor

FROM Document-Profile-Descriptor -- see 5.6

Layout-Class-Descriptor, Layout-Object-Descriptor,

FROM Layout-Descriptors -- see 5.8

Logical-Class-Descriptor, Logical-Object-Descriptor

FROM Logical-Descriptors -- see 5.9

Presentation-Style-Descriptor, Layout-Style-Descriptor

FROM Style-Descriptors -- see 5.10

Text-Unit FROM Text-Unit; -- see 5.12

Interchange-Data-Element ::= CHOICE {

document-profile [0] IMPLICIT Document-Profile-Descriptor,

layout-object-class [1] IMPLICIT Layout-Class-Descriptor,

layout-object [2] IMPLICIT Layout-Object-Descriptor,

content-portion	[3]	IMPLICIT Text-Unit,
logical-object-class	[5]	IMPLICIT Logical-Class-Descriptor,
logical-object	[6]	IMPLICIT Logical-Object-Descriptor,
presentation-style	[7]	IMPLICIT Presentation-Style-Descriptor,
layout-style	[8]	IMPLICIT Layout-Style-Descriptor}

END

## 5.6 Document profile descriptor

Document-Profile-Descriptor { 2 8 1 5 6 }

DEFINITIONS ::= BEGIN

EXPORTS Document-Profile-Descriptor;

IMPORTS Resource-Name, Object-or-Class-Identifier

FROM Identifiers-and-Expressions -- see 5.7

Measure-Pair, Transparency, Colour, Dimension-Pair, One-Of-Four-Angles,  
Border, Medium-Type, FROM Layout-Descriptors -- see 5.8

Protection FROM Logical-Descriptors -- see 5.9

Content-Architecture-Class, Content-Type,

Block-Alignment, Fill-Order

FROM Style-Descriptors -- see 5.10

Type-of-Coding FROM Text-Units -- see 5.12

Character-Content-Defaults, Char-Presentation-Feature,

Character-Coding-Attribute

FROM Character-Profile-Attribute { 2 8 1 6 4 } -- see Recommendation T.416

Raster-Gr-Content-Defaults, Ra-Gr-Presentation-Feature,

Ra-Gr-Coding-Attribute

FROM Raster-Gr-Profile-Attributes { 2 8 1 7 4 } -- see Recommendation T.417

Geo-Gr-Content-Defaults, Geo-Gr-Presentation-Feature,

Geo-Gr-Coding-Attribute

FROM Geo-Gr-Profile-Attributes { 2 8 1 8 4 } -- see Recommendation T.418

Font-Reference FROM ISO9541-FONTS { 1 9541 6 1 0 }; -- see ISO 9541-6

Document-Profile-Descriptor ::= SET {

generic-layout-structure [0] IMPLICIT NumericString OPTIONAL,

specific-layout-structure [1] IMPLICIT NumericString OPTIONAL,

generic-logical-structure [4] IMPLICIT NumericString OPTIONAL,

specific-logical-structure [5] IMPLICIT NumericString OPTIONAL,

presentation-styles [6] IMPLICIT NumericString OPTIONAL,

layout-styles [7] IMPLICIT NumericString OPTIONAL,

-- for the generic structures:

-- 'partial-generator-set' is represented by "0",

-- 'complete-generator set' is represented by "1",

-- 'factor-set' is represented by "2",

-- for the other cases, the Numeric string has the value 'present'

-- represented by "1".

external-document-class [9] Document-Reference OPTIONAL,

resource-document [10] Document-Reference OPTIONAL,

resources [11] IMPLICIT SET OF SET {

resource-identifier Resource-Name

object-class-identifier Object-or-Class-Identifier} OPTIONAL,

document-characteristics [2] IMPLICIT Document-Characteristics OPTIONAL,

document-management-attributes [3] IMPLICIT Document-Management-Attributes  
OPTIONAL }



```

Document-Characteristics ::= SET {
    document-application-profile CHOICE {
        [0] IMPLICIT INTEGER {
            group-4-facsimile (2)}
        [4] IMPLICIT OBJECT IDENTIFIER} OPTIONAL,
    doc-appl-profile-defaults [10] IMPLICIT Doc-Appl-Profile-Defaults OPTIONAL,
    document-architecture-class [1] IMPLICIT INTEGER {
        formatted (0),
        processable (1),
        formatted-processable (2)} OPTIONAL,
    content-architecture-classes [5] IMPLICIT SET OF OBJECT IDENTIFIER
        OPTIONAL,
    interchange-format-class [6] IMPLICIT INTEGER {
        if - a (0),
        if - b (1)} OPTIONAL,
    oda-version [8] IMPLICIT SEQUENCE {
        standard-or-recommendation Character-Data,
        publication-date Date-and-Time} OPTIONAL,
    non-basic-doc-characteristics [2] IMPLICIT Non-Basic-Doc-Characteristics
        OPTIONAL,
    non-basic-struc-characteristics [3] IMPLICIT Non-Basic-Struc-Characteristics
        OPTIONAL,
    additional-doc-characteristics [9] IMPLICIT Additional-Doc-Characteristics
        OPTIONAL}

Doc-Appl-Profile-Defaults ::= SET {
    document-architecture-defaults [0] IMPLICIT Document-Architecture-Defaults
        OPTIONAL,
    character-content-defaults [1] IMPLICIT Character-Content-Defaults OPTIONAL,
    raster-gr-content-defaults [2] IMPLICIT Raster-Gr-Content-Defaults OPTIONAL,
    geo-gr-content-defaults [3] IMPLICIT Geo-Gr-Content-Defaults OPTIONAL,
    -- the following tags are reserved for additional types of content defaults:
    -- [4] videotex, for use in conjunction with CCITT Recommendations
    -- [5] audio
    -- [6] dynamic-graphics
    external-capt-arch-defaults [7] IMPLICIT SEQUENCE OF EXTERNAL
        OPTIONAL}}

Document-Architecture-Defaults ::= SET {
    content-architecture-class [0] IMPLICIT Content-Architecture-Class OPTIONAL,
    content-type [1] IMPLICIT Content-Type OPTIONAL,
    page-dimensions [2] IMPLICIT Measure-Pair OPTIONAL,
    transparency [3] IMPLICIT Transparency OPTIONAL,
    colour [4] IMPLICIT Colour OPTIONAL,
    layout-path [5] IMPLICIT One-Of-Four-Angles OPTIONAL,
    medium-type [6] IMPLICIT Medium-Type OPTIONAL,
    block-alignment [7] IMPLICIT Block-Alignment OPTIONAL,
    border [8] IMPLICIT Border OPTIONAL,
    page-position [9] IMPLICIT Measure-Pair OPTIONAL,
    type-of-coding [10] IMPLICIT Type-of-Coding OPTIONAL}

Non-Basic-Doc-Characteristics ::= SET {
    profile-character-sets [5] IMPLICIT OCTET STRING OPTIONAL,
    comments-character-sets [1] IMPLICIT OCTET STRING OPTIONAL,
    alternative-repr-char-sets [6] IMPLICIT OCTET STRING OPTIONAL,

```

-- each of these octet strings represents a string of escape sequence

page-dimensions	[2]	IMPLICIT SET OF Dimension-Pair OPTIONAL,
medium-types	[8]	IMPLICIT SET OF Medium-Type OPTIONAL,
layout-paths	[21]	IMPLICIT SET OF One-Of-Four-Angles OPTIONAL,
transparencies	[22]	IMPLICIT SET OF Transparency OPTIONAL,
protections	[23]	IMPLICIT SET OF Protection OPTIONAL,
block-alignments	[24]	IMPLICIT SET OF Block-Alignment OPTIONAL,
fill-orders	[25]	IMPLICIT SET OF Fill-Order OPTIONAL,
colours	[26]	IMPLICIT SET OF Colours OPTIONAL,
borders	[27]	IMPLICIT SET OF Border OPTIONAL,
page-positions	[28]	IMPLICIT SET OF Measure-Pair OPTIONAL,
types-of-coding	[29]	IMPLICIT SET OF Type-of-Coding OPTIONAL,
char-presentation-features	[9]	IMPLICIT SET OF Char-Presentation-Feature OPTIONAL,
ra-gr-presentation-features	[4]	IMPLICIT SET OF Ra-Gr-Presentation-Feature OPTIONAL,
geo-gr-presentation-features	[12]	IMPLICIT SET OF Geo-Gr-Presentation-Feature OPTIONAL,

-- the following tags are reserved for additional types of presentation features:

- [13] videotex, for use in conjunction with CCITT Recommendations
- [14] audio
- [15] dynamic-graphics

character-coding-attributes	[16]	IMPLICIT SET OF Character-Coding-Attribute OPTIONAL,
ra-gr-coding-attributes	[3]	IMPLICIT SET OF Ra-Gr-Coding-Attribute OPTIONAL,
geo-gr-coding-attributes	[17]	IMPLICIT SET OF Geo-Gr-Coding-Attribute OPTIONAL,

-- the following tags are reserved for additional types of coding attributes:

- [18] videotex, for use in conjunction with CCITT Recommendations
- [19] audio
- [20] dynamic-graphics

ext-non-basic-pres-features	[10]	IMPLICIT SEQUENCE OF EXTERNAL OPTIONAL,
ext-non-basic-coding attributes	[11]	IMPLICIT SEQUENCE OF EXTERNAL OPTIONAL}

Non-Basic-Struc-Characteristics	::=	SET {
number-of-objects-per-page		[0] IMPLICIT INTEGER OPTIONAL}
Additional-Doc-Characteristics	::=	SET {
unit-scaling		[3] IMPLICIT SEQUENCE {INTEGER, INTEGER} OPTIONAL,
fonts-list		[2] IMPLICIT Fonts-List OPTIONAL}
Fonts-List	::=	SET OF SET {
font-identifier		INTEGER,
font-reference		Font-Reference}
Document-Management-Attributes	::=	SET {
document-description		[7] IMPLICIT Document-Description OPTIONAL,
dates-and-times		[0] IMPLICIT Dates-and-Times OPTIONAL,
originators		[1] IMPLICIT Originators OPTIONAL,
other-user-information		[2] IMPLICIT Other-User-Information OPTIONAL,
external-references		[3] IMPLICIT External-References OPTIONAL,
local-file-references		[4] IMPLICIT Local-File-References OPTIONAL,
content-attributes		[5] IMPLICIT Content-Attributes OPTIONAL,
security-information		[6] IMPLICIT Security-Information OPTIONAL}

```

Document-Description ::= SET {
    title [0] IMPLICIT Character-Data OPTIONAL,
    subject [1] IMPLICIT Character-Data OPTIONAL,
    document-type [2] IMPLICIT Character-Data OPTIONAL,
    abstract [3] IMPLICIT Character-Data OPTIONAL,
    keywords [4] IMPLICIT SET OF Character-Data OPTIONAL,
    document-reference [5] IMPLICIT Document-Reference OPTIONAL}

Character-Data ::= [APPLICATION 3] IMPLICIT OCTET STRING

-- string of characters from the sets designated by the attribute "profile character sets",
-- plus carriage return and line feed

Document-Reference ::= CHOICE {
    unique-reference OBJECT IDENTIFIER,
    descriptive-reference Character-Data}

Dates-and-Times ::= SET {
    document-date-and-time [0] IMPLICIT Date-and-Time OPTIONAL,
    creation-date-and-time [1] IMPLICIT Date-and-Time OPTIONAL,
    local-filing-date-and-time [2] IMPLICIT SEQUENCE OF Date-and-Time
        OPTIONAL,
    expiry-date-and-time [3] IMPLICIT Date-and-Time OPTIONAL,
    start-date-and-time [4] IMPLICIT Date-and-Time OPTIONAL,
    purge-date-and-time [5] IMPLICIT Date-and-Time OPTIONAL,
    release-date-and-time [6] IMPLICIT Date-and-Time OPTIONAL,
    revision-history [7] IMPLICIT SEQUENCE OF SET {
    revision-date-and-time [0] IMPLICIT Date-and-Time OPTIONAL,
    version-number [1] IMPLICIT Character-Data OPTIONAL
    revisors [2] IMPLICIT SET OF SET {
        names [0] IMPLICIT SET OF Personal-Name
            OPTIONAL,
        position [1] IMPLICIT Character-Data OPTIONAL,
        organization [2] IMPLICIT Character-Data OPTIONAL}
        OPTIONAL,
    version-reference [3] Document-Reference OPTIONAL,
    user-comments [4] IMPLICIT Character-Data OPTIONAL}
        OPTIONAL}

Date-and-Time ::= [APPLICATION 4] IMPLICIT PrintableString

-- string of characters representing a date and, optionally, a time in accordance with
-- ISO 8601

Originators ::= SET {
    organizations [0] IMPLICIT SET OF Character-Data OPTIONAL,
    preparers [1] IMPLICIT SEQUENCE OF SET {
    personal-name [0] IMPLICIT Personal-Name OPTIONAL,
    organization [1] IMPLICIT Character-Data OPTIONAL}
        OPTIONAL,
    owners [2] IMPLICIT SEQUENCE OF SET {
    personal-name [0] IMPLICIT Personal-Name OPTIONAL,
    organization [1] IMPLICIT Character-Data OPTIONAL}
        OPTIONAL,
    authors [3] IMPLICIT SEQUENCE OF SET {
    personal-name [0] IMPLICIT Personal-Name OPTIONAL,
    organization [1] IMPLICIT Character-Data OPTIONAL}
        OPTIONAL,

Personal-Name ::= [APPLICATION 6] IMPLICIT SET {
    surname [0] IMPLICIT Character-Data,
    givenname [1] IMPLICIT Character-Data OPTIONAL,
    initials [2] IMPLICIT Character-Data OPTIONAL,
    title [3] IMPLICIT Character-Data OPTIONAL}

