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STANDARD

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**Information technology — Open  
Document Architecture (ODA) and  
interchange format: Tabular structures and  
tabular layout**

*Technologies de l'information — Architecture de documents ouverts  
(ODA) et format d'échange: Structures tabulaires et disposition tabulaire*



Reference number  
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## Contents

	<i>Page</i>	
1	Scope.....	1
2	Normative references .....	2
2.1	Identical Recommendations   International Standards .....	2
2.2	Paired Recommendations   International Standards equivalent in technical terms .....	2
3	Definitions.....	2
4	Abbreviations .....	4
5	Conventions.....	4
5.1	Content associated with a composite logical object.....	4
5.2	The symbol / .....	4
6	Relationship to ITU-T Recommendation T.412   ISO/IEC 8613-2.....	5
7	Features of tabular structures and tabular layout.....	5
7.1	Content types and inner structures of table entries .....	6
7.2	Dimensions of tables, rows and columns.....	6
7.3	Placement of tables .....	6
7.4	Spanning cells .....	6
7.5	Placement of table entries .....	6
7.5.1	Gutter space around table lines .....	6
7.5.2	Offset of table entries.....	7
7.5.3	Alignment of a table entry within a table cell .....	7
7.5.4	Reference line alignment .....	7
7.6	Split of tables .....	7
7.6.1	Direction of table split.....	7
7.6.2	Repetition of headings .....	7
7.7	Rendition of table lines .....	8
7.8	Supplementary lines.....	8
8	Grid logical components .....	8
8.1	Logical grids .....	8
8.1.1	Logical grid lines and logical grid locations .....	8
8.1.2	Major and minor paths .....	8
8.1.3	Major and minor logical grid lines.....	8
8.1.4	Major and minor sizes of a logical grid .....	9
8.1.5	Logical coordinates .....	9
8.1.6	Logical grid rectangles.....	9
8.2	Association of entry objects with logical grid rectangles .....	9

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9	Grid frame components .....	10
9.1	Layout grid .....	11
9.1.1	Layout grid lines .....	11
9.1.2	Major and minor paths .....	11
9.1.3	Major and minor layout grid lines .....	11
9.1.4	Grid line segments .....	13
9.1.5	Major and minor sizes of a layout grid .....	13
9.1.6	Major and minor dimensions of a layout grid .....	13
9.1.7	Grid intervals, layout grid locations and layout grid rectangles .....	13
9.1.8	Dimensions of grid intervals .....	14
9.1.9	Naming of edges of a layout grid rectangle .....	15
9.1.10	Grid gutter spaces .....	16
9.1.11	Position of a layout grid .....	16
9.1.12	Minimal layout of a layout grid .....	17
9.2	Association of grid frames with grid logical objects .....	17
9.3	Binding of entry frames to layout grid rectangles .....	17
9.3.1	Correspondence between layout grid lines and logical grid lines .....	18
9.3.2	Correspondence between layout grid rectangles and logical grid rectangles .....	18
9.3.3	Layout of content associated with entry objects .....	18
10	Duplication of content .....	18
10.1	Reproductions of content .....	18
10.1.1	Reproductions of the content of a basic logical object .....	18
10.1.2	Reproductions of the content of a target object .....	19
10.1.3	Reproduction bundles .....	19
10.2	Layout of content within reproductions .....	19
10.2.1	Order of layout .....	19
10.2.2	Splits of content portions .....	19
10.2.3	Effects of layout directive attributes on layout .....	20
10.3	Content identifiers for reproductions .....	22
11	Expressions .....	22
11.1	Grid construction expressions .....	22
11.2	Attributes with grid construction expressions as values .....	23
11.3	Grid interval expressions .....	24
11.4	Interval indicators .....	24
11.5	Grid gutter expressions .....	26
11.6	Gutter indicators .....	27
11.7	Grid line expressions .....	27
11.8	Line characteristics .....	27
11.9	Line characteristic expressions .....	28
11.10	Line segment characteristics .....	28
12	Attribute definitions .....	29
12.1	Layout attributes .....	29
12.1.1	Frame alignment point .....	29
12.1.2	Grid dimensions .....	31
12.1.3	Grid gutters .....	31
12.1.4	Grid interval dimensions .....	33
12.1.5	Grid lines .....	34
12.1.6	Grid position .....	36
12.1.7	Indent – major; .....	38
	Indent – minor .....	38

