

Implementation of
ISO/IEC 8613-12:1996

Information technology — Open Document Architecture (ODA) and Interchange Format: Identification of document fragments

ICS 35.240.20

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee IST/18, Document processing and related communication, upon which the following bodies were represented:

- British Computer Society
- HM Treasury (Central Computer and Telecommunications Agency)
- IBM United Kingdom Ltd.
- International Computers Limited
- Joint Information Systems Committee of the Higher Education Funding Council
- Level 7 Ltd.
- National Computing Centre Ltd.
- National Health Services
- Rank Xerox Ltd.

This British Standard, having been prepared under the direction of the Information Systems Technology Assembly, was published under the authority of the Standards Board and comes into effect on 15 August 1996

© BSI 11-1998

The following BSI references relate to the work on this standard:
Committee reference IST/18
Draft for comment 93/654323 DC

ISBN 0 580 26250 2

Amendments issued since publication

Amd. No.	Date	Comments

Contents

	Page
Committees responsible	Inside front cover
National Foreword	ii
Foreword	iii
Text of ISO/IEC 8613-12	1

National foreword

This British Standard reproduces verbatim ISO/IEC 8613-12:1996 and implements it as the UK national standard.

This British Standard is published under the direction of the Information Systems Technology Assembly whose Technical Committee IST/18 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international committee any enquiries on interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

NOTE International and European Standards, as well as overseas standards, are available from Customer Services, BSI, 389 Chiswick High Road, London W4 4AL.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO/IEC title page, pages ii to iv, pages 1 to 28, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

INTERNATIONAL
STANDARD

ISO/IEC
8613-12

First edition
1996-05-15

**Information technology — Open Document
Architecture (ODA) and interchange
format: Identification of document
fragments**

*Technologies de l'information — Architecture des documents ouverts
(ODA) et format d'échange: Identification de fragments de document*



Reference number
ISO/IEC 8613-12:1996(E)

Contents

	Page
Foreword	iii
Introduction	1
1 Scope	1
2 Normative references	2
2.1 Identical Recommendations International Standards	2
2.2 Paired Recommendations International Standards equivalent in technical content	2
2.3 Additional references	3
3 Definitions	3
4 Abbreviations	4
5 Conventions	4
6 Overview	4
6.1 Location expressions	4
6.2 External references	4
6.3 Subprofiles	4
6.4 Relationship to application profiles	4
7 Location expressions	5
7.1 Introduction	5
7.2 Basic location expressions	5
7.2.1 Region locators	5
7.2.2 Subtree locators	5
7.2.3 Constituent locators	5
7.2.4 Identifier production functions	7
7.3 Composite location expressions	10
7.4 ASN.1 representation	11
8 External references	15
8.1 Reference name	15
8.2 Additional document profile and hypermedia document profile attributes-External references list	15
8.3 ASN.1 representation	16
9 Subprofiles	16
9.1 Definition of subprofile	16
9.2 Content of the subprofiles	17
9.2.1 Subprofile identifier	17
9.2.2 Subprofile reference	17
9.2.3 Subprofile precedence	17
9.2.4 Document fragment reference	17
9.2.5 Document characteristics-Content architecture classes	17
9.2.6 Document fragment management attributes	18
9.3 ASN.1 representation	21
Annex A Changes to other Parts of ITU-T Rec. T.410-Series ISO/IEC 8613	24
A.1 Additions to ITU-T Rec. T.411 ISO/IEC 8613-1	24
A.2 Additions to ITU-T Rec. T.412 ISO/IEC 8613-2	24
A.3 Additions to ITU-T Rec. T.414 ISO/IEC 8613-4	24
A.4 Changes to ITU-T Recommendation T.415 ISO/IEC 8613-5	24
Annex B Examples of location expressions	25
Annex C Application class tag assignments	26
Annex D Summary of object identifiers	27
Figure 1 — Example of scope of subprofiles	17
Table C.1 — Application class tags	26
Table D.1 — Summary of ASN.1 object identifiers	27

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 8613-12 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 18, *Document processing and related communication*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation T.422.