```

```

Other-User-Information ::= SET {
  copyright [0] IMPLICIT SET OF SET {
  copyright-information [0] IMPLICIT SET OF Character-Data
                                OPTIONAL,
                                OPTIONAL}
  copyright-dates [1] IMPLICIT SET OF Date-and-Time
                                OPTIONAL,
                                OPTIONAL}
  status [1] IMPLICIT Character-Data OPTIONAL,
  user-specific-codes [2] IMPLICIT SET OF Character-Data OPTIONAL,
  distribution-list [3] IMPLICIT SEQUENCE OF SET {
  personal-name [0] IMPLICIT Personal-Name OPTIONAL,
  organization [1] IMPLICIT Character-Data OPTIONAL}
                                OPTIONAL,
  additional-information [5] ANY OPTIONAL}

External-References ::= SET {
  references-to-other-documents [0] IMPLICIT SET OF Document-Reference
                                OPTIONAL,
  superseded-documents [1] IMPLICIT SET OF Document-Reference
                                OPTIONAL}

Local-File-Reference ::= SET OF SET {
  file-name [0] IMPLICIT Character-Data OPTIONAL,
  location [1] IMPLICIT Character-Data OPTIONAL,
  user-comments [2] IMPLICIT Character-Data OPTIONAL}

Content-Attributes ::= SET {
  document-size [1] IMPLICIT INTEGER OPTIONAL,
  number-of-pages [2] IMPLICIT INTEGER OPTIONAL,
  languages [4] IMPLICIT INTEGER OF Character-Data
                                OPTIONAL}

Security-Information ::= SET {
  authorization CHOICE {
  person [0] IMPLICIT Personal-Name,
  organization [4] IMPLICIT Character-Data} OPTIONAL,
  security-classification [1] IMPLICIT Character-Data OPTIONAL,
  access-rights [2] IMPLICIT SET OF Character-Data OPTIONAL}

END

```

## 5.7 Identifiers and expressions

Identifiers-and-Expressions { 2 8 1 5 7 }

```
DEFINITIONS ::= BEGIN
```

```
EXPORTS Content-Portion-Identifier, Object-or-Class-Identifier,
Style-Identifier, Layout-Category-Name,
Resource-Name, Binding-Name,
Construction-Expression, Object-Id-Expression,
Numeric-Expression, String-Expression;
```

```
IMPORTS Layout-Object-Type
FROM Layout-Descriptors -- see 5.8
Logical-Object-Type
FROM Logical-Descriptors; -- see 5.9
```

Content-Portion-Identifier	::=	[APPLICATION 0] IMPLICIT PrintableString
		<i>-- only digits and space are used in the present version of the standard; other characters -- are reserved for extensions</i>
Object-or-Class-Identifier	::=	[APPLICATION 1] IMPLICIT PrintableString
		<i>-- only digits and space are used in the present version of the standard; other characters -- are reserved for extensions; a "null" value is represented by an empty string</i>
Style-Identifier	::=	[APPLICATION 5] IMPLICIT PrintableString
		<i>-- only digits and space are used in the present version of the standard, other characters -- are reserved for extensions; a "null" value is represented by an empty string</i>
Layout-Category-Name	::=	PrintableString
		<i>-- a "null" value is represented by an empty string</i>
Resource-Name	::=	PrintableString
Binding-Name	::=	PrintableString
Construction-Expression	::=	CHOICE { construction-type single-term-construction [3] Construction-Term }
Construction-Type	::=	CHOICE { [0] IMPLICIT Term-Sequence, [1] IMPLICIT Term-Sequence, [2] IMPLICIT Term-Sequence }
Term-Sequence	::=	SEQUENCE OF Construction-Term
Construction-Term	::=	CHOICE { [0] Construction-Factor, [1] Construction-Factor, [2] Construction-Factor, [3] Construction-Factor }
Construction-Factor	::=	CHOICE { Object-Class-Identifier, Construction-Type }
Object-Id-Expression	::=	CHOICE { [0] IMPLICIT NULL, [1] Object-Id-expression, [3] Object-Id-Expression, [4] Current-Instance-Function }
Numeric-Expression	::=	CHOICE { [0] IMPLICIT INTEGER, [1] Numeric-Expression, [2] Numeric-Expression, [3] CHOICE { Object-or-Class-Identifier, Object-Id-Expression}, [4] IMPLICIT Binding-Reference }
Binding-Reference	::=	SET { CHOICE { Object-or-Class-Identifier, Binding-Selection-Function}, }

```

binding-identifier                               Binding-Name}

Binding-Selection-Function ::= CHOICE {
  current-object-function      [0]  IMPLICIT NULL,
  preceding-function           [1]  Object-Id-Expression,
  superior-function            [3]  Object-Id-Expression,
  current-instance-function    [4]  Current-Instance-Function}

Current-Instance-Function ::= SEQUENCE {
  first-parameter             CHOICE {
    identifier                [0]  IMPLICIT Object-or-Class-Identifier,
    layout-object-type        [1]  IMPLICIT Layout-Object-Type,
    logical-object-type       [2]  IMPLICIT Logical-Object-Type},
  second-parameter           CHOICE {
    identifier                Object-or-Class-Identifier,
    expression                Object-Id-Expression}}

String-Expression ::= SEQUENCE OF Atomic-String-Expression

Atomic-String-Expression ::= CHOICE {
  string-literal              [0]  IMPLICIT OCTET STRING,
  binding-reference           [2]  IMPLICIT Binding-Reference,
  make-string-application     [3]  Numeric-Expression,
  upper-alpha-application     [4]  Numeric-Expression,
  lower-alpha-application     [5]  Numeric-Expression,
  upper-roman-application     [6]  Numeric-Expression,
  lower-roman-application     [7]  Numeric-Expression}

END

```

## 5.8 *Layout descriptors*

Layout-Descriptors { 2 8 1 5 8 }

DEFINITIONS ::= BEGIN

EXPORTS Layout-Object-Descriptor, Layout-Class-Descriptor,  
 Layout-Object-Type, Transparency, Comment-String,  
 Binding-Pair, One-Of-Four-Angles, Measure-Pair,  
 Dimension-Pair, Medium-Pair, Colour, Border;

IMPORTS Object-or-Class-Identifier, Style-Identifier,  
 Layout-Category-Name, Resource-Name, Binding-Name,  
 Construction-Expression, Object-Id-Expression,  
 Numeric-Expression, String-Expression  
 FROM Identifiers-and-Expressions -- see 5.7  
 Presentation-Attributes  
 FROM Style-Descriptors -- see 5.10  
 Default-Value-Lists-Layout  
 FROM Default-Value-Lists; -- see 5.11

```

Position-Spec ::= SET {
  offset [0] IMPLICIT SET {
    leading [0] IMPLICIT INTEGER OPTIONAL,
    trailing [1] IMPLICIT INTEGER OPTIONAL,
    left-hand [2] IMPLICIT INTEGER OPTIONAL,
    right-hand [3] IMPLICIT INTEGER OPTIONAL}
    OPTIONAL,
  separation [1] IMPLICIT SET {
    leading [0] IMPLICIT INTEGER OPTIONAL,
    trailing [1] IMPLICIT INTEGER OPTIONAL,
    centre [2] IMPLICIT INTEGER OPTIONAL}
    OPTIONAL,
  alignment [2] IMPLICIT INTEGER {

```

fill-order	[3]	right-hand (0), centred (1), left-hand (2)} OPTIONAL, IMPLICIT INTEGER { normal (0), reverse (1)} OPTIONAL}
Dimension-Pair horizontal Vertical fixed variable	::=	SEQUENCE { [0] IMPLICIT INTEGER, CHOICE { [0] IMPLICIT INTEGER, [1] IMPLICIT INTEGER}}}
Dimension-Spec horizontal vertical	::=	SEQUENCE { Dimension, Dimension}
Dimension fixed rule-a minimum maximum rule-b minimum maximum maximum-size	::=	CHOICE { [0] IMPLICIT INTEGER, [1] IMPLICIT SET { [0] IMPLICIT INTEGER OPTIONAL, [1] IMPLICIT INTEGER OPTIONAL}, [2] IMPLICIT SET { [0] IMPLICIT INTEGER OPTIONAL, [1] IMPLICIT INTEGER OPTIONAL}, [3] IMPLICIT NULL}
Transparency	::=	INTEGER {transparent (0), opaque (1)}
Comment-String	::=	OCTET STRING  <i>-- string of characters from the sets designated by the document profile attribute "comments -- character sets", plus code extension control functions, carriage return and line feed</i>
Binding-Pair binding-identifier binding-value	::=	SET { [0] IMPLICIT Binding-Name, CHOICE { [1] Object-Id-Expression, [2] Numeric-Expression, [3] String-Expression, [4] IMPLICIT Object-or-Class Identifier, [5] IMPLICIT INTEGER, [6] IMPLICIT OCTET STRING}}
One-Of-Four-Angles	::=	INTEGER {d0 (0), d90 (1), d180 (2), d270 (3)}
Measure-Pair horizontal vertical	::=	SEQUENCE { [0] IMPLICIT INTEGER, [0] IMPLICIT INTEGER}
Medium-Type nominal-page-size side-of-sheet	::=	SEQUENCE { Measure-Pair OPTIONAL, INTEGER {unspecified (0), recto (1), verso (2)} OPTIONAL}
Colour	::=	INTEGER {colourless (0), white (1)}
Border left-hand-edge right-hand-edge trailing-edge leading-edge	::=	SET { [0] IMPLICIT Border-Edge OPTIONAL, [1] IMPLICIT Border-Edge OPTIONAL, [2] IMPLICIT Border-Edge OPTIONAL, [3] IMPLICIT Border-Edge OPTIONAL}
Border-Edge line-width	::=	SET { [0] IMPLICIT INTEGER OPTIONAL,

line-type	[1]	IMPLICIT INTEGER { invisible (0), solid (1), dashed (2), dot (3), dash-dot (4), dash-dot-dot (5)} OPTIONAL,
freespace-width	[2]	IMPLICIT INTEGER OPTIONAL}

