

AS/NZS 4223.1:1994
ISO/IEC ISP 10610-1:1993

Australian/New Zealand Standard

**Information technology—
International standardized profile
FOD11—Open document format:
Simple document structure—
Character content architecture only**

**Part 1: Document application
profile**

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Documents ✓

Document Sharing Hub

AS/NZS 4223.1:1994

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT/1, Information Systems—Interconnection. It was approved on behalf of the Council of Standards Australia on 10 June 1994 and on behalf of the Council of Standards New Zealand on 9 May 1994. It was published on 17 October 1994.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT/1 on Information Systems—Interconnection. It is identical with and has been reproduced from ISO/IEC ISP 10610-1:1993, *Information technology—International Standardized Profile FOD11—Open Document Format: Simple document structure—Character content architecture only*, Part 1: *Document Application Profile (DAP)*.

This Standard is issued as a Joint Standard under the terms of the Active Cooperation Agreement between Standards Australia and Standards New Zealand.

The objective of this Standard is to provide computer users with a specification of interchange formats for the transfer of structured documents (character content only) between equipment designed for word or document processing.

This Standard is one of a series of Open Systems Interconnection (OSI) Standards which are currently under development. Since OSI Standards are developmental, there may be some minor difficulties encountered in their implementation. For this reason, Standards Australia will be providing, through the OSI Help Desk, a service to coordinate and disseminate information concerning difficulties which are identified in using this Standard.

Users of this Standard are advised by Standards Australia and Standards New Zealand, under arrangements made with ISO and IEC, as well as certain other Standards organizations, that the number of this Standard is not reproduced on each page; its identity is shown only on the cover and title pages.

For the purpose of this Standard, the source text should be modified as follows:

- (a) *Terminology* The words ‘this Australian/New Zealand Standard’ should replace the words ‘this International Standard’ wherever they appear.
- (b) *Decimal marker* Substitute a full point for a comma where it appears as a decimal marker.
- (c) *References* The references to international Standards should be replaced by references, where appropriate, to the following Australian or Joint Australian/New Zealand Standards:

Reference to International Standard or other publication		Australian or Joint Australian/New Zealand Standard	
ISO		AS	
2022	Information processing—ISO 7-bit and 8-bit coded character sets—Code extension techniques	1953	Information processing—ISO 7-bit and 8-bit coded character sets—Code extension techniques
2375	Data processing—Procedure for the registration of escape sequences	—	
6937	Information processing—Coded character sets for text communication	2793	Information processing—Coded character sets for text communication
6937-2	Part 2: Latin alphabetic and non-alphabetic graphic characters	2793.2	Part 2: Latin alphabetic and non-alphabetic graphic characters
6937-2/Add.1	Addendum 1	—	

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ISO		AS	
8613	Information processing—Text and office systems—Office Document Architecture (ODA) and interchange format	3951	Information processing—Text and office systems—Office Document Architecture (ODA) and interchange format
8613-1	Part 1: Introduction and general principles	3951.1	Part 1: Introduction and general principles
8613-1/Add.1	Addendum 1: Document Application Profile Proforma and Notation	—	
8613-2	Part 2: Document structures	3951.2	Part 2: Document structures
8613-4	Part 4: Document profile	3951.4	Part 4: Document profile
8613-5	Part 5: Office Document Interchange Format (ODIF)	3951.5	Part 5: Office Document Interchange Format (ODIF)
8613-6	Part 6: Character content architectures	3951.6	Part 6: Character content architectures
8859	Information processing—8-bit single-byte coded graphic character sets		
8859-1	Part 1: Latin alphabet No. 1	—	
8879	Information processing—Text and office systems—Standard Generalized Markup Language (SGML)	3514	Information processing—Text and office systems—Standard generalized markup language (SGML)
9069	Information processing—SGML support facilities—SGML Document Interchange Format (SDIF)	3649	Information processing—SGML support facilities—SGML document interchange format (SDIF)
9293	Information processing—Volume and file structure of flexible disk cartridges for information interchange	3714	Data storage and transfer media—Volume and file structure of flexible disk cartridges (diskettes) for information interchange
ISO/IEC			
646	Information technology—ISO 7-bit coded character set for information interchange	1776	Information processing—7-bit coded character set for information interchange
7350	Information technology—Registration of repertoires of graphic characters from ISO/IEC 10367	2760	Text communication—Registration of graphic character subrepertoires
8824	Information technology—Open Systems Interconnection—Specification of Abstract Syntax Notation One (ASN.1)	3625	Information technology—Open Systems Interconnection—Specification of Abstract Syntax Notation One (ASN.1)
8825	Information technology—Open Systems Interconnection—Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)	3626	Information technology—Open Systems Interconnection—Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)

