

**OPEN DOCUMENT ARCHITECTURE (ODA) AND INTERCHANGE FORMAT -
DOCUMENT PROFILE¹⁾**

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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.

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.

¹⁾ This text is aligned with the final text of the corresponding International Standard ISO 8613-4.

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 purpose of the document profile;
- specifies the attributes which constitute the document profile.

Annex A specifies the format of personal names used in various document profile attributes.

Annex B specifies a minimum set of document profile attributes that is to be supported by document application profiles.

Annex C contains an example of a document profile.

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.

- Recommendation T.50 (1984): International alphabet No. 5.
- Recommendation X.208 (1988): Specification of abstract syntax notation one (ASN.1).
- ISO 2022 (1986): Information processing - ISO 7-bit and 8-bit coded character sets - Code extension techniques.
- ISO 6937-2 (1983): Information processing - Coded character sets for text communication - Part 2: Latin alphabetic and non-alphabetic graphic characters.
- ISO 8601: Data elements and interchange formats - Information interchange - Representation of dates and times.²⁾
- ISO 9541-5: Information processing - Font and character information interchange - Part 5: Font attributes and character model.²⁾
- ISO 9541-6: Information processing - Font and character information interchange - Part 6: Font and character attribute subsets and applications.²⁾

3 Definitions

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

4 Purpose of the document profile

The document profile provides information by means of attributes which pertain to the document as a whole. It includes information for processing the document (e.g. reformatting, editing, filing/retrieval).

A document profile may be interchanged or stored without the body of the document. In such a case, the attribute "local file references" may be used to indicate the location of the document.

The document profile contains information for use by human beings and for machine processing.

2) To be published.

5 Content of the document profile

This section is a list of attributes that may occur within the document profile.

5.1 Values of document profile attributes

The value of each attribute is either user-specified or specified in this Recommendation.

Where attribute values consist of character strings, the document profile character set is used. This set consists of SPACE, CARRIAGE RETURN, LINE FEED and a set of graphic characters. In the absence of the attribute "profile character sets," this set of graphic characters consists of the 73 graphic characters of the minimum sub-repertoire of ISO 6937-2.

5.2 Presence of document constituents

The attributes defined in this section indicate the presence of document constituents associated with the document body, whether or not interchanged with the document profile.

5.2.1 Generic layout structure

This attribute is used if and only if the document contains any layout object class descriptions.

The value of this attribute (if specified) is one of 'factor set', 'partial generator set' or 'complete generator set'.

5.2.2 Specific layout structure

This attribute is used if and only if the document contains any layout object descriptions.

The value of this attribute (if specified) is 'present'.

5.2.3 Generic logical structure

This attribute is used if and only if the document contains any logical object class descriptions.

The value of this attribute (if specified) is one of 'factor set', 'partial generator set' or 'complete generator set'.

5.2.4 Specific logical structure

This attribute is used if and only if the document contains any logical object descriptions.

The value of this attribute (if specified) is 'present'.

5.2.5 Layout styles

This attribute is used if and only if the document contains any layout styles.

The value of this attribute (if specified) is 'present'.

5.2.6 Presentation styles

This attribute is used if and only if the document contains any presentation styles.

The value of this attribute (if specified) is 'present'.

5.2.7 External-document class

This attribute is used if and only if the document refers to one or more of the generic layout structure, generic logical structure, layout styles and presentation styles defined in an external- document class description. This attribute has no effect if any generic layout or generic logical structure is present in the document.

The value of this attribute is either an ASN.1 object identifier or a string of characters from the document profile

character set.

This value is equal to the value of the document profile attribute "document reference" of the document referred to.

Constraints on the permitted external-document classes may be specified by the document application profile.

5.2.8 Resource-document

This attribute is used if and only if the document refers to a resource-document.

The value of this attribute is either an ASN.1 object identifier or a string of characters from the document profile character set.

This value is equal to the value of the document profile attribute "document reference" of the document referred to.

5.2.9 Resources

This attribute provides a mapping between names and identifiers of object class descriptions within the body of the document in order that the document may be used as a resource-document.

The value of this attribute consists of one or more pairs, each pair comprising a character string, representing the name, and an object class identifier.

The characters used in resource names are limited to those of the minimum sub-repertoire of ISO 6937-2.

5.3 Document characteristics

5.3.1 Document application profile

This attribute specifies the document application profile that pertains to the document.

The value of this attribute is either an ASN.1 object identifier or an integer.

The integer value is used only to identify the document application profile for Group 4 Facsimile, Class 1, defined in Recommendation T.503. In this case, the value of the integer is 2.