12.1.8	Major path.....	40
12.1.9	Minor path.....	40
12.1.10	Position .....	40
12.1.11	Reference line alignment – major; .....	47
	Reference line alignment – minor .....	47
12.1.12	Supplementary lines.....	51
12.2	Layout directive attributes .....	52
12.2.1	Block alignment point.....	52
12.2.2	Grid description .....	53
12.2.3	Grid frame classes.....	55
12.2.4	Obligatory same layout objects.....	55
12.2.5	Presentation precedence.....	57
12.2.6	Selective same layout objects .....	59
12.2.7	Supplementary line directive .....	60
12.3	Presentation attributes .....	61
12.3.1	Character content architecture .....	61
12.3.2	Raster graphics content architecture .....	63
12.3.3	Geometric graphics content architecture.....	63
13	Reference model of the document layout process with respect to tabular layout .....	65
13.1	Layout of reproductions of content.....	65
13.2	Layout reference from a grid logical object to grid frames .....	65
13.3	Determination of the dimensions of layout grids.....	66
13.3.1	Constraints on the dimensions of layout grids .....	66
13.3.2	Minimal layout of the layout grid .....	66
13.4	Determination of the imaging factors of table lines .....	67
13.5	Processing order of basic logical objects .....	67
13.6	Placement of an entry frame not bound to a grid rectangle .....	68
13.7	Placement of an entry frame bound to a grid rectangle .....	68
13.7.1	Determination of the area available for placement of entry frames.....	68
13.7.2	Placement of an entry frame within its available area .....	75
13.7.3	Placement of temporarily positioned entry frames .....	78
13.7.4	Rectification of position of entry frames with centre order .....	79
14	Reference model of the document imaging process with respect to tabular layout .....	80
14.1	Generation of images of layout grid lines .....	80
14.1.1	Direction of a grid line segment.....	80
14.1.2	Position and dimension of a grid line segment .....	80
14.1.3	Imaging factors for a grid line segment .....	81
14.2	Generation of images of supplementary lines.....	81
Annex A	Formal definition of tabular structures and tabular layout.....	82
A.1	Layout descriptors.....	82
A.2	Logical descriptors.....	84
A.3	Style descriptors.....	84
A.4	Default value lists .....	85
A.5	Character presentation attributes.....	85
A.6	Raster graphics presentation attributes.....	86
A.7	Geometric graphics presentation attributes .....	87
A.8	Grid layout descriptors.....	87
A.9	Grid style descriptors .....	90

Annex B – Formal definition of tabular structures and tabular layout .....	92
B.1 Example 1 .....	92
B.1.1 Generic Layout Structure .....	92
B.1.2 Explanation .....	94
B.2 Example 2 .....	95
B.2.1 Generic Logical Structure .....	95
B.2.2 Specific Logical Structure .....	96
B.2.3 Specific Layout Structure .....	97
B.2.4 Explanation .....	100
B.3 Example 3 .....	104
B.3.1 Generic Logical Structure .....	104
B.3.2 Specific Logical Structure .....	104
B.3.3 Specific Layout Structure .....	106
B.3.4 Explanation .....	108
B.4 Example 4 .....	110
B.4.1 Generic Logical Structure .....	110
B.4.2 Specific Logical Structure .....	110
B.4.3 Explanation .....	111
B.5 Example 5 .....	111
B.5.1 Generic Logical Structure .....	111
B.5.2 Specific Logical Structure .....	112
B.5.3 Generic Layout Structure .....	118
B.5.4 Layout Style .....	119
B.5.5 Explanation .....	120
B.6 Example 6 .....	121
B.6.1 Generic Logical Structure .....	121
B.6.2 Specific Logical Structure .....	121
B.6.3 Generic Layout Structure .....	121
B.6.4 Layout Style .....	123
B.6.5 Explanation .....	124
B.7 Example 7 .....	125
B.7.1 Generic Logical Structure .....	125
B.7.2 Layout Styles .....	126
B.7.3 Presentation Styles .....	127
B.7.4 Generic Layout Structure .....	127
B.7.5 Specific Logical Structure .....	128
B.7.6 Explanation .....	129