ISO/IEC ISP		AS/NZS	
11181	Information technology — International Standardized Profile FOD26—Open Document Format: Enhanced document structure—Character, raster graphics and geometric graphics content architectures	—	
11181-1	Part 1: Document Application Profile (DAP)	—	
11182	Information technology — International Standardized Profile FOD36—Open Document Format: Extended document structure—Character, raster graphics and geometric graphics content architectures	—	
11182-1	Part 1: Document Application Profile (DAP)	—	
ISO/IEC TR 10000	Information technology — Framework and taxonomy of International Standardized Profiles	3966	Information technology — Framework and taxonomy of International Standardized Profiles
10000-1	Part 1: Framework	3966.1	Part 1: Framework
10000-2	Part 2: Taxonomy of OSI Profiles	3966.2	Part 2: Taxonomy of profiles
ITU-T Recommendations			
T.400	Introduction to Document Architecture, Transfer and Manipulation	—	
T.502	Document Application Profile PM-11 FOD11 Open Document Format: Simple document structure—Character content architecture only	—	

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AUSTRALIAN/NEW ZEALAND STANDARD

**Information technology—International standardized profile
FOD11—Open document format: Simple document
structure—Character content architecture only****Part 1:
Document application profile****1 Scope**

This International Standardized Profile specifies interchange formats for the transfer of structured documents between equipment designed for word or document processing. Such documents contain character content.

The documents that can be interchanged using this International Standardized Profile range from memos and letters to simple structured documents. This International Standardized Profile provides a comprehensive level of features for the transfer of documents between these systems.

This International Standardized Profile allows documents to be interchanged in the following forms:

- formatted form;
- processable form;
- formatted processable form.

The architecture levels defined for these three forms have matching functionalities so that the interchange formats of a document are convertible from a processable form to any other form.

This International Standardized Profile is independent of the processes carried out in an end system to create, edit or reproduce documents. It is also independent of the means to transfer documents which, for example, may be by means of communication links or storage media.

A document structured in accordance with this International Standardized Profile is represented for interchange by one of two DAPs. One DAP uses the Office Document Interchange Format (ODIF), the other DAP uses the Office Document Language (ODL), both as defined in ISO 8613-5.

When this document refers to *this International Standardized Profile*, it is referring to either of the document application profiles defined by this International Standardized Profile

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this International Standardized Profile. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this International Standardized Profile are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by ISPs to such documents is that they may be specific to a particular edition. Members of IEC and ISO maintain registers of currently valid International Standards and ISPs, and CCITT maintains published editions of its current Recommendations.

2.1 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation T.411 (1988), *Open Document Architecture (ODA) and Interchange Format: Introduction and General Principles*.

ISO 8613-1 : 1989, *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format - Part 1: Introduction and general principles*.

- CCITT Recommendation T.411 Annex F (1991), *Open Document Architecture (ODA) and Interchange Format: Introduction and General Principles - Annex F : Document Application Profile Proforma and Notation*.

ISO 8613-1 Add.1¹⁾ : *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format - Part 1: Introduction and general principles - Addendum 1 : Document Application Profile Proforma and Notation*.

- CCITT Recommendation T.412 (1988), *Open Document Architecture (ODA) and Interchange Format: Document Structures*.

ISO 8613-2 : 1989, *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format - Part 2: Document structures*.

- CCITT Recommendation T.414 (1988), *Open Document Architecture (ODA) and Interchange Format: Document Profile*.

ISO 8613-4 : 1989, *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format - Part 4: Document profile*.

- CCITT Recommendation T.415 (1988), *Open Document Architecture (ODA) and Interchange Format: Open Document Interchange Format (ODIF)*.

ISO 8613-5 : 1989, *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format - Part 5: Office Document Interchange Format (ODIF)*.

- CCITT Recommendation T.416 (1988), *Open Document Architecture (ODA) and Interchange Format: Character Content Architecture*.

ISO 8613-6 : 1989, *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format - Part 6: Character content architectures*.

¹⁾ To be published.

- 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)*.

- CCITT Recommendation T.505¹⁾, *Document Application Profile PM-26 | FOD26 - Open Document Format : Enhanced document structure - Character, raster graphics and geometric graphics content architectures*.

ISO/IEC ISP 11181-1 : 1993, *Information technology - International Standardized Profile FOD26 - Open Document Format : Enhanced document structure - Character, raster graphics and geometric graphics content architectures - Part 1: Document Application Profile (DAP)*.

- CCITT Recommendation T.506¹⁾, *Document Application Profile PM-36 | FOD36 - Open Document Format : Extended document structure - Character, raster graphics and geometric graphics content architectures*.