ISO/IEC 8613 consists of the following part, under the general title *Information technology — Open Document Architecture (ODA) and interchange format*:

- *Part 1: Introduction and general principles;*
- *Part 2: Document structures;*
- *Part 3: Abstract interface for the manipulation of ODA documents;*
- *Part 4: Document profile;*
- *Part 5: Open Document Interchange Format;*
- *Part 6: Character content architectures;*
- *Part 7: Raster graphics content architectures;*
- *Part 8: Geometric graphics content architectures;*
- *Part 9: Audio content architectures;*
- *Part 10: Formal specifications;*
- *Part 11: Tabular structures and tabular layout;*
- *Part 12: Identification of document fragments;*
- *Part 13: Spreadsheet;*
- *Part 14: Temporal relationship and non-linear structures.*

Annex A forms an integral part of this part of ISO/IEC 8613. Annexe B to Annexe D are for information only.

Introduction

This ITU-T Recommendation | International Standard was prepared as a joint publication by ITU-T Study Group 8 and ISO/IEC Joint Technical Committee 1.

At present, the ITU-T Recommendations in the T.410-Series | International Standard ISO/IEC 8613 consists of:

- Introduction and general principles;
- Document structures;
- Abstract interface for the manipulation of ODA documents;
- Document profile;
- Open document interchange format;
- Character content architectures;
- Raster graphics content architectures;
- Geometric graphics content architectures;
- Audio content architectures;
- Formal specification of the Open Document Architecture (FODA).
(The formal Specification is applicable to ISO/IEC 8613 only).
- Tabular structures and tabular layout;
- Identification of document fragments;
- Temporal relationships and non-linear structures.

Further Recommendations | International Standards may be added to this series of ITU-T Recommendations | International Standards.

Development of this series of ITU-T Recommendations | International Standards was originally in parallel with ECMA-101 standard: *Open Document Architecture*.

This ITU-T Recommendation | International Standard contains four annexes:

- Annex A (integral) contains changes to other parts of ITU-T Rec. T.410-Series | ISO/IEC 8613;
- Annex B (non-integral) contains examples of location expressions;
- Annex C (non-integral) contains the application class tag assignments;
- Annex D (non-integral) contains a summary of object identifiers.

1 Scope

The purpose of ITU-T Rec. T.410-Series | ISO/IEC 8613 is to facilitate the interchange and manipulation of documents.

In the context of these Recommendations | International Standards, 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, raster graphics elements and geometric graphics elements, all potentially within one document.

NOTE These Recommendations | International Standards are designed to allow for extensions, including spreadsheets and additional types of content such as video.

In addition to the content types defined in these Recommendations | International Standards, ODA also provides for arbitrary content types to be included in documents.

These Recommendations | International Standards apply to the interchange of documents by means of data communications or the exchange of storage media.

These Recommendations | International Standards provide 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 of the document.

These Recommendations | International Standards also provide for the interchange of ODA information structures used for the processing of interchanged documents.

This Recommendation | International Standard provides:

- a mechanism for the identification of document fragments. Location expressions are used for this purpose;
- the specification of external references;
- the specification of subprofiles.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- ITU-T Recommendation T.411 (1993) | ISO/IEC 8613-1:1994, *Information technology — Open Document Architecture (ODA) and interchange format: Introduction and general principles*.
- ITU-T Recommendation T.412 (1993) | ISO/IEC 8613-2:1995, *Information technology — Open Document Architecture (ODA) and interchange format: Document structures*.
- ITU-T Recommendation T.413 (1994) | ISO/IEC 8613-3:1995, *Information technology — Open Document Architecture (ODA) and interchange format: Abstract interface for the manipulation of ODA documents*.
- ITU-T Recommendation T.414 (1993) | ISO/IEC 8613-4:1994, *Information technology — Open Document Architecture (ODA) and interchange format: Document profile*.
- ITU-T Recommendation T.415 (1993) | ISO/IEC 8613-5:1994, *Information technology — Open Document Architecture (ODA) and interchange format: Open Document Interchange Format*.
- ITU-T Recommendation T.416 (1993) | ISO/IEC 8613-6:1994, *Information technology — Open Document Architecture (ODA) and interchange format: Character content architectures*.
- ITU-T Recommendation T.417 (1993) | ISO/IEC 8613-7:1994, *Information technology — Open Document Architecture (ODA) and interchange format: Raster graphics content architectures*.
- ITU-T Recommendation T.418 (1993) | ISO/IEC 8613-8:1994, *Information technology — Open Document Architecture (ODA) and interchange format: Geometric graphics content architectures*.
- ITU-T Recommendation T.419¹⁾ | ISO/IEC 8613-9: ...¹⁾, *Information technology — Open Document Architecture (ODA) and interchange format: Audio content architectures*.
- ITU-T Recommendation T.421 (1994) | ISO/IEC 8613-11:1995, *Information technology — Open Document Architecture (ODA) and interchange format: Tabular structures and tabular layout*.
- ITU-T Recommendation T.424¹⁾ | ISO/IEC 8613-14: ...¹⁾, *Information technology — Open Document Architecture (ODA) and interchange format: Temporal relationships and non-linear structures*.