**List of Figures**

1	Logical grid .....	9
2	Association of entry objects with logical grid rectangles.....	10
3	Layout grid.....	11
4	Layout grid lines .....	12
5	Grid intervals.....	14
6	Grid interval dimensions .....	15
7	Edges of grid rectangles .....	16
8	Grid origin and grid reference point.....	17
9	Gutter spaces .....	32
10	Grid origin and grid reference point.....	37
11	Major alignment of grids.....	38
12	Indent – major .....	39
13	Example of first typical case of placement of entry frames with centre order .....	46
14	Example of second typical case of placement of entry frames with centre order .....	46
15	Quasi alignment groups.....	48
16	Alignment groups.....	49
17	Presentation of reference lines .....	50
18	Processing order of basic logical objects .....	58
19	Alignment points in the character content architecture .....	62
20	Alignment points in the raster graphics content architecture .....	64
21	Available area for an entry frame with normal order.....	71
22	Available area for an entry frame with centre order .....	72
23	Available area for an entry frame with reverse order.....	73
24	Reference line alignment.....	78
B.1	Generic Layout Structure of Example 1.....	93
B.2	Example 1.....	94
B.3	Generic Logical Structure of Example 2.....	95
B.4	Specific Structures of Example 2 .....	96
B.5	Formatted Table of Example 2.....	96
B.6	Placement of Entry Frame within Grid Rectangle .....	97
B.7	Overflow of Table Contents.....	109
B.8	Table with Raster Contents .....	111
B.9	Generic Logical Structure of Example 5.....	112
B.10	Specific Logical Structure of Example 5 .....	117
B.11	Layout of Example 5.....	120
B.12	Indentation.....	121
B.13	Cut-in heads .....	125
B.14	Redundant duplication of table headings .....	126
B.15	Reference Line Alignment .....	129

**List of Tables**

1	Types of grid construction expression .....	23
2	Positions of grid origins and grid reference points .....	37

## 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 8613-11 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.421.

ISO/IEC 8613 consists of the following parts, 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 relationships and non-linear structures*

Annex A forms an integral part of this part of ISO/IEC 8613. Annex B is for information only.



## Introduction

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

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

- Introduction and general principles;
- Document structures;
- Document profile;
- Open document interchange formats;
- Character content architectures;
- Raster graphics content architectures;
- Geometric graphics content architectures;
- Formal specification of the Open Document Architecture (FODA)  
(The formal specification is applicable to ISO/IEC 8613 only.)

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 the ECMA 101 standard: *Open Document Architecture*.

This series of ITU-T Recommendations | International Standards is a new edition of the CCITT T.410-Series of Recommendations (1988) and ISO 8613 (1989).

Significant technical changes are the inclusion of the following amendments as agreed by ITU and ISO/IEC:

- Alternative Representation;
- Annex on use of MHS/MOTIS;
- Colour;
- Conformance Testing Annex;
- Document Application Profile, Proforma and Notation;
- Security;
- Streams;
- Styles;
- Tiled Raster Graphics.

In addition, a number of technical corrigenda have been applied to this Recommendation | International Standard.

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

- Annex A – Formal definition of tabular structures and tabular layout.
- Annex B – Examples.

## INTERNATIONAL STANDARD

## ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY – OPEN DOCUMENT ARCHITECTURE (ODA)  
AND INTERCHANGE FORMAT: TABULAR STRUCTURES  
AND TABULAR LAYOUT**

**1 Scope**

The purpose of the ITU-T Recommendation T.410-Series | ISO/IEC 8613 is to facilitate the interchange 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 graphic elements and geometric graphic elements, all potentially within one document.

NOTE – These Recommendations | International Standards are designed to allow for extensions, including typographical features, colour, spreadsheets and additional types of content such as sound.

In addition to the content type 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.

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

This Recommendation | International Standard:

- defines a document architecture, in order to allow presentation and processing of tabular material, that can be used in conjunction with the document architecture defined in ITU-T Recommendation T.412 | ISO/IEC 8613-2;
- defines two types of components, the grid logical component and the grid frame component, which are characterized by association with grids;
- defines the layout attributes and layout directive attributes, in order to allow representation of tabular layout, applicable to this document architecture;
- defines the presentation attributes, in order to allow presentation of tabular layout, applicable to the content architectures defined in ITU-T Recommendation T.416 | ISO/IEC 8613-6, ITU-T Recommendation T.417 | ISO/IEC 8613-7, and ITU-T Recommendation T.418 | ISO/IEC 8613-8;
- describes reference models of the document layout process and the document imaging process which, together with the document processing model described in ITU-T Recommendation T.412 | ISO/IEC 8613-2, determine representation and presentation of tabular layout.

## 2 Normative references

The following ITU-T Recommendations and International Standards contain provisions which, through references, 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.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.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.*

### 2.2 Paired Recommendations | International Standards equivalent in technical terms

- 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).*
- CCITT Recommendation X.209 (1988), *Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1).*  
ISO/IEC 8825:1990, *Information technology – Open Systems Interconnection – Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*