-- a "null" border edge is represented by an empty set

Layout-Object-Descriptor	::=	SEQUENCE {
object-type		Layout-Object-Type OPTIONAL,
descriptor-body		Layout-Object-Descriptor-Body OPTIONAL}

Layout-Object-Type	::=	INTEGER { document-layout-root (0), page-set (1), page (2), frame (3), block (4)}
--------------------	-----	---

Layout-Object-Descriptor-Body	::=	SET {
object-identifier		Object-or-Class-Identifier OPTIONAL,
subordinates	[0]	IMPLICIT SEQUENCE OF NumericString OPTIONAL,
content-portions	[1]	IMPLICIT SEQUENCE OF NumericString OPTIONAL,
object-class	[2]	IMPLICIT Object-or-Class-Identifier OPTIONAL,
position	[3]	IMPLICIT Measure-pair OPTIONAL,
dimensions	[4]	IMPLICIT Dimension-Pair OPTIONAL,
transparency	[5]	IMPLICIT Transparency OPTIONAL,
presentation-attributes	[6]	IMPLICIT Presentation-Attributes OPTIONAL,
default-value-lists	[7]	IMPLICIT Default-Value-Lists-Layout OPTIONAL,
user-readable-comments	[8]	IMPLICIT Comment-String OPTIONAL,
bindings	[9]	IMPLICIT SET OF Binding-Pair OPTIONAL,
layout-path	[11]	IMPLICIT One-Of-Four-Angles OPTIONAL,
imaging-order	[12]	IMPLICIT SEQUENCE OF NumericString OPTIONAL,
permitted-categories	[13]	IMPLICIT SET OF Layout-Category-Name OPTIONAL,

-- a "null" value is represented by an empty set

user-visible-name	[14]	IMPLICIT Comment-String OPTIONAL,
page-position	[15]	IMPLICIT Measure-Pair OPTIONAL,
medium-page	[16]	IMPLICIT Medium-Type OPTIONAL,
presentation-style	[17]	IMPLICIT Style-Identifier OPTIONAL,
balance	[21]	IMPLICIT SET OF Object-or-Class-Identifier OPTIONAL,

-- a "null" value is represented by an empty set

colour	[22]	IMPLICIT Colour OPTIONAL,
border	[23]	IMPLICIT Border OPTIONAL,
application-comments	[25]	IMPLICIT OCTET STRING OPTIONAL}

Layout-Class-Descriptor	::=	SEQUENCE {
object-type		Layout-Object-Type,
descriptor-body		Layout-Class-Descriptor-Body }

Layout-Class-Descriptor-Body	::=	SET {
object-class-identifier		Object-or-Class-Identifier,
generator-for-subordinates	[0]	Construction-Expression OPTIONAL,
content-portions	[1]	IMPLICIT SEQUENCE OF NumericString OPTIONAL,



```

position
  fixed-position
  variable-position
  dimensions
transparency
presentation-attributes
default-value-lists
user-readable-comments
bindings
content-generator
layout-path
permitted-categories

```

CHOICE {

[3] IMPLICIT Measure-Pair,

[26] IMPLICIT Position-Spec} OPTIONAL,

[4] IMPLICIT Dimension-Spec OPTIONAL,

[5] IMPLICIT Transparency OPTIONAL,

[6] IMPLICIT Presentation-Attributes OPTIONAL,

[7] IMPLICIT Default-Value-Lists-Layout OPTIONAL,

[8] IMPLICIT Comment-String OPTIONAL,

[9] IMPLICIT SET OF Binding-Pair OPTIONAL,

[10] IMPLICIT String-Expression OPTIONAL,

[11] IMPLICIT One-Of-Four-Angles OPTIONAL,

[13] IMPLICIT SET OF Layout-Category-Name  
OPTIONAL,

-- a "null" value is represented by an empty set

```

user-visible-name
page-position
medium-type
presentation-style
logical-source
balance

```

[14] IMPLICIT Comment-String OPTIONAL,

[15] IMPLICIT Measure-Pair OPTIONAL,

[16] IMPLICIT Medium-Type OPTIONAL,

[17] IMPLICIT Style-Identifier OPTIONAL,

[18] IMPLICIT Object-or-Class-Identifier OPTIONAL,

[21] IMPLICIT SET OF Object-Id-Expression  
OPTIONAL,

-- a "null" value is represented by an empty set

```

colour
border
resource
application-comments

```

[22] IMPLICIT Colour OPTIONAL,

[23] IMPLICIT Border OPTIONAL,

[24] IMPLICIT Resource-Name OPTIONAL,

[25] IMPLICIT OCTET STRING OPTIONAL}

END

## 5.9 Logical descriptors

Logical-Descriptors { 2 8 1 5 9 }

DEFINITIONS ::= BEGIN

EXPORTS Logical-Object-Descriptor, Logical-Class-Descriptor,  
Logical-Object-Type, Protection;

IMPORTS Object-or-Class-Identifier, Style-Identifier,  
Resource-Name, Construction-Expression, String-Expression  
FROM Identifiers-and-Expressions -- see 5.7  
Comment-String, Binding-pair  
FROM Layout-Descriptors -- see 5.8  
Presentation-Attributes  
FROM Style-Descriptors -- see 5.10  
Default-Value-Lists-Logical  
FROM Default-Value-Lists; -- see 5.11

Logical-Object-Descriptor ::= SEQUENCE {  
object-type  
descriptor-body  
Logical-Object-Type OPTIONAL,  
Logical-Object-Descriptor-Body OPTIONAL}

Logical-Object-Type ::= INTEGER {document-logical-root (0),  
composite-logical-object (1),  
basic-logical-object (2)}

```

Logical-Object-Descriptor-Body ::= SET {
    object-identifier
    subordinates
                                [0]   IMPLICIT SEQUENCE OF NumericString
                                        OPTIONAL,
    content-portions
                                [1]   IMPLICIT SEQUENCE OF NumericString
                                        OPTIONAL,
    object-class
    presentation-attributes
                                [2]   IMPLICIT Object-or-Class-Identifier OPTIONAL,
                                [6]   IMPLICIT Presentation-Attributes OPTIONAL,

    -- only for use for the attribute content-architecture-class, the content architecture
    -- specific attributes can only be referenced by use of presentation style

    default-value-lists
                                [7]   IMPLICIT Default-Value-Lists-Logical OPTIONAL,
    user-readable-comments
                                [8]   IMPLICIT Comment-String OPTIONAL,
    bindings
                                [9]   IMPLICIT SET OF Binding-Pair OPTIONAL,
    content-generator
                                [10]  IMPLICIT String-Expression OPTIONAL,
    user-visible-name
                                [14]  IMPLICIT Comment-String OPTIONAL,
    presentation-style
                                [17]  IMPLICIT Style-Identifier OPTIONAL,
    layout-style
                                [19]  IMPLICIT Style-Identifier OPTIONAL,
    protection
                                [20]  IMPLICIT Protection OPTIONAL,
    application-comments
                                [25]  IMPLICIT OCTET STRING OPTIONAL}

Logical-Class-Descriptor ::= SEQUENCE {
    object-type
    descriptor-body
                                Logical-Object-Type,
                                Logical-Class-Descriptor-Body}

Logical-Class-Descriptor-Body ::= SET {
    object-class-identifier
    generator-for-subordinates
    content-portions
                                [0]   Construction-Expression OPTIONAL,
                                [1]   IMPLICIT SEQUENCE OF NumericString
                                        OPTIONAL,
    presentation-attributes
                                [6]   IMPLICIT Presentation-Attributes OPTIONAL,

    -- only for use for the attribute content-architecture-class, the content architecture
    -- specific attributes can only be referenced by use of presentation style

    default-value-lists
                                [7]   IMPLICIT Default-Value-Lists-Logical OPTIONAL,
    user-readable-comments
                                [8]   IMPLICIT Comment-String OPTIONAL,
    bindings
                                [9]   IMPLICIT SET OF Binding-Pair OPTIONAL,
    content-generator
                                [10]  IMPLICIT String-Expression OPTIONAL,
    user-visible-name
                                [14]  IMPLICIT Comment-String OPTIONAL,
    presentation-style
                                [17]  IMPLICIT Style-Identifier OPTIONAL,
    layout-style
                                [19]  IMPLICIT Style-Identifier OPTIONAL,
    protection
                                [20]  IMPLICIT Protection OPTIONAL,
    resource
                                [24]  IMPLICIT Resource-Name OPTIONAL,
    application-comments
                                [25]  IMPLICIT OCTET STRING OPTIONAL}

Protection ::= INTEGER {unprotected (0), protected (1)}

```

END

## 5.10 Style descriptors

Style-Descriptors { 2 8 1 5 10 }

DEFINITIONS ::= BEGIN

EXPORTS Presentation-Style-Descriptor, Presentation-Attributes,  
Content-Type, Content-Architecture-Class,  
Layout-Style-Descriptor, Fill-Order, Block-Alignment;

```

IMPORTS Object-or-Class-Identifier, Style-Identifier,
Layout-Category-Name, Object-Id-Expression,
FROM Identifiers-and-Expressions -- see 5.7
Comment-String, Transparency, Colour, Border,
Layout-Object-Type
FROM Layout-Descriptors -- see 5.8
Character-Attributes
FROM Character-Presentation-Attributes { 2 8 1 6 2 } -- see Recommendation T.416
Raster-Graphics-Attributes
FROM Raster-Gr-Presentation-Attributes { 2 8 1 7 2 } -- see Recommendation T.417
Geometric-Graphics-Attributes
FROM Geo-Gr-Presentation-Attributes { 2 8 1 8 2 } -- see Recommendation T.418

Presentation-Style-Descriptor ::= SET {
    style-identifier Style-Identifier,
    user-readable-comments [0] IMPLICIT Comment-String OPTIONAL,
    user-visible-name [1] IMPLICIT Comment-String OPTIONAL,
    transparency [2] IMPLICIT Transparency OPTIONAL,
    presentation-attributes [3] IMPLICIT Presentation-Attributes OPTIONAL,
    colour [4] IMPLICIT Colour OPTIONAL,
    border [5] IMPLICIT Border OPTIONAL}

Presentation-Attributes ::= SET {
    content-type Content-Type OPTIONAL,
    content-architecture-class Content-Architecture-Class OPTIONAL,
    character-attributes [0] IMPLICIT Character-Attributes OPTIONAL,
    raster-graphics-attributes [1] IMPLICIT Raster-Graphics-Attributes OPTIONAL,
    geometric-graphics-attributes [2] IMPLICIT Geometric-Graphics-Attributes
                                OPTIONAL,

-- the following tags are reserved for additional types of presentation attributes:
-- [3] videotex for use in conjunction with CCITT Recommendations
-- [4] audio
-- [5] dynamic-graphics

    ext-cont-arch-pres-attributes [6] IMPLICIT SEQUENCE OF EXTERNAL
                                OPTIONAL}

Content-Type ::= [APPLICATION 2] IMPLICIT INTEGER {
    formatted-raster-graphics (1)}

Content-Architecture-Class ::= OBJECT IDENTIFIER

Layout-Style-Descriptor ::= SET {
    style-identifier Style-Identifier,
    user-readable-comments [0] IMPLICIT Comment-String OPTIONAL,
    user-visible-name [1] IMPLICIT Comment-String OPTIONAL,
    layout-directives [4] IMPLICIT Layout-Directives OPTIONAL}

Layout-Directives ::= SET {
    indivisibility CHOICE {
        to-layout-object-class [0] IMPLICIT Object-or-Class-Identifier,
        to-layout-category [1] IMPLICIT Layout-Category-Name,
        to-layout-object-type [2] IMPLICIT Layout-Object-Type,
        null [15] IMPLICIT NULL} OPTIONAL,
    separation [3] IMPLICIT Separation OPTIONAL,
    offset [4] IMPLICIT Offset OPTIONAL,
    fill-order [5] IMPLICIT Fill-Order OPTIONAL,
    concatenation [6] IMPLICIT Concatenation OPTIONAL,
    new-layout-object CHOICE {
        to-layout-object-class [7] IMPLICIT Object-or-Class-Identifier,
        to-layout-category [8] IMPLICIT Layout-Category-Name,
        to-layout-object-type [9] IMPLICIT Layout-Object-Type,
        null [16] IMPLICIT NULL} OPTIONAL,
    same-layout-object [10] IMPLICIT Same-Layout-Object OPTIONAL,