The absence of this attribute indicates that all constituents, attributes and attribute values defined in Recommendations T.411 to T.418 are permitted to be used, that all features are basic, and that the default values are those defined in the T.410 Series of Recommendations.

5.3.2 Document application profile defaults

This attribute specifies the default attribute values, specified in the document application profile, which are different from the values specified in the T.410 Series of Recommendations.

The document architecture attributes for which a document application profile may define non- standard values are:

- content architecture class;
- content type;
- dimensions, only in the case that this attribute applies to a component of object type page;
- transparency;
- colour;
- border;
- layout path;
- page position;
- medium type;
- block alignment;
- type of coding.

Specifications of the presentation attributes and coding attributes for which a document application profile may define non-standard default values are given in Recommendations T.416, T.417 and T.418.

The value of this attribute is a list of default values for any of the defaultable attributes (document architecture attributes as well as content architecture attributes) for which the document application profile defines a default value different from the default value defined in the T.410 Series of Recommendations.

5.3.3 Document architecture class

This attribute specifies the document architecture class used in the document.

The value of this attribute is 'formatted', 'processable' or 'formatted processable', representing one of the document architecture classes defined in Recommendation T.412.

5.3.4 Content architecture classes

This attribute specifies the content architecture classes used in the document.

The value of this attribute consists of one or more ASN.1 object identifiers referring to content architecture classes defined in the T.410 Series of Recommendations or in other standards.

Constraints on the permitted content architecture classes may be specified by the document application profile. The value of each object identifier must designate a content architecture class defined in accordance with the rules specified in Recommendation T.412.

Note - If no document application profile is specified, this attribute can only take values of identifiers of content architecture classes specified in Recommendations T.416, T.417 and T.418 (see § 5.3.1).

5.3.5 Interchange format class

This attribute specifies the interchange format class used to represent the document.

The value of this attribute is 'A' or 'B', representing one of the interchange format classes defined in Recommendation T.415.

5.3.6 ODA version

This attribute identifies the Document Architecture Standard or Recommendation, and its version, to which the document conforms.

The value of this attribute consists of two parameters. The value of the first parameter is a string of characters from the document profile character set which identifies the Document Architecture Standard or Recommendation. The value of the second parameter is a complete representation of a calendar date (as defined in ISO 8601), which indicates that the document conforms to the version and addenda current on this date.

5.3.7 Non-basic document characteristics

5.3.7.1 Profile character sets

This attribute specifies the graphic character set(s), other than the character set specified in § 5.1, used in those document profile attributes that consist of character strings.

The value of this attribute consists of the escape sequence(s) used to announce and to designate the set(s) in accordance with ISO 2022 and the register of ISO 2375.

5.3.7.2 Comments character sets

This attribute specifies the graphic character set(s), other than the default character set specified in Recommendation T.412, used in the document architecture attributes "user-readable comments" and "user-visible name".

The value of this attribute consists of the escape sequence(s) used to announce and to designate the set(s) in

accordance with ISO 2022 and the register to ISO 2375.

5.3.7.3 Alternative representation character sets

This attribute specifies the graphic character set(s), other than the default character set specified in Recommendation T.412, used in the document architecture attributes "user-readable comments" and "user-visible name".

The value of this attribute consists of the escape sequence(s) used to announce and to designate the set(s) in accordance with ISO 2022 and the register to ISO 2375.

5.3.7.4 Document constituent attributes

5.3.7.4.1 Page dimensions

This attribute specifies the non-basic values of the attribute "dimensions" of layout objects of type 'page' used in the document.

The value of this attribute consists of one or more pairs of page dimensions. A pair of page dimensions shall be included in this attribute when the horizontal component and/or the vertical component of the page dimensions exceed the corresponding components of the basic page dimensions specified by the document application profile.

Each pair of page dimensions is represented by a pair of positive integers specifying the horizontal and vertical components of the page dimensions in scaled measurement units.

5.3.7.4.2 Medium types

This attribute specifies the non-basic values of the attribute "medium type" used in the document.

The value of this attribute consists of one or more groups of parameter values. Each group consists of the parameter "nominal page size" and/or the parameter "side of sheet", and details one non-basic medium type used in the document. The meaning and format of each parameter is defined in Recommendation T.412.

5.3.7.4.3 Layout paths

This attribute specifies the non-basic values of the attribute "layout path" used in the document.

The value of this attribute consists of one or more values of the attribute "layout path", as defined in Recommendation T.412.

5.3.7.4.4 Protections

This attribute specifies the non-basic values of the attribute "protection" used in the document.