2.2 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.208 (1988), *Specification of Abstract Syntax Notation One (ASN.1)*. ISO/IEC 8824:1990, *Information technology — Open Systems Interconnection — Specification of Abstract Syntax Notation One (ASN.1)*.
- ITU-T X.501 (1993), *Information technology — Open Systems Interconnection — The Directory: Models*.

¹⁾ Presently at the stage of draft.

ISO/IEC 9594-2:1990, *Information technology — Open Systems Interconnection — The Directory — Part 2: Models*.

— ITU-T X.511 (1993), *Information technology — Open Systems Interconnection — The Directory: Abstract service definition*.

ISO/IEC 9594-3:1990, *Information technology — Open Systems Interconnection — The Directory — Part 3: Abstract service definition*.

2.3 Additional references

— ISO/IEC 6937:1994, *Information technology — Coded graphic character set for text communication — Latin alphabet*.

— ISO 8601:1988, *Data elements and interchange formats — Information interchange — Representation of dates and times*.

— ISO/IEC 8613-10:1995, *Information technology — Open Document Architecture (ODA) and interchange format — Part 10: Formal specifications*.

— ISO/IEC 10031-2:1991, *Information technology — Text and office systems — Distributed — office-applications model — Part 2: Distinguished-object-reference and associated procedures*.

3 Definitions

For the purposes of this Recommendation | International Standard the definitions given in ITU-T Rec. T.411 | ISO/IEC 8613-1 apply.

The following additional definitions are given in this Recommendation | International Standard:

3.1

associated information name

a name which uniquely identifies a set of information being transmitted with the document, the precise semantics being local to the transfer mechanism being used

3.2

document fragment

a part of a document identified by a location expression

3.3

external entity

any amount of structured external ODA information that can be interchanged as a unit

3.4

external reference

a reference to structured information that is external to the document that references it

3.5

identifier production function

a function defined for producing identifiers of constituents with given properties, used for the construction of constituent locators

3.6

location expression

a mechanism to select a document fragment based on values of attributes and other document characteristics

3.7

locator

part of a location expression which identifies one or more constituents, a subtree in a specific structure, or a region in a specific structure

3.8

reference name

a pointer into an external references list in either the document profile or the hypermedia document profile

3.9

subprofile

a subprofile is a constituent consisting of a set of attributes, taken from a subset of the document profile attributes, that can be specified for a document fragment

4 Abbreviations

For the purposes of this Recommendation | International Standard the abbreviations given in ITU-T Rec. T.411 | ISO/IEC 8613-1 and ISO/IEC 10031-2 apply.

The following additional abbreviations are given in this Recommendation | International Standard:

DOR Distinguished Object Reference

5 Conventions

For the purposes of this Recommendation | International Standard the conventions given in ITU-T Rec. T.411 | ISO/IEC 8613-1 and ITU-T Rec. T.412 | ISO/IEC 8613-2 apply.

6 Overview

The areas covered by this Specification are the following:

- location expressions, for identification of document fragments;
- external references, for identification and handling of information that is external to a given document;
- subprofiles, for the provision of, mainly, management information applying to a document fragment.

6.1 Location expressions

The purpose of location expressions is to provide a general mechanism for the identification of document fragments. Location expressions may be either basic or composite depending on the structure of the expression.

Location expressions allow the selection of a document fragment based on values of attributes and other document characteristics.

6.2 External references

Document constituents may refer to information external to the document they belong to, by means of the external references mechanism. Reference entities are the referenced information.

6.3 Subprofiles

A subprofile is a constituent consisting of a set of attributes, taken from a subset of the document profile attributes, that can be specified for a document fragment. This document fragment shall be referenced using a location expression.

The attributes of a subprofile provide management information, or other kind of information, applying to a document fragment, in a similar way that document profile attributes apply to whole documents.

6.4 Relationship to application profiles

Application profiles may be defined for applications that need identification of document fragments, to specify (in addition to the rules described in clause 10 of ITU-T Rec. T.411 | ISO/IEC 8613-1):

- permissible ranges of values for location expressions;
- what the value range of the parameter “external entity” shall be;
- rules for external information names;
- rules for associated information names;
- rules for distinguished names;
- values and semantics of ASN.1 object identifiers in external entities.