```

```

layout-object-class      [11]  IMPLICIT Object-or-Class-Identifier OPTIONAL,
layout-category         [12]  IMPLICIT Layout-Category-Name OPTIONAL,
synchronization        [13]  IMPLICIT Object-or-Class-Identifier,
                        [17]  Object-Id-Expression,
                        [18]  IMPLICIT NULL} OPTIONAL,
block-alignment         [14]  IMPLICIT Block-Alignment OPTIONAL}

Separation              ::=  SET {
  leading               [0]  IMPLICIT INTEGER OPTIONAL,
  trailing              [1]  IMPLICIT INTEGER OPTIONAL,
  centre                [2]  IMPLICIT INTEGER OPTIONAL}

Offset                  ::=  SET {
  right-hand            [0]  IMPLICIT INTEGER OPTIONAL,
  left-hand             [1]  IMPLICIT INTEGER OPTIONAL,
  trailing              [2]  IMPLICIT INTEGER OPTIONAL,
  leading               [3]  IMPLICIT INTEGER OPTIONAL}

Fill-Order              ::=  INTEGER {normal (0), reverse (1)}

Concatenation           ::=  INTEGER {non-concatenated (0), concatenated (1)}
Same-Layout-Object     ::=  SET {
  to-logical-object    CHOICE {
                        [0]  IMPLICIT Object-or-Class-Identifier,
                        [4]  Object-Id-Expression,
                        [5]  IMPLICIT NULL},
  to-layout-object-class [1]  IMPLICIT Object-or-Class-Identifier,
  to-layout-category    [2]  IMPLICIT Layout-Category-Name,
  to-layout-object-type [3]  IMPLICIT Layout-Object-Type} OPTIONAL}

Block-Alignment         ::=  INTEGER {
  right-hand (0), left-hand (1),
  centred (2), null (3)}

                        END

```

## 5.11 *Default value lists*

Default-Value-Lists { 2 8 1 5 11 }

```
DEFINITIONS ::= BEGIN
```

```
EXPORTS Default-Value-Lists-Logical, Default-Value-Lists-Layout;
```

```
IMPORTS Style-Identifier, Layout-Category-Name
FROM Identifier-and-Expressions -- see 5.7
Measure-Pair, One-Of-Four-Angles, Medium-Type,
Dimension-Pair, Transparency, Colour, Border
FROM Layout-Descriptors -- see 5.8
Protection FROM Logical-Descriptors -- see 5.9
Presentation-Attributes
FROM Style-Descriptors; -- see 5.10
```

```
Default-Value-Lists-Layout ::= SET {
  page-attributes      [2]  IMPLICIT Page-Attributes OPTIONAL,
  frame-attributes     [3]  IMPLICIT Frame-Attributes OPTIONAL,
  block-attributes     [4]  IMPLICIT Block-Attributes OPTIONAL}

```

```

Default-Value-Lists-Logical      ::= SET {
    composite-logical-attributes  [5]  IMPLICIT Composite-Logical-Attributes
                                     OPTIONAL,
    basic-logical-attributes      [6]  IMPLICIT Basic-Logical-Attributes OPTIONAL}

Page-Attributes                  ::= SET {
    dimensions                     < Attribute OPTIONAL,
    transparency                   < Attribute OPTIONAL,
    presentation-attributes        < Attribute OPTIONAL,
    page-position                  < Attribute OPTIONAL,
    medium-page                   < Attribute OPTIONAL,
    presentation-style             < Attribute OPTIONAL,
    colour                        < Attribute OPTIONAL,

Frame-Attributes                 ::= SET {
    position                       < Attribute OPTIONAL,
    dimensions                     < Attribute OPTIONAL,
    transparency                   < Attribute OPTIONAL,
    layout-path                   < Attribute OPTIONAL,
    permitted-categories           < Attribute OPTIONAL,
    colour                        < Attribute OPTIONAL,
    border                        < Attribute OPTIONAL}

Block-Attributes                 ::= SET {
    position                       < Attribute OPTIONAL,
    dimensions                     < Attribute OPTIONAL,
    transparency                   < Attribute OPTIONAL,
    presentation-attributes        < Attribute OPTIONAL,
    presentation-style             < Attribute OPTIONAL,
    colour                        < Attribute OPTIONAL,
    border                        < Attribute OPTIONAL}

Composite-Logical-Attributes     ::= SET {
    protection                     < Attribute OPTIONAL,
    layout-style                   < Attribute OPTIONAL}

Basic-Logical-Attributes         ::= SET {
    presentation-attributes        < Attribute OPTIONAL,

-- only for use for the attribute content-architecture-class, the content architecture
-- specific attributes can only be referenced by use of presentation style

    protection                     < Attribute OPTIONAL,
    presentation-style             < Attribute OPTIONAL,
    layout-style                   < Attribute OPTIONAL}

Attribute                        ::= CHOICE {
    position                       [0]  IMPLICIT Measure-Pair,
    dimensions                     [1]  IMPLICIT Dimension-Pair,
    transparency                   [2]  IMPLICIT Transparency,
    presentation-attributes        [3]  IMPLICIT Presentation-Attributes,
    layout-path                   [4]  IMPLICIT One-Of-Four-Angles,
    page-position                  [5]  IMPLICIT Measure-Pair,
    medium-type                   [6]  IMPLICIT Medium-Type,
    permitted-categories           [7]  IMPLICIT SET OF Layout-Category-Name,
    protection                     [8]  IMPLICIT Protection,
    presentation-style             [9]  IMPLICIT Style-Identifier,
    layout-style                   [10] IMPLICIT Style-Identifier,
    colour                        [11]  IMPLICIT Colour,
    border                        [12]  IMPLICIT Border}

```

END

5.12 *Text units*

Text-Units { 2 8 1 5 12 }

DEFINITIONS ::= BEGIN

EXPORTS Text-Unit, Type-Of-Coding;

IMPORTS Content-Portion-Identifier  
 FROM Identifiers-and-Expressions -- see 5.7  
 Character-Coding-Attributes  
 FROM Character-Coding-Attributes { 2 8 1 6 3 } -- see Recommendation T.416  
 Raster-Gr-Coding-Attributes  
 FROM Raster-Gr-Coding-Attributes { 2 8 1 7 3 } -- see Recommendation T.417  
 Geo-Gr-Coding-Attributes  
 FROM Geo-Gr-Coding-Attributes { 2 8 1 8 3 } -- see Recommendation T.418

Text-Unit ::= SEQUENCE {  
 content-portion-attributes Content-Portion-Attributes OPTIONAL,  
 content-information Content-Information }

Content-Portion-Attributes ::= SET {  
 content-identifier-layout Content-Portion-Identifier OPTIONAL,  
 content-identifier-logical [4] IMPLICIT Content-Portion-Identifier OPTIONAL,  
 type-of-coding Type-Of-Coding OPTIONAL,  
 coding-attributes CHOICE {  
 character-coding-attributes [1] IMPLICIT Character-Coding-Attributes,  
 raster-gr-coding-attributes [2] IMPLICIT Raster-Gr-Coding-Attributes,  
 geo-gr-coding-attributes [7] IMPLICIT Geo-Gr-Coding-Attributes,  
 videotex-coding-attributes [8] IMPLICIT Videotex-Coding-Attributes,

-- the following tags are reserved for additional types of coding attributes:

-- [9] audio

-- [10] dynamic-graphics

ext-contr-arch-coding-attributes [11] IMPLICIT EXTERNAL } OPTIONAL,  
 alternative-representation [3] IMPLICIT Alternative-Representation OPTIONAL }

Content-Information ::= OCTET STRING

Type-Of-Coding ::= CHOICE {  
 [0] IMPLICIT INTEGER {t6 (1)},  
 [6] IMPLICIT OBJECT IDENTIFIER }

Alternative-Representation ::= OCTET STRING

-- string of characters from the sets designated by the document profile attribute

-- "alternative representation character sets", plus carriage return and line feed

END

ANNEX A  
(to Recommendation T.415)

**Coded representation**

(Informative)

This Annex is a summary of the basic encoding rules for the abstract syntax notation ASN.1 defined in Recommendation X.209.

The coded representation of each data structure or data item that constitutes, or constitutes part of, a descriptor or a text unit consists of a type field, a length field and a value field.

If the data item concerned is an elementary data item, then the type field specifies the elementary data type, the length field specifies the length of the value field, and the value field represents the value of the data item.

If the data structure or data item concerned is not elementary, then the type field identifies the attribute or group of attributes corresponding to the data structure or data item, the length field specifies the length of the value field, and the value field consists of one or more triplets, each of which is composed of a type field, a length field and a value field, representing the subordinate data structures and data items.

The *type field* (which is called "identifier octets" in Recommendation X.209) consists of one or more bytes. The bits of the first byte are used as follows:

bits 8 and 7:	tag class	(00: universal, 01: application, 10: context-specific, 11: private);
bit 6:	contents encoding form	(0: simple, 1: structured);
bits 5 to 1:	00000 to 11110: tag number; 11111 indicates a multi-octet type field.	

The following tag numbers for universal tags have been assigned in Recommendations X.208 and X.209.

Built-in data types	<i>Defined data types</i>
0: end-of-contents	18: numeric string
1: Boolean	19: printable string
2: integer	20: teletex string
3: bit string	21: videotex string
4: octet string	22: IA5 string
5: null	23: UTC time
6: object identifier	24: generalized time
7: object descriptor	25: graphic character string
8: external	26: general string
9: real	27: visible string
10: enumerated	
11: encrypted	
16: sequence	
17: set	

Data items of type end-of-contents, Boolean, integer or null are simple (elementary data items). Sequences and sets are structured (data structures with subordinate data items). Data items of type bit string, octet string or any of the defined data types can be either simple or structured.

The length field consists of one or more bytes. It takes one of three forms: short, long and indefinite. The bits of the first byte are used as follows:

- bit 8: length field form (0: short, 1: long or indefinite);
- bits 7 to 1: if bit 8 = 0: number of bytes of the value field;
- if bit 8 = 1: number of bytes of the length field following the first byte; 000000 indicates the indefinite form of the length field.

A data structure or data item with an indefinite length field must be structured and must be terminated by a delimiter consisting of an end-of-contents (EOC) item. An EOC item consists of two bytes: a type field of one byte and a length field of one byte. Both are equal to zero. An EOC item has no value field.

## ANNEX B

(to Recommendation T.415)

### Application class tag assignments

(Informative)

The application class tag assignments made in various sections of this Recommendation are summarized in the table below.

Tag	Data type	Paragraph
APPLICATION 0	Content-Portion-Identifier	5.7
APPLICATION 1	Object-or-Class-Identifier	5.7
APPLICATION 2	Content-Type	5.10
APPLICATION 3	Character-Data	5.6
APPLICATION 4	Date-and-Time	5.6
APPLICATION 5	Style-Identifier	5.7
APPLICATION 6	Personal-Name	5.6



ANNEX C  
(to Recommendation T.415)

**Summary of object identifiers**

(Informative)

Values of ASN.1 object identifiers are assigned in various sections in this Recommendation. These are summarized below.