The value of this attribute consists of one or more values of the attribute "protection", as defined in Recommendation T.412.

5.3.7.4.5 Block alignments

This attribute specifies the non-basic values of the attribute "block alignment" used in the document.

The value of this attribute consists of one or more values of the attribute "block alignment", as defined in Recommendation T.412.

5.3.7.4.6 Fill orders

This attribute specifies the non-basic values of the attribute "fill order" used in the document.

The value of this attribute consists of one or more values of the attribute "fill order", as defined in Recommendation T.412.

5.3.7.4.7 Transparencies

This attribute specifies the non-basic values of the attribute "transparency" used in the document.

The value of this attribute consists of one or more values of the attribute "transparency", as defined in Recommendation T.412.

5.3.7.4.8 Colours

This attribute specifies the non-basic values of the attribute "colour" used in the document.

The value of this attribute consists of one or more values of the attribute "colour", as defined in Recommendation T.412.

5.3.7.4.9 Borders

This attribute specifies the non-basic values of the attribute "border" used in the document.

The value of this attribute consists of one or more values of the attribute "border", as defined in Recommendation T.412.

5.3.7.4.10 Page positions

This attribute specifies the non-basic values of the attribute "page position" used in the document.

The value of this attribute consists of one or more values of the attribute "page position", as defined in Recommendation T.412.

5.3.7.4.11 Types of coding

This attribute specifies the non-basic values of the attribute "type of coding" used in the document.

The value of this attribute consists of one or more values of the attribute "type of coding", as defined in Recommendation T.412.

5.3.7.5 Coding attributes

This attribute consists of one or more sets of coding attribute values used in the document. Each set pertains to a single content type and consists of coding attribute values that are specified as non-basic by the document application profile. The names of the sets of coding attribute values are:

- character coding attributes;
- raster-graphics coding attributes;
- geometric-graphics coding attributes.

5.3.7.6 Presentation features

This attribute consists of one or more sets of presentation features used in the document. Each set pertains to a single content type and consists of presentation features that are specified as non-basic by the document application profile.

Presentation features consist of presentation attribute values, control function parameter values, sets of content elements and their parameter values.

The names of the sets of presentation features are:

- character presentation;
- raster-graphics presentation features;
- geometric-graphics presentation features.

5.3.8 Non-basic structure characteristics

5.3.8.1 Number of objects per page

This attribute specifies the maximum number of specific layout objects per page used in the document. This attribute is only specified if the maximum number of objects per page exceeds the value specified by the document application profile.

5.3.9 Additional document characteristics

5.3.9.1 Unit scaling

This attribute specifies a scaling factor that is to be applied to all attributes and numeric control function parameters that specify absolute or relative positions and dimensions.

The value of this attribute is a pair of integers m and n which indicate that these positions and dimensions are to be interpreted as being expressed in units equal to m/n BMU. The name of this unit is scaled measurement unit (SMU).

In the absence of this attribute, the scaled measurement unit is equal to 1 BMU.

5.3.9.2 Fonts list

This attribute specifies the character font(s) used in the document.

The value of this attribute consists of one or more pairs, each pair comprising an integer, representing the font identifier, and a font reference. A font reference consists of a subset of the font attributes defined in ISO 9541-5. Appropriate subsets are defined in ISO 9541-6.

A font is referred to from within the document by means of the associated integer font identifier.

Note - The font attributes defined in ISO 9541-5 include both a structured font name and a set of character attributes.

5.4 Document management attributes

5.4.1 Document description

5.4.1.1 Title

This attribute gives the name of the document as specified by the author.

The value of this attribute consists of a string of characters from the document profile character set.

5.4.1.2 Subject

This attribute contains information to indicate the subject of the document.

The value of this attribute consists of a string of characters from the document profile character set.

5.4.1.3 Document reference

This attribute identifies the document. The attribute's value is used to refer to the document from other documents (see §§ 5.2.7, 5.2.8, 5.4.5).

The value of this attribute is either an ASN.1 object identifier or a string of characters from the document profile character set.

5.4.1.4 Document type

This attribute specifies the type of document, e.g. memorandum, letter, report, resource. This attribute specifies only an informal name; it does not specify a relation to a particular document class description.

The value of this attribute consists of a string of characters from the document profile character set.

5.4.1.5 Abstract

This attribute contains information to summarize the document.

The value of this attribute consists of a string of characters from the document profile character set.

5.4.1.6 Keywords

This attribute specifies one or more character strings that permit logical associations to be made about the content of the document.

The value of this attribute consists of string(s) of characters from the document profile character set.