ISO/IEC ISP 11182-1 : 1993, *Information technology - International Standardized Profile FOD36 - Open Document Format : Extended document structure - Character, raster graphics and geometric graphics content architectures - Part 1: Document Application Profile (DAP)*.

NOTE - In the titles of the various parts of ISO 8613 the term "Office" occurs. ISO has decided that this shall be changed to "Open" and the new edition of ISO 8613 (to be published) will use "Open" in place of "Office". For this reason this International Standardized Profile uses the term "Open" in its title.

2.2 Additional references

- ISO/IEC 646 : 1991, *Information technology - ISO 7-bit coded character set for information interchange*.
- ISO 2022 : 1986, *Information processing - ISO 7-bit and 8-bit coded character sets - Code extension techniques*.
- ISO 2375 : 1985, *Data processing - Procedure for registration of escape sequences*.
- ISO 6937-2 : 1983, *Information processing - Coded character sets for text communication - Part 2: Latin alphabetic and non-alphabetic graphic characters*.
- ISO 6937-2 Add.1 : 1989, *Information processing - Coded character sets for text communication - Part 2: Latin alphabetic and non-alphabetic graphic characters - Addendum 1*.
- ISO/IEC 7350 : 1991, *Information technology - Registration of repertoires of graphic characters from ISO/IEC 10367*.
- ISO 8859-1 : 1987, *Information processing - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1*.

¹⁾ To be published. The title of this recommendation may be changed.

- ISO 8879 : 1986, *Information processing - Text and office systems - Standard Generalized Markup Language (SGML)*.
- ISO 9069 : 1988, *Information processing - SGML support facilities - SGML Document Interchange Format (SDIF)*.
- ISO 9293 : 1987, *Information processing - Volume and file structure of flexible disk cartridges for information interchange*.
- ISO/IEC TR 10000-1 : 1992, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 1 : Framework*.
- ISO/IEC TR 10000-2 : 1992, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 2 : Taxonomy of OSI Profiles¹⁾*.
- CCITT Recommendation T.400 (1988), *Introduction to Document Architecture, Transfer and Manipulation*.
- CCITT Recommendation T.502²⁾, *Document Application Profile PM-11 | FOD11 Open Document Format : Simple document structure - Character content architecture only*.

3 Definitions

For the purposes of this International Standardized Profile, the following definitions apply.

The definitions given in CCITT Rec. T.411 | ISO 8613-1 are applicable to this International Standardized Profile.

Constituent constraint names : Each constituent that may be included in a document that conforms to this International Standardized Profile has been given a unique name which serves to associate that constituent with a constituent constraint defined in this International Standardized Profile.

The convention is that full names are used (i.e., no abbreviations are used), two or more words in a name are concatenated and each word begins with a capital. Examples of constituent constraint names used in this International Standardized Profile are BodyText and RectoPage.

In clause 6, each constituent constraint provided by this International Standardized Profile is italicized once at the point in the text at which the purpose of that constituent constraint is defined. This also serves to identify all the constituent constraints provided by this International Standardized Profile.

The same constituent constraint names are also used in the technical specification in clause 7 so that there is a one-to-one correspondence between the use of these names in clauses 6 and 7.

Although the constituent constraint names relate to the purpose of the constituent constraints, the semantics of constituents shall not be implied from the names that are used. Also, these names do not appear in an interchanged document but a mechanism for associating constituents in a document with constituent constraints is provided (see 6.6.1). Thus in an application using this International Standardized Profile, the constituents may be known to the user by different names.

¹⁾ Taxonomy of this document is based on the first edition of ISO/IEC TR 10000-2 (published 1990). In the present edition of ISO/IEC TR 10000-2 (published 1992), the profile identifiers FOD11, FOD26 and FOD36 were changed to FOD011, FOD026 and FOD036.

²⁾ To be published. The title of this recommendation may be changed.

4 Relationship with other International Standardized Profiles

This International Standardized Profile belongs to a series of hierarchically related International Standardized Profiles which include FOD26 and FOD36.

The features supported by this International Standardized Profile are a subset of the features supported by the International Standardized Profiles FOD26 and FOD36 and thus all data streams conformant to this International Standardized Profile are also conformant to FOD26 and FOD36, apart from the DAP identifier.

NOTE - This International Standardized Profile is identical to CCITT Recommendation T.502 (PM-11)(to be published), except that PM-11 only defines the use of the ODIF interchange format.

5 Conformance

In order to conform to this International Standardized Profile, a data stream representing a document shall meet the requirements specified in 5.1.

This part of the International Standardized Profile does not define implementation support requirements. These requirements are defined in other parts that make use of this International Standardized Profile.