Object identifier value	Meaning	Paragraph
{ 2 8 0 0 }	Identifies external data type	5.1
{ 2 8 1 5 5 }	Identifies module; interchange data elements	5.5
{ 2 8 1 5 6 }	Identifies module1; document profile descriptor	5.6
{ 2 8 1 5 7 }	Identifies module; identifiers and expressions	5.7
{ 2 8 1 5 8 }	Identifies module; layout descriptors	5.8
{ 2 8 1 5 9 }	Identifies module; logical descriptors	5.9
{ 2 8 1 5 10 }	Identifies module; style descriptors	5.10
{ 2 8 1 5 11 }	Identifies module; default value lists	5.11
{ 2 8 1 5 12 }	Identifies module; text units	5.12

ANNEX D  
(to Recommendation T.415)

**Examples**

(Informative)

The first four examples in this annex consist of data streams representing various versions of the sample document in Annex B of Recommendation T.412.

Four versions of the sample document are considered:

- *Example 1*: specific layout structure only.

This example is specified by B.4.1, including Figure B-7/T.412 and Table B-1/T.412.

- *Example 2*: specific logical structure only.

This example is specified by B.4.2, including Figure B-8/T.412 and Tables B-2/T.412 and B-3/T.412.

- *Example 3*: specific logical structure, generic logical structure and generic layout structure.  
This example is specified by B.5, including Figures B-8/T.412, B-9/T.412, B-10/T.412 and Tables B-4/T.412, B-5/T.412, B-6/T.412 and B-7/T.412.
- *Example 4*: specific layout structure only, as generated from the structures in example 3. This example is specified by B.6, including Figure B-11/T.412 and Table B-8/T.412.

The four examples are presented in D.1, D.2, D.3 and D.4 below. The data stream constituting each example is shown in two forms of notation:

- a) the ASN.1 notation for data values defined in Recommendation T.208;
- b) the hexadecimal notation of the encoded data values, after applying the basic encoding rules defined in Recommendation T.209.

The ASN.1 notation is shown on the left and the hexadecimal notation is shown on the right of each page. The symbol LL represents a length field of which the length is unknown.

In addition, D.5 presents an example consisting of a data stream representing the sample document profile in Annex C of Recommendation T.414.

D.1 *Example 1: Sample document from Annex B of Recommendation T.412; specific layout structure only*

```

document-profile{                               A030
  specific-layout-structure "1",                 810130
  document-characteristics {                    A22B
    document-architecture-class formatted,      810100
    content-architecture-classes{              A512
      {2 8 2 6 0},                             060458020600
      {2 8 2 7 0},                             060458020700
      {2 8 2 8 0}},                             060458020800
    interchange-format-class if-b,              860101
    oda-version "ISO 8613: 1988"}},            880F49534F..31393838
layout-object{                                  A21B
  object-type document-layout-root,             020100
  descriptor-body{                              3116
    object-identifier "1",                      410131
    user-visible-name "Letter",                 8E064C6574746572
    subordinates{                              A009
      "0", "1", "2"}},                          120130120131120132
layout-object{                                  A232
  object-type page,                             020102
  descriptor-body{                              312D
    object-identifier "1 0",                    4103312030
    user-visible-name "Header Page",            8E0B4865616465720D50616765
    dimensions{                                A408
      horizontal 9920,                          800226C0
      vertical fixed 14030},                    800236CE
    subordinates{                              A00F
      "0", "1", "2", "3", "4"}},                120130120131120132120133120134
layout-object{                                  A238
  object-type block,                            020104
  descriptor-body{                              3133
    object-identifier "1 0 0",                  41053120302030
    user-visible-name "Logo",                  8E044C6F676F
    position{                                  A308
      horizontal 710,                            800202C6
      vertical 730},                            800202DA
    dimensions{                                A408
      horizontal 3685,                          80020E65
      vertical fixed 2495},                    800209BF
    presentation-attributes{                   A60B
      content-architecture-class {2 9 2 7 0},  060458020700
      raster-graphics-attributes{              A103
        pel-transmission-density 5}},          820105

```

<pre>         content-portions{"0"}}, text-unit{   content-portion-attributes{     content-identifier-layout "1 0 0 0"},     raster-gr-coding-attributes{       number-of-pels-per-line 737}},   content-information{ /*Array of raster     graphic elements for the logo*/}, layout-object{   object-type block,   descriptor-body{     object-identifier "1 0 1",     user-visible-name "Date",     position{       horizontal 5440,       vertical 1275},     dimensions{,       horizontal 3060,       vertical fixed 540},     content-portions{"0"}}, text-unit{   content-portion-attributes{     content-identifier-layout "1 0 1 0"},     content-information{"CESSON, 26 JUNE 1985"}, layout-object{   object-type block,   descriptor-body{     object-identifier "1 0 2"     user-visible-name "Addressee",     position{       horizontal 1105,       vertical 4310},     dimensions{       horizontal 4505,       vertical fixed 540},     content-portions{"0"}}, text-unit{   content-portion-attributes{     content-identifier-layout "1 0 2 0"},     content-information{"To members of ISO/       TC97/SC18/WG3"}}, layout-object{   object-type block,   descriptor-body{     object-identifier "1 0 3"     user-visible-name "Subject",     position{       horizontal 1105,       vertical 6660},     dimensions{       horizontal 7200,       vertical fixed 905},     presentation-attributes{       character-attributes{         line-spacing 300}},     content-portions{"0"}}, text-unit{   content-portion-attributes{     content-identifier-layout "1 0 3 0"},     content-information{"SUBJECT: PROPOSED       EXAMPLE TO CLARIFY       THE DOCUMENT\n </pre>	<pre> A103120130 A3LL 31LL 4009400731203020302030 A204 800202E1 04LL..... ..... A22B 020104 3126 41053120302031 8E0444617465 A308 80021540 800204FB A408 80020BF4 8002021C A103120130 A323 310B 4009400731203020312030 0414434553534F4E2C... ...31393835 A230 020104 312B 41053120302032 8E09416464726573736565 A308 80020451 800210D6 A408 80021199 8002021C A103120130 A32E 310B 4009400731203020322030 041F546F206D656D626572 73 .. 574733 A234 020104 312F 41053120302033 8E075375626A656374 A308 80020451 800021A04 A408 80021C20 80020389 A604 8702012C A103120130 A3LL 310B 4009400731203020332030 04LL5456424A4543553A..... ..... </pre>
--	--

ARCHITECTURE MODEL" }},	.....4D4F44454C
layout-object{	A233
object-type block,	020104
descriptor-body{	312E
object-identifier "1 0 4",	41053120302034
user-visible-name "Summary",	8E0753756D6D617279
position{	A308
horizontal 2180,	80020884
vertical 9695},	800225DF
dimensions{	A408
horizontal 5585,	800215D1
vertical fixed 2325},	80020915
presentation-attributes{	A603
character-attributes{	
alignment justified}},	880103
content-portion{"0"}},	A103120130
text-unit{	A3LL
content-portion-attributes{	31LL
content-identifier-layout "1 0 4 0",	400940073123020342030
content-information{ /*Formatted string of	04LL53554D4D4152415259.....
SUMMARY- */}},	.....
layout-object{	A232
object-type page,	020102
descriptor-body{	312D
object-identifier "1 1",	4103312031
user-visible-name{ "Body Page 1"},	8E0B426F647920506167652031
dimensions{	A408
horizontal 9920,	800226C0
vertical fixed 14030},	800236CE
subordinates{	A00F
"0", "1", "2", "3", "4"}},	120130120131120132120133120134
layout-object{	A236
object-type block,	020104
descriptor-body{	3131
object-identifier "1 1 0",	41053120312030
user-visible-name "Para A",	8E06506172612041
position{	A308
horizontal 1105,	80020451
vertical 1105,	80020451
dimensions{	A408
horizontal 7935,	80021EFF
vertical fixed 1785},	800206F9
presentation-attributes{	A607
character-attributes{	
line-spacing 300,	8702012C
alignment justified}},	880103
content-portions{"0"}},	A103120130
text-unit{	A3LL
content-portion-attributes{	310B
content-identifier-layout "1 1 0 0",	4009400731203120302030
content-information{ /*Formatted string	04LL414141.....
of A's*/}},	.....
layout-object{	A236
object-type block,	020104
descriptor-body{	3131
object-identifier "1 1 1",	41053120312031
user-visible-name "Para B",	8E06506172612042
position{	A308
horizontal 1105,	80020451
vertical 3770},	80020EBA
dimensions{	A408
horizontal 7935,	80021EFF
vertical fixed 1785},	800206F9

presentation-attributes{	A607
character-attributes{	
line-spacing 400,	87020190
alignment justified}},	880103
content-portions{"0"}},	A103120130
text-unit{	A3LL
content-portion-attributes{	310B
content-identifier-layout "1 1 1 0"},	4009400731203120312030
content-information{/*Formatted string	04LL4242.....
of B's*/}},	.....
layout-object{	A236
object-type block,	020104
descriptor-body{	3131
object-identifier "1 1 2",	41053120312032
user-visible-name "Drawing",	8E0744726177686E67
position{	A308
horizontal 2180,	80020884
vertical 6460},	80002193C
dimensions{	A408
horizontal 5045,	800213B5
vertical fixed 4140},	8002102C
presentation-attributes{	A606
content-architecture-class{2 8 2 8 0},	060458020800
content-portions{"0"}},	A103120130
text-unit{	A3LL
content-portion-attributes{	310B
content-identifier-layout "1 1 2 0"},	4009400731203120322030
content-information{/*Ordered set of	04LL.....
geometric graphics	.....
content elements for	.....
the diagram*/}},	.....
layout-object{	A22E
object-type block,	020104
descriptor-body{	3129
object-identifier "1 1 3",	41053120312033
user-visible-name "Caption",	8E0743617074696F6E
position{	A308
horizontal 2550,	800209F6
vertical 10800},	80022A30
dimensions{	A408
horizontal 3970	80020F82
vertical fixed 370},	80020172
content-portions{"0"}},	A103120130
text-unit	A3LL
content-portion-attributes{	310B
content-identifier-layout "1 1 3 0"},	4009400731203120332030
content-information{/*Formatted string	04LL63617074696F6E....
for the caption*/}},	.....
layout-object{	A239
object-type block,	020104
descriptor-body{	3134
object-identifier "1 1 4",	41053120312034
user-visible-name{"Para C1"},	8E09506172612043283129
position{	A308
horizontal 1105,	80020451
vertical 11980},	80022ED6
dimensions{	A408
horizontal 7935,	80021EFF
vertical fixed 1075},	80020433
presentation-attributes{	A607
character-attributes{	
line-spacing 300,	8702012C
alignment justified}}},	880103