5.4.2 Dates and times

5.4.2.1 Document date and time

This attribute specifies the date and, optionally, the time of day that the originator associates with the document. The value of this attribute consists of a date character string and, optionally, a time of day character string, in accordance with ISO 8601.

5.4.2.2 Creation date and time

This attribute specifies the date and, optionally, the time of day when the document was created. The value of this attribute consists of a sequence of parameters. Each parameter consists of a date character string and, optionally, a time of day character string, in accordance with ISO 8601.

5.4.2.3 Local filing date and time

This attribute specifies the date and, optionally, the time of day when the document was filed. When more than one entry occurs, the last entry indicates the most recent local filing date and time.

The value of this attribute consists of a date character string and, optionally a time of day character string, in accordance with ISO 8601.

5.4.2.4 Expiry date and time

This attribute specifies the date and, optionally, the time of day after which the document is considered to be invalid.

The value of this attribute consists of a date character string and, optionally, a time of day character string, in accordance with ISO 8601.

5.4.2.5 Start date and time

This attribute specifies the date and, optionally, the time of day after which the document is considered to be valid.

The value of this attribute consists of a date character string and, optionally, a time of day character string, in accordance with ISO 8601.

5.4.2.6 Purge date and time

This attribute specifies the date and, optionally, the time of day after which the document can be purged from wherever it is stored.

The value of this attribute consists of a date character string and, optionally, a time of day character string, in accordance with ISO 8601.

5.4.2.7 Release date and time

This attribute specifies the date and, optionally, the time of day after which the document can be released from any restrictions specified in the attribute "security classification".

The value of this attribute consists of a date character string and, optionally a time of day character string, in accordance with ISO 8601.

5.4.2.8 Revision history

This attribute specifies the history of the document, indicating when, where and by whom the document was created or revised.

The value of this attribute consists of a sequence of groups of parameters. Each group forms an entry in the history. The first group in the sequence provides information on the creation of the document. The last group in the sequence provides information on the current version of the document. Each group consists of the following optional parameters:

- a) revision date and time;
- b) version number;
- c) revisor(s);
- d) version reference;
- e) user comments;

where

- "revision date and time" indicates the date and, optionally, the time of day on which a revision occurred; the format is in accordance with ISO 8601;
- "version number" indicates the version number of the document resulting from the revision; the format is a string of characters from the document profile character set;
- "revisor(s)" identifies the person(s) who carried out a revision; the identification may include the specification of the revision; the identification may include the specification of the name of one or more individuals, information to identify their position within an organization, and the name of the organization; the format consists of the following three optional sub-parameters:

- 1) name(s);
- 2) position;
- 3) organization;

where

- "name(s)" has the format of one or more personal names, according to the format specified in Annex A;
- "position" is a string of characters from the document profile character set;
- "organization" is a string of characters from the document profile character set;
- "version reference" is either an ASN.1 object identifier or a string of characters from the document profile character set; the value of this parameter is equal to the value of the document profile attribute "document reference" of the document referred to;
- "user comments" describes the revisions made; the value of this parameter is a string of characters from the document profile character set.

5.4.3 Originators

5.4.3.1 Organizations

This attribute identifies the originating organization(s) associated with the document.

The value of this attribute consists of string(s) of characters from the document profile character set.

5.4.3.2 Preparers

This attribute identifies the name(s) of the person(s) and/or organization(s) responsible for the preparation of the document.

The value of this attribute consists of one or more entries. Each entry has two optional parameters:

- "personal name of preparer", according to the format specified in Annex A;
- "preparerw's organization", a string of characters from the document profile character set, which indicates information about the organization responsible for preparing the document, e.g. name, address, telephone number.

5.4.3.3 Owners

This attribute identifies the current administrator(s) of the document.

The value of this attribute consists of one or more entries. Each entry has two optional parameters:

- "personal name of preparer", according to the format specified in Annex A;
- "ownerw's organization", a string of characters from the document profile character set, which indicates information about the organization which owns the document, e.g. name, address, telephone number.

5.4.3.4 Authors

This attribute identifies the author(s) of the document.

The value of this attribute consists of one or more entries. Each entry has two optional parameters:

- "personal name of author", according to the format specified in Annex A;
- "authorw's organization", a string of characters from the document profile character set, which indicates information about the organization responsible for the authorship of the document, e.g. name, address, telephone number.