<pre> text-unit{   content-portions{"0"}},   content-portion-attributes{   content-identifier-layout "1 1 4 0"},   content-information{ /*Formatted string     of C's* }}, layout-object{   object-type page,   descriptor-body{     object-identifier "1 2",     user-visible-name "Body Page 2",     dimensions{       horizontal 9920,       vertical fixed 14030},     subordinates{"0", "1", "2", "3", "4"}}, layout-object{   object-type block,   descriptor-body{     object-identifier "1 2 0",4105320322030     user-visible-name "Para C2",     position{       horizontal 1105, 80020451       vertical 1105}, 80020451     dimensions{       horizontal 7035, 80021EFF       vertical fixed 1275,     presentation-attributes{       character-attributes{         line-spacing 300,         alignment justified}},     content-portions{"0"}}, text-unit{   content-portion-attributes{   content-identifier-layout "1 2 0 0"},   content-information{ /*Formatted string     of C's* }}, layout-object{   object-type block,   descriptor-body{     object-identifier "1 2 1",     user-visible-name "Para D",     position{       horizontal 1105,       vertical 3260},     dimensions{       horizontal 7935,       vertical fixed 1615},     presentation-attributes{       character-attributes{         line-spacing 300,         alignment justified}},     content-portions{"0"}}, text-unit{   content-portion-attributes{   content-identifier-layout "1 2 1 0"},   content-information{ /*Formatted string     of D's*/}, layout-object{   object-type block,   descriptor-body{     object-identifier "1 2 2",     user-visible-name "Ending",     position{ </pre>	<pre> A103120130 A3LL 310B 4009400731203120342030 04LL..... ..... A232 020102 312D 4103312032 8E0B426F647920506167652032 A408 800226C0 800236CE A00F120130120131120132120133120134 A239 020104 3134 8E09506172612043283229 A308 A408 800206F9 A607 8702012C 880103 A003120130 A3LL 310B 4009400731203230302030 04LL4343..... ..... A236 020104 3131 41053120322031 8E06506172612044 A308 80020451 80020CBC A408 80021EFF 8002064F A607 8702012C 880103 A103120130 A3LL 310B 4009400731203220312030 04LL444444..... ..... A236 020104 3131 41053120322032 8E06456E64696E67 A308 </pre>
--	---

horizontal 1985, vertical 5755}, dimensions{ horizontal 6860, vertical fixed 2155}, presentation-attributes{ character-attributes{ line-spacing 300, alignment justified}}, content-portions{"0"}}, text-unit{ content-portion-attributes{ content-identifier-layout "1 2 2 0"}, content-information{"Formatted string of FORMAL ENDING"}}, layout-object{ object-type block, descriptor-body{ object-identifier "1 2 3", user-visible-name "signature", position{ horizontal 3260, vertical 8675, dimensions{ horizontal 5585, vertical fixed 2495}, presentation-attributes{ content-architecture-class{2 8 2 7 0}, raster-graphics-attributes{ pel-transmission-density 5}}, content-portions{"0"}}, text-unit{ content-portion-attributes{ content-identifier-layout "1 2 3 0"}, raster-gr-coding-attributes{ number-of-pels-per-line 1117}, content-information{ /*Array of raster-graphics content element for the signature*/ }, layout-object{ object-type block, descriptor-body{ object-identifier "1 2 4", user-visible-name "Name", position{ horizontal 5950, vertical 11170}, dimensions{ horizontal 2520, vertical fixed 905}, presentation-attributes{ character-attributes{line-spacing 300}}, content-portions{"0"}}, text-unit{ content-portion-attributes{ content-identifier-layout "1 2 4 0"}, content-information{"Miss Aude HEA\n Document Architect"}},	800207C1 8002167B A408 80021ACC 8002086B A607  8702012C 880103 A103120130 A3LL 310B 4009400731203220322030 04LL464F52524D41402045 4E44494E47..... A23D 020104 3138 41053120322033 8E095369676E6174757265 A308 80020CBC 800221E3 A408 800215D1 800209BF A60B 060458020700 A103 820105 A103120130 A3LL 310B 4009400731203220332030 A204 800204D 04LL..... ..... ..... A231 020104 312C 41053120322034 8E044E616D65 A308 8002173E 80022BA2 A408 800209D8 80020389 A604 8702012C A103120130 A3LL 310B 4009400731203220342030 04LL4D697373..... .....
--	---

D.2 Example 2: Sample document from Annex B of Recommendation T.412; specific logical structure only

document-profile{	A033
presentation-styles "1",	860131
specific-logical-structure "1",	850131
document-characteristics {	A228
document-architecture-class	
{formatted-processable},	810101
content-architecture-classes{	A512
{2 8 2 6 1},	060458020600
{2 8 2 7 1},	060458020701
{2 8 2 8 0}},	060458020800
interchange-format-class if-a,	860100
oda-version "ISO 8613: 1988"}},	880F49534F..3139838
presentation-style{	A70D
style-identifier "5 0",	4503352030
presentation-attributes{	A306
character-attributes{	A004
line-spacing 300}}},	8702012C
presentation-style{	A711
style-identifier "5 1"}	4503352031
presentation-attributes{	A30A
character-attributes{	A008
first-line-offset 1417,	97020589
line-spacing 300}}},	8702012C
presentation-style{	A714
style-identifier "5 2",	4503352032
presentation-attributes	A30D
character-attributes{	A00B
first-line-offset 1417,	97020589
alignment justified,	880103
line-spacing 300}}},	8702012C
presentation-style{	A714
style-identifier "5 3",	4503352033
presentation-attributes	A30D
character-attributes{	A00B
first-line-offset 1020,	970203FC
alignment justified,	880103
line-spacing 300}}},	8702012C
presentation-style{	A714
style-identifier "5 4",	4503352034
presentation-attributes{	A30D
character-attributes{	A00B
first-line-offset 1417,	97020589
alignment justified,	880103
line-spacing 400}}},	87020190
logical-object {	A624
object-type document-logical-root"},	020100
descriptor-body {	311F
object-identifier "3",	410133
user-visible-name "Letter",	8E064C6574746572
subordinates{"0","1"},	A0061201300120131
default-value-lists{	A70A
Default-Value-Lists-Logical	
basic-logical-attributes	A608
presentation-attributes	3106
content-architecture-class	060458020601
{2 8 2 6 1}}},	
logical-object{	A620
object-type composite-logical,	020101
descriptor-body{	311B
object-identifier "3 0",	4103332030
user-visible-name "Header",	8E06486561646572



subordinates{"0","1","2","3"}},	A00C120130120131120132120133
logical-object{	A617
object-type basic-logical,	020102
descriptor-body{	3112
object-identifier "3 0 0",	41053320302030
user-visible-name "Date",	8E0444617465
content-portions{"0"},	A103120130
logical-object{	A61C
object-type basic-logical,	020102
descriptor-body{	3117
object-identifier "3 0 1",	410533200302031
user-visible-name "Addressee",	8E9416464726573736565
content-portions{"0"}},	A103120130
logical-object{	A61F
object-type basic-logical,	020102
descriptor-body{	311A
object-identifier "3 0 2",	41053320302032
user-visible-name "Subject",	8E075375626A656374
presentation-style "5 0",	9103352030
content-portions{"0"},	A103120130
logical-object{	A61A
object-type composite-logical,	020101
descriptor-body{	3115
object-identifier "3 0 3",	41053320302033
user-visible-name "Summary",	8E0753756D6D617279
subordinates{"0"}},	A003120130
logical-object{	A62B
object-type basic-logical,	020102
descriptor-body{	3126
object-identifier "3 0 3 0",	410733203020332030
user-visible-name "Summary-paragraph",	8E1153756D6D617279
	2D706172616772617068
presentation-style "5 1",	9103352031
content-portions{"0"}},	A103120130
logical-object{	A627
object-type composite-logical,	020101
descriptor-body{	3122
object-identifier "3 1",	4103332031
user-visible-name "Body",	8E04426F6479
subordinates{"0","1","2","3","4",	A015120130120131120132120133
"5","6"}},	1201341201345120136
logical-object{	A623
object-type basic-logical,	020102
descriptor-body{	311E
object-identifier "3 1 0",	41053320312030
user-visible-name "Paragraph A"	8E0B5061726167726170682041
presentation-style "5 2",	9103352032
content-portions{"0"},	A103120130
logical-object{	A623
object-type basic-logical,	020102
descriptor-body{	311E
object-identifier "3 1 1",	41053320312031
user-visible-name "Paragraph B"	8E0B50617261677261706820462
presentation-style "5 2",	9103352032
content-portions{"0"},	A103120130
logical-object{	A61C
object-type composite-logical,	020101
descriptor-body{	3117
object-identifier "3 1 2",	41053320322032
user-visible-name "Figure"	8E06466967757265
subordinates{"0","1"}},	A006120130120131
logical-object{	A624
object-type basic-logical,	020102

descriptor-body{ object-identifier "3 1 2 0", user-visible-name "Drawing" presentation-attributes{ content-architecture-class {2 8 2 8 0}}, content-portions{"0"}},	311F 410733203120322030 8E0744726177686E67 A606 A60458020800 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 2 1", user-visible-name "Caption" content-portions {"0"}},	A61C 020102 3117 410733203120322031 8E0743517074696F6E A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 3", user-visible-name "Paragraph C" presentation-style "5 2", content-portions{"0"}},	A623 020102 311E 41053320312033 8E0B5061726167726170682043 91033522032 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 4", user-visible-name "Paragraph D" presentation-style "5 2", content-portions{"0"}},	A623 020102 311E 41053320312034 8E0B5061726167726170682043 9103352032 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 5", user-visible-name "Ending" presentation-style "5 3", content-portions{"0"}},	A61E 020102 3119 41053320312035 8E06456E64696E67 9102252033 A103120130
logical-object{ object-type composite-logical, descriptor-body{ object-identifier "3 1 6", user-visible-name "Signature and Name",  subordinates{"0","1"}},	A628 020101 3123 41053320312036 8E125369676E61747572652D 4E616D65 A006120130120131
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 6 0", user-visible-name "Signature", presentation-attributes{ content-architecture-class {2 8 2 7 1}}, content-portions{"0"}},	A626 020102 3121 410733203120362030 8E095369676E6174757265 A606 060458020701  A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 6 1", user-visible-name "Name", presentation-style "5 0", content-portions{"0"}},	A61E 020102 3119 410733203120362031 8E044E616D65 9103352030 A103120130
text-unit{ content-portion-attributes{ content-identifier-logical "3 0 0 0", content-information{"CESSON, 26 JUNE 1985"}},	A321 3109 840733203020312030 0414434553534F4E2C.....31393835
text-unit{ content-portion-attributes{ content-identifier-logical "3 0 1 0",	A32C 3109 840730203020312030

<pre> content-information{"To members of TC97/SC18/WG3"}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 0 2 0"}, content-information{"SUBJECT: PROPOSED EXAMPLE TO CLARIFY THE DOCUMENT ARCHITECTURE MODEL"}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 0 3 0 0"}, content-information{/*Unformatted string of SUMMARY-*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 0 0"}, content-information{/*Unformatted string of A's*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 1 0"}, content-information{/*Unformatted string of B's*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 2 0 0"}, content-information{/*Ordered set of geometric-graphics content elements for the diagram*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 2 1 0"} content-information{/*Unformatted string for the caption*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 3 0"}, content-information{/*Unformatted string of C's*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 4 0"}, content-information{/*Unformatted string of D's*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 5 0"}, content-information{/*Unformatted string for Ending*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 6 0 0"}, raster-gr-coding-attributes{ number-of-pels-per-line 1117}}, content-information{/*Array of raster-graphics content elements for the signature*/}}, text-unit{ content-portion-attributes{ content-identifier-logical "3 1 6 1 0"}, </pre>	<pre> 041F546F206D656D62657273...4733 A3LL 3109 840733203020322030 04LL5456424A4543553A..... .....4D4F44454C A3LL 310B 8409332030203320302030 04LL53554D4D415259 A3LL 3109 840733203120302030 04LL414141..... A3LL 3109 840733203120312030 04LL4242424242..... A3LL 310B 8409332031203220302030 04LL4242424242..... A3LL 310B 8409332031203220312030 04LL63617074696F6E..... ..... A3LL 3109 840733203120332030 04LL4343434343..... A3LL 3109 840733203120342030 04LL44444444..... A3LL 3109 840733203120352030 04LL464F524D414C2D 454E44494E47..... A3LL 3111 4109332031203620302030 A204 8002045D 04LLZZZZZZZZZZZZ..... ..... ..... A3LL 310B 8409332031203620312030 </pre>
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content-information{"Miss Aude HEA Document Architect"}}, 04LL4D697373.....  
 .....

D.3 Example 3: Sample document from Annex B of Recommendation T.412; generic layout, generic logical and specific logical structures

document-profile{ A03C  
 generic-layout-structure "1", 800131  
 generic-logical-structure "1", 840131  
 presentation-styles "1", 860131  
 layout-styles "1", 870131  
 specific-logical-structure "1", 850131  
 document-characteristics { A22B  
 document-architecture-class processable, 810101  
 content-architecture-classes { A512  
 { 2 8 2 6 1 }, 060458020601  
 { 2 8 2 7 0 }, 060458020700  
 { 2 8 2 8 0 }}, 060458020800  
 interchange-format-class if-a, 860101  
 oda-version "ISO 8613 : 1988"}}, 880F49534F..31393838  
 layout-object-class{ A122  
 object-type document-layout-root, 020100  
 descriptor-body{ 311D  
 object-class-identifier "0", 410130  
 user-visible-name "Letter", 8E064C6574746572  
 generator-for-subordinates{ A010  
 sequence-construction A00E  
 required-construction-factor A005  
 object-class-identifier "0 0", 4103302030  
 object-class-identifier "0 1"}}, 4103302031  
 layout-object-class{ A14D  
 object-type page, 020102  
 descriptor-body{ 3148  
 object-class-identifier "0 0", 4103302030  
 user-visible-name "Header", 8E06486561646572  
 dimensions{ A408  
 horizontal fixed 9920, 800226C0  
 vertical fixed 14030}, 800236CE  
 generator-for-subordinates{ A02F  
 sequence-construction A02D  
 required-construction-factor A007  
 object-class-identifier "0 0 0", 41053020302030  
 required-construction-factor A007  
 object-class-identifier "0 0 1", 41053020302031  
 required-construction-factor A007  
 object-class-identifier "0 0 2", 41053020302032  
 required-construction-factor A007  
 object-class-identifier "0 0 3", 41053020302033  
 required-construction-factor A007  
 object-class-identifier "0 0 4"}}, 41053020302034  
 layout-object-class{ A12F  
 object-type frame, 020103  
 descriptor-body{ 312A  
 object-class-identifier "0 0 0", 41053020302030  
 position{  
 fixed-position{ A308  
 horizontal 710, 800202C6  
 vertical 730}}, 800202DA  
 dimensions{ A408  
 horizontal fixed 3685, 80020E65  
 vertical fixed 2495}, 800209BF  
 generator-for-subordinates{ A00D  
 single-term-construction A30B

required-construction-factor	A009
object-class-identifier	
"0 0 0 0"}},	410730203020302030
layout-object-class{	A121
object-type block,	020104
descriptor-body{	311C
object-class-identifier{"0 0 0 0"},	410730203020302030
user-visible-name{"Logo"},	8E044C6F676F
presentation-attributes{	A606
content-architecture-class	
{2 8 2 7 0},	060458020700
content-portions{"0"}},	A103120130
object-type frame,	020103
descriptor-body{	3121
object-class-identifier "0 0 1",	41053020302031
user-visible-name "Date",	8E0444617465
position{	
fixed-position{	A308
horizontal 5045,	800213B5
vertical 565}},	80020235
dimensions{	A408
horizontal fixed 3970,	80020F82
vertical fixed 1615}}},	8002064F
layout-object-class{	A12B
object-type frame,	020103
descriptor-body{	3126
object-class-identifier "0 0 2",	41053020302032
user-visible-name "Addressee",	8E09416464726573736565
position{	
fixed-position{	A308
horizontal 1105,	80020451
vertical 4310}},	800210D6
dimensions{	A408
horizontal fixed 5395,	80021513
vertical fixed 1415}}},	80020587
layout-object-class{	A129
object-type frame,	020103
descriptor-body{	3124
object-class-identifier "0 0 3",	41053020302033
user-visible-name "Subject",	8E075375626A656374
position{	
fixed-position{	A308
horizontal 1105,	80020451
vertical 6660}},	80021A04
dimensions{	A408
horizontal fixed 7200,	80021C20
vertical fixed 1785}}},	800206F9
layout-object-class{	A129
object-type frame,	020103
descriptor-body{	3124
object-class-identifier "0 0 4",	41053020302034
user-visible-name "Summary",	8E0753756D6D617279
position{	
fixed-position{	A308
horizontal 2180,	80020884
vertical 9695}},	800225DF
dimensions{	A408
horizontal fixed 6290,	80021892
vertical fixed 3570}}},	80020DF2
layout-object-class{	A127
object-type page,	020102
descriptor-body{	3122
object-class-identifier "0 1",	4103302031

user-visible-name "Body",	8E04426F6479
dimensions{	A408
horizontal fixed 9920,	800226C0
vertical fixed 14030}},	800236CE
generator-for-subordinates{	A00B
single-term-construction	A309
required-construction-factor	A007
object-class-identifier "0 1 0"}},	41053020312030
layout-object-class{	A126
object-type frame,	020103
descriptor-body{	3121
object-class-identifier "0 1 0",	41053020312030
user-visible-name "Body",	8E04426F6479
position{	
fixed-position{	A308
horizontal 565,	80020235
vertical 565}},	80020235
dimensions{	A408
horizontal fixed 8815,	8002226F
vertical fixed 12870}}},	80023246
logical-object-class{	A522
object-type document-logical-root,	020100
descriptor-body{	311D
object-class-identifier "2",	410132
user-visible-name "Letter",	8E064C6574746572
generator-for-subordinates{	A010
sequence-construction	A00E
required-construction-factor	A005
object-class-identifier "2 0",	4103322030
required-construction-factor	A005
object-class-identifier "2 1"}},	4103322031
logical-object-class{	A53A
object-type composite-logical,	020101
descriptor-body{	3135
object-class-identifier "2 0",	4103322030
user-visible-name "Header",	8E06486561646572
generator-for-subordinates{	A026
sequence-construction	A024
required-construction-factor	A007
object-class-identifier "2 0 0",	41053220302030
required-construction-factor	A007
object-class-identifier "2 0 1",	41053220302031
required-construction-factor	A007
object-class-identifier "2 0 2",	41053220302032
required-construction-factor	A007
object-class-identifier "2 0 3"}},	41053220302033
logical-object-class{	A51F
object-type basic-logical,	020102
descriptor-body{	311A
object-class-identifier "2 0 0",	41053220302030
user-visible-name "Date",	8E0444617465
layout-style "4 0",	9303342030
presentation-attributes{	A606
content-architecture-class {2 8 2 6 1}}},	060458020601
logical-object-class{	A524
object-type basic-logical,	020102
descriptor-body{	311F
object-class-identifier "2 0 1",	41053220302031
user-visible-name "Addressee",	8E09416464726573736565
layout-style "4 1",	9303342031
presentation-attributes{	A606
content-architecture-class {2 8 2 6 1}}},	060458020601
logical-object-class{	A527

object-type basic-logical,	020102
descriptor-body{	3122
object-class-identifier "2 0 2",	41053220302032
user-visible-name "Subject",	8E075375626A656374
layout-style "4 2",	9303342032
presentation-style "5 0",	9103352030
presentation-attributes{	A606
content-architecture-class {2 8 2 6 1}}},	060458020601
logical-object-class{	A529
object-type composite-logical,	020101
descriptor-body{	3124
object-class-identifier "2 0 3",	41053220302033
user-visible-name "Summary",	8E0753756D6D617279
layout-style "4 3",	9303342033
generator-for-subordinates{	A00D
single-term-construction	A30B
repetitive-construction-factor	A309
object-class-identifier	
{"2 0 3 1"}},	410732203020332031
logical-object-class{	A533
object-type basic-logical,	020102
descriptor-body{	312E
object-class-identifier "2 0 3 1",	410732203020332031
user-visible-name "Summary-paragraph",	8E1153756D6D6172792D70617261
	6772617068
layout-style "4 4",	9303342034
presentation-style "5 1",	9103352031
presentation-attributes{	A606
content-architecture-class	060458020601
{2 8 2 6 1}}},	
logical-object-class{	A531
object-type composite-logical,	020101
descriptor-body{	312C
object-class-identifier "2 1",	4103322031
user-visible-name "Body",	8E04426F6479
layout-style "4 5",	9303342035
generator-for-subordinates{	A02A
sequence-construction	A028
repetitive-construction-factor	A214
choice-construction	A212
required-construction-factor	A007
object-class-identifier	
"2 1 1",	41053220312031
required-construction-factor	A007
object-class-identifier	
"2 1 0",	41053220312030
required-construction-factor	A007
object-class-identifier	
"2 1 2",	41053220312032
required-construction-factor	A007
object-class-identifier	
"2 1 3"}},	41053220312033
logical-object-class{	A533
object-type composite-logical,	020101
descriptor-body{	312E
object-class-identifier "2 1 0",	41053220312030
user-visible-name "Figure",	8E06466967757265
layout-style "4 6",	9303342036
generator-for-subordinates{	A018
sequence-construction	A016
required-construction-factor	A009
object-class-identifier	
"2 1 0 0",	410732203120302030

<pre>                 required-construction-factor                 object-class-identifier                     "2 1 0 1" } } }, logical-object-class{     object-type basic-logical,     descriptor-body{         object-class-identifier "2 1 0 0",         user-visible-name "Drawing",         presentation-attributes{             content-architecture-class                 {2 8 2 8 0},             layout-style "4 7" } }, logical-object-class{     object-type basic-logical,     descriptor-body{         object-class-identifier "2 1 0 1",         user-visible-name "Caption",         layout-style "4 8",         presentation-attributes{             content-architecture-class                 {2 8 2 6 1} } } }, logical-object-class{     object-type basic-logical,     descriptor-body{         object-class-identifier "2 1 1",         user-visible-name "Body-paragraph",         layout-style "4 9",         presentation-style "5 3",         presentation-attributes{             content-architecture-class                 {2 8 2 6 1} } } }, logical-object-class{     object-type basic-logical,     descriptor-body{         object-class-identifier "2 1 2",         user-visible-name "Ending",         layout-style "4 10",         presentation-style "5 4",         content-portions{"0"},         presentation-attributes{             content-architecture-class{                 {2 8 2 6 1} } } }, logical-object-class{     object-type composite-logical,     descriptor-body{         object-class-identifier "2 1 3",         user-visible-name "Signature-and-Name",          generator-for-subordinates{             sequence-construction                 required-construction-factor                     object-class-identifier                         "2 1 3 0",                 required-construction-factor                     object-class-identifier                         "2 1 3 1" } } }, logical-object-class{     object-type basic-logical,     descriptor-body{         object-class-identifier "2 1 3 0",         user-visible-name "Signature", </pre>	<pre> A009 410732203120302031 A524 020102 311F 410732203120302030 8E0744726177686E67 A606 060458020800 9303342037 A524 020102 311F 410732203120302031 8E0743617074696F6E 9303342038 A606 060458020601 A52E 020102 3129 41053220312031 8E0E426F64792D706172616772617068 9303342039 9103352033 A606 060458020601 A52C 020102 3127 41053220312032 8E06456E64696E67 930434203130 9103352034 A103120130 A606 060458020601 A538 020101 3133 41053220312033 8E125369676E61747572652D616E 642D4E616D65 A018 A016 A009 410732203120332030 A009 410732203120332031 A527 020102 3122 410732203120332030 8E095369676E6174757265 </pre>
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presentation-attributes{	A606
content-architecture-class	060458020701
{2 8 2 7 1}},	
layout-style "4 11"}},	930434203131
logical-object-class{	A527
object-type basic-logical,	020101
descriptor-body{	3122
object-class-identifier "2 1 3 1",	410732203120332031
user-visible-name "Name",	8E044E616D65
layout-style "4 12",	930434203132
presentation-style "5 0",	9103352030
presentation-attributes{	A606
content-architecture-class	060458020601
{2 8 2 6 1},	
text-unit{	A3LL
content-portion-attributes{	3111
content-identifier-layout "0 0 0 0"},	4009400730203020302030
raster-gr-coding-attributes{	A204
number-of-pels-per-line 737}},	800202E1
content-information{/*Array of	
raster-graphics	04LL.....
content elements for	.....
the logo*/ }},	.....
text-unit{	A3LL
content-portion-attributes{	3109
content-identifier-logical "2 1 2 0"},	400732203120322030
content-information{/*Unformatted string	04LL.....
of ending*/}},	.....
presentation-style{	A70D
style-identifier "5 0",	4503352030
presentation-attributes{	A306
character-attributes{	A004
line-spacing 300}}},	8702012C
presentation-style{	A710
style-identifier "5 1",	4503352031
presentation-attributes{	A309
character-attributes{	A007
first-line-offset 1417,	97020589
alignment justified}}},	880103
presentation-style{	A714
style-identifier "5 3",	4503352033
presentation-attributes{	A30D
character-attributes{	A00B
first-line-offset 1417,	97020589
alignment justified,	880103
line-spacing 300}}},	8702012C
presentation-style{	A714
style-identifier "5 4",	4503352034
presentation-attributes{	A30D
character-attributes{	A00B
first-line-offset 1020,	970203FC
alignment justified,	880103
line-spacing 300}}},	8702012C
layout-style{	A818
style-identifier "4 0",	4503342030
layout-directives{	A411
layout-object-class "0 0 1",	8B053020302031
offset{	A408
trailing 710,	820202C6
right-hand 395}}},	8002018B