5.4.4 Other user information

5.4.4.1 Copyright

The value of this attribute consists of one or more entries. Each entry has two optional parameters:

- "copyright information", identifying the name(s) of the legal party (parties) in whom the copyright of the document is vested; the value of this parameter consists of string(s) of characters from the document profile character set;
- "copyright dates", specifying the date(s) associated with the copyright by the holder(s) identified by the parameter "copyright information"; the value of this parameter consists of string(s) of characters representing date(s) in accordance with ISO 8601.

5.4.4.2 Status

This attribute specifies the document status, e.g. working paper, draft proposal.

The value of this attribute consists of a string of characters from the document profile character set.

5.4.4.3 User-specific codes

This attribute specifies additional user-specific code(s), e.g. contract number, project number, budget code. The value of this attribute consists of a string(s) of characters from the document profile character set.

5.4.4.4 Distribution list

This attribute specifies a list of the intended recipients of the document.

The value of this attribute consists of one or more entries. Each entry has two optional parameters:

- "personal name of recipient", according to the format specified in Annex A;
- "recipientw's organization", a string of characters from the document profile character set, which indicates information about the organization with which the recipient is associated, e.g. name, address, telephone number.

5.4.4.5 Additional information

This attribute may be used for information that cannot be specified by any other attribute of the document profile. This attribute can have any value.

5.4.5 External references

5.4.5.1 References to other documents

This attribute specifies reference(s) to any other associated document(s). It consists of one or more entries.

The value of each entry is either an ASN.1 object identifier or a string of characters from the document profile character set.

This value is equal to the value of the document profile attribute "document reference" of the document referred to.

5.4.5.2 Superseded documents

This attribute specifies reference(s) to document(s) superseded by the current document. It consists of one or more entries.

The value of each entry is either an ASN.1 object identifier or a string of characters from the document profile character set.

This value is equal to the value of the document profile attribute "document reference" of the document referred to.

5.4.6 Local file references

This attribute specifies where a copy (copies) of the document may be found. It consists of one or more entries, one for each location where a copy (copies) of the document may be found.

Each entry consists of up to three optional parameters, namely

- the file name;
- the location of the document;
- user comments.

The file name is a string of characters that can be used to identify the document uniquely in a filing system. The second parameter specifies the location of the document in a filing system, for example the name of the filing system, the name of the directory and folder in which the document is contained. The third parameter is used to provide user-readable comments.

The value of each parameter is a string of characters from the document profile character set.

5.4.7 Content attributes

5.4.7.1 Document size

This attribute represents the estimated size of the whole document, expressed as a number of 8-bit bytes, where the estimate must not be less than the actual size. The size includes that of the document profile and the document body (if present).

The value of this attribute is an integer, which is not less than the number of 8-bit bytes in the document data stream.

5.4.7.2 Number of pages

This attribute specifies the number of pages in the specific layout structure (if any) of the document. The value of this attribute is an integer.

5.4.7.3 Languages

This attribute specifies the primary language(s) in which the content of the document is written.

The value of this attribute consists of string(s) of characters from the document profile character set.

5.4.8 Security information

These attributes provide security information only and are not intended to ensure security measures.

5.4.8.1 Authorization

This attribute identifies the person or organization approving or authorizing the document.

The value of this attribute consists either of a personal name with the format specified in Annex A, or the name of an organization consisting of a string of characters from the document profile character set.

5.4.8.2 Security classification

This attribute specifies the security classification assigned by the document owner(s) relating to such aspects as its visibility, reproduction, storage, audit and destruction requirements.

The value of this attribute consists of a string of characters from the document profile character set.

5.4.8.3 Access rights

This attribute specifies the access right(s) to the document relating to its privacy, as defined by the current owner(s) of the document.

The value of this attribute consists of string(s) of characters from the document profile character set.

ANNEX A

(to Recommendation T.414)

Format of personal names

(Normative)

The format of a personal name consists of a group of up to four parameters:

- a) surname;
- b) given name;
- c) initials;
- d) title.

The "surname" parameter is the family name of a person. This parameter is mandatory.

The "givenname" parameter is the name by which a person is commonly known. This parameter is optional.

The "initials" parameter consists of a sequence of the initial characters of any names other than "surname" and "givenname", in the order in which they are normally written. This parameter is optional.

The "title" parameter is the title by which a person is normally addressed in documents. This parameter is optional.

The format of each of the parameters is a string of characters from the document profile character set.

Note - The format defined above is the same as that given in Recommendation X.411 (1984).

ANNEX B

(to Recommendation T.414)

Minimum set of document profile attributes to be supported by document application profiles

(Normative)

The document profile attributes listed in Table B-1/T.414 shall be included in any document profile level defined as a part of a document application profile, subject to the conditions specified in the explanatory notes referred to in the second column of the Table.