layout-style{ style-identifier "4 1", layout-directives{ layout-object-class "0 0 2"}},	A80E 4503342031 A407 8B053020302032
layout-style{ style-identifier "4 2", layout-directives{ layout-object-class "0 0 3"}},	A80E 4503342032 A407 8B053020302033
layout-style{ style-identifier "4 3", layout-directives{ layout-object-class "0 0 4"}},	A80E 4503342033 A407 8B053020302034
layout-style{ style-identifier "4 4", layout-directives{ offset{ left-hand 705}}},	A80D 4503342034 A406 A404 810202C1
layout-style{ style-identifier "4 5", layout-directives{ new-layout-object{ to-layout-object-class "0 1"}},	A80C 4503342035 A405  8703302031
layout-style{ style-identifier "4 6", layout-directives{ indivisibility{ to-layout-object-class "0 1 0"}},	A80E 4503342036 A407  80053020312030
layout-style{ style-identifier "4 7", layout-directives{ offset{ right-hand 1615, left-hand 2155}, separation{ trailing 905}}},	A817 4503342037 A410 A408 8002064F 8102086B A304 81020389
layout-style{ style-identifier "4 8", layout-directives{ offset{ right-hand 1985, left-hand 2860}, separation{ trailing 200}}},	A817 4503342038 A410 A408 800207C1 81020B26 A304 810201C8
layout-style{ style-identifier "4 9", layout-directives{ offset{ trailing 540, leading 280, right-hand 540, left-hand 340}, separation{ trailing 880}}},	A81F 4503342039 A418 A410 8202021C 83020118 8002021C 81020154 A304 81020370
layout-style{ style-identifier "4 10", layout-directives{ offset{ right-hand 1420, left-hand 535}, separation{ trailing 880}}},	A818 450434203130 A410 A408 8002058C 81020217 A304 81020370
layout-style{ style-identifier "4 11",	A818 450434203131

layout-directives{	A410
offset{	A408
right-hand 2695,	80020A87
left-hand 535},	81020217
separation{	A304
trailing 765}}},	810202FD
layout-style{	A812
style-identifier "4 12",	450434203132
layout-directives{	A40A
offset{	A408
right-hand 5385,	80021509
left-hand 910}}},	8102038E
logical-object{	A61B
object-type document-logical-root,	020100
descriptor-body{	3118
object-identifier "3",	410103
object-class "2",	820132
user-visible-name "Letter",	8E064C6574746572
subordinates{"0","1"}}},	A006120130120131
logical-object{	A625
object-type composite-logical}	020101
descriptor-body{	3120
object-identifier "3 0",	4103302030
object-class "2 0",	8203322030
user-visible-name "Header",	8E06486561646572
subordinates{"0","1","2","3"}}},	A00C120130120131120132120133
logical-object{	A61E
object-type basic-logical,	020102
descriptor-body{	3119
object-identifier "3 0 0",	41053320302030
object-class "2 0 0",	82053220302030
user-visible-name "Date",	8E0444617465
content-portions{"0"}}},	A103120130
logical-object{	A623
object-type basic-logical,	020102
descriptor-body{	311E
object-identifier "3 0 1",	41053320302031
object-class "2 0 1",	82053220302031
user-visible-name "Addressee",	8E09416464726573736565
content-portions{"0"}}},	A103120130
logical-object{	A621
object-type basic-logical,	020102
descriptor-body{	311C
object-identifier "3 0 2",	41053320302032
object-class "2 0 2",	82053220302032
user-visible-name "Subject",	8E075375626A656374
content-portions{"0"}}},	A103120130
logical-object{	A621
object-type composite-logical,	020101
descriptor-body{	311C
object-identifier "3 0 3",	41053320302033
object-class "2 0 3",	82053320302033
user-visible-name "Summary",	8E0753756D6D617279
subordinates{"0"}}},	A003120130
logical-object{	A62F
object-type basic-logical,	020102
descriptor-body{	312A
object-identifier "3 0 3 0",	410733203020332030
object-class "2 0 3 1",	820732203020332031
user-visible-name "Summary-paragraph",	8E1153756D6D617279
content-portions{"0"}}},	2D706172616772617068
logical-object{	A103120130
object-type basic-logical,	A62C

object-type composite-logical, descriptor-body{ object-identifier "3 1", object-class "2 1", user-visible-name "Body", subordinates{"0","1","2","3","4","5","6"}},	020101 3127 4103332031 8203322031 8E04426F6479 A015120130120131120132120133 120134120135120136
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 0", object-class "2 1 1", user-visible-name "Paragraph A", content-portions{"0"}},	A625 020102 3120 41053320312030 82053220312031 8E0B5061726167726170682041 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 1", object-class "2 1 1", user-visible-name "Paragraph B", presentation-attributes{ character-attributes{ line-spacing 400}}, content-portions{"0"}},	A62D 020102 3128 41053320312031 82053220312031 8E0B5061726167726170682042 A606 A004 87020190 A103120130
logical-object{ object-type composite-logical"} descriptor-body{ object-identifier "3 1 2", object-class "2 1 0", user-visible-name "Figure", subordinates{"0","1"}},	A623 020101 311E 41053320312032 82053220312030 8E06466967757265 A006120130120131
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 2 0", object-class "2 1 0 0", user-visible-name "Drawing", content-portions{"0"}},	A625 020102 3120 410733203120322030 820732203120302030 8E0744726177686E67 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 2 1", object-class "2 1 0 1", user-visible-name "Caption", content-portions{"0"}},	A625 020102 3120 410733203120322031 820732203120302031 8E0743617074696F6E A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 3", object-class "2 1 1", user-visible-name "Paragraph C", content-portions{"0"}},	A625 020102 3120 41053320312033 82053220312031 8E0B5061726167726170682043 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 4", object-class "2 1 1", user-visible-name "Paragraph D", content-portions{"0"}},	A625 020102 3120 41053320312034 82053220312031 8E0B5061726167726170682043 A103120130
logical-object{ object-type basic-logical, descriptor-body{ object-identifier "3 1 5",	A61B 020102 3116 41053320312035



content-identifier-logical "3 1 2 1 0"},	8409332031203220312030
content-information{ /*Unformatted string for the caption*/ },	04LL63617074696F6E.....
text-unit{	A3LL
content-portion-attributes{	3109
content-identifier-logical "3 1 3 0"},	840733203120332030
content-information{ /*Unformatted string of C's*/ },	04LL4343434343.....
text-unit{	A3LL
content-portion-attributes{	3109
content-identifier-logical "3 1 4 0"},	840733203120342030
content-information{ /*Unformatted string of D's*/ },	04LL44444444.....
text-unit{	A3LL
content-portion-attributes{	310B
content-identifier-logical "3 1 6 0 0",	4109332031203620302030
raster-gr-coding-attributes{	A104
number-of-pels-per-line 1117}},	8002045D
content-information{ /*Array of raster-graphics content elements for the signature*/ },	04LLZZZZZZZZZZZZ.....
text-unit{	.....
content-portion-attributes{	A3LL
content-identifier-logical "3 1 6 1 0"},	310B
content-information{ "Miss Aude HEA Document Architect" }},	4109332031203620312030
	04LL4D697373.....
	.....

D.4 Example 4: Sample document from Annex B of Recommendation T.412; specific layout structure only

document-profile{	A030
specific-layout-structure{"1"}	810131
document-characteristics {	A22B
document-architecture-class formatted,	810100
content-architecture-classes{	A512
{ 2 8 2 6 0 },	060458020600
{ 2 8 2 7 0 },	060458020700
{ 2 8 2 8 0 }},	060458020800
interchange-format-class if-b,	860101
oda-version{ "ISO 8613 : 1988" }},	880F49534F..31393838
layout-object{	A21E
object-type document-layout-root,	020100
descriptor-body{	3119
object-identifier "1",	4101331
object-class "0",	820130
user-visible-name "Letter",	8E064C6574746572
subordinates{"0","1","2"}},	A009120130120131120132
layout-object{	A228
object-type page,	020102
descriptor-body{	3123
object-identifier "1 0",	4103312030
object-class "0 0",	8203302030
user-visible-name "Header",	8E06486561646572
subordinates{"0","1","2","3","4"}},	A00F120130120131120132120133
	120134
layout-object{	A218
object-type frame,	020103
descriptor-body{	3113
object-identifier "1 0 0",	41053120302030
object-class "0 0 0",	82053020302030
subordinates{"0"}},	A003120130
layout-object{	A229
object-type block,	020104
descriptor-body{	3124

object-identifier "1 0 0 0",	410531203020302030
object-class "0 0 0 0",	820730203020302030
user-visible-name "Logo",	8E044C6F676F
presentation-attributes{	A60C
content-architecture-class	060458020700
{2 8 2 7 0}},	
raster-graphics-attributes{	A104
pel-transmission-density 5}}}},	820105
layout-object{	A21E
object-type frame,	020103
descriptor-body{	3119
object-identifier "1 0 1",	410531203020331
object-class "0 0 1",	820530203020331
user-visible-name "Date",	8E0444617465
subordinates{"0"}},	A003120130
layout-object{	A22F
object-type block,	020104
descriptor-body{	312A
object-identifier "1 0 1 0",	410731203020312030
position{	A308
horizontal 395,	8002018B
vertical 710,	800202C6
dimensions{	A408
horizontal 3060,	80020BF4
vertical fixed 540},	8002021C
content-portions{"0"},	A103180130
presentation-attributes{	A606
content-architecture-class	060458020602
{2 8 2 6 2}}}},	
layout-object{	A223
object-type frame,	020103
descriptor-body{	311E
object-identifier "1 0 2",	41053120302032
object-class "0 0 2",	82053020302032
user-visible-name "Addressee",	8E09416464726573736565
subordinates{"0"}},	A003120130
layout-object{	A225
object-type block,	020104
descriptor-body{	3120
object-identifier "1 0 2 0",	410731203020322030
dimensions{	A408
horizontal 4505,	80021199
vertical fixed 540},	8002021C
content-portions{"0"},	A103180130
presentation-attributes{	A606
content-architecture-class	060458020602
{2 8 2 6 2}}}},	
layout-object{	A221
object-type frame,	020103
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D.5 Example 5: Sample document profile from Annex C of Recommendation T.414; document profile only

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Atlanta, Georgia, USA",	4D61737465722C576964
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