5.1 Data stream conformance

The following requirements apply to the encoding of data streams which conform to this International Standardized Profile:

- a) the data stream shall be encoded either in accordance with the ASN.1 encoding rules defined in CCITT Rec. X.209 | ISO/IEC 8825 or the SGML encoding rules defined in ISO 8879;
- b) the data stream shall be structured in accordance with the interchange formats defined in clause 8;
- c) the document, as represented by the data stream after resolution of any external references, shall be structured in accordance with one of the documents architecture classes as defined in 6.1 and shall contain all mandatory constituents specified for that class; other constituents may be included, provided that they are permitted for that class, as specified in clause 7;
- d) each constituent shall contain all those attributes specified as required for that constituent in this International Standardized Profile; other attributes may be specified provided that they are permitted for that constituent;
- e) the attribute values specified shall be within the range of permissible values specified in this International Standardized Profile;
- f) the encoded document shall be constructed in accordance with the abstract document architecture defined in CCITT Rec. T.412 | ISO 8613-2;
- g) the document shall be structured in accordance with the characteristics and constraints specified in clause 6.

5.2 Implementation conformance

This subclause states the requirements for implementations claiming conformance to this International Standardized Profile.

A conforming receiving implementation shall be capable of receiving *either* any data streams conforming to this International Standardized Profile structured in accordance with ODIF *or* any data streams conforming to this International Standardized Profile structured in accordance with ODL *or* both of these. Receiving usually, but not always, involves recognizing and further processing the data stream elements. The explicit meaning of "receiving" is determined by another part of this International Standardized Profile.

6 Characteristics supported by this document application profile

This clause describes the characteristics of documents which may be represented by data streams conforming to this International Standardized Profile. This clause also describes how these characteristics are represented in term of constituent constraints.

6.1 Overview

6.1.1 General

This International Standardized Profile supports the interchange of documents in the following forms:

- processable form, which facilitates the revision of a document by a recipient;
- formatted form, which facilitates the reproduction of a document as intended by the originator;
- formatted processable form, which facilitates the reproduction of a document as intended by the originator or facilitates the revision of a document by a recipient.

The constituents that make up these three classes of data stream are defined in 6.1.2, 6.1.3 and 6.1.4. Constituents defined as "required" shall occur in any data stream that conforms to this International Standardized Profile. Constituents listed as "optional" may or may not be present in the data stream depending on the requirements of the particular data stream.

6.1.2 Formatted form documents

Required constituents:

- a document profile;
- layout object descriptions representing a specific layout structure;
- content portion descriptions associated to the basic objects in the specific layout structure.

Optional constituents:

- layout object class descriptions representing a factor generic layout structure;
- presentation styles.

6.1.3 Processable form documents

Required constituents:

- a document profile;
- logical object class descriptions representing a complete or partial generic logical structure;
- logical object descriptions representing a specific logical structure;
- content portion descriptions associated to the basic objects in the specific logical structure.

Optional constituents:

- layout object class descriptions representing a complete generic layout structure;
- layout styles;
- presentation styles;
- content portion descriptions associated to the basic object classes in the generic logical structure.

In the case of processable form documents, when the generic layout structure is not present, additional restrictions are placed on the layout directives that may be included in layout styles. These restrictions are defined in 6.4.3.

Note that when the generic layout structure is present, a layout style is required by the constituent constraint of the type Passage.

6.1.4 Formatted processable form documents

Required constituents:

- a document profile;
- logical object class descriptions representing a complete or partial generic logical structure;
- logical object descriptions representing a specific logical structure;
- layout object class descriptions representing a complete generic layout structure;
- layout object descriptions representing a specific layout structure;
- content portion descriptions associated to the basic objects in the specific logical/layout structure;
- layout styles.

Optional constituents:

- presentation styles;
- content portion descriptions associated to the basic object classes generic logical structure.

6.2 Logical characteristics

6.2.1 Introduction

This subclause defines the logical constituent constraints provided by this International Standardized Profile to represent the characteristics of documents containing logical component descriptions.

Different constituent constraints may be used to represent and distinguish parts of a document that have different logical characteristics. This subclause describes the general characteristics and typical uses of the constituent constraints that are provided.

The descriptions of the logical characteristics represented by each of the constituent constraints is provided for guidance only. It is the responsibility of the user to determine how a document is to be represented using the constituents provided. Adherence to these guidelines can enhance the mutual understanding of a document by an originator and a recipient.

6.2.2 Overview of the logical structure

From the logical point of view, the document consists of two parts, namely a body part and a common part.

The body part represents the main content of a document and is intended to be reproduced in the body area of the pages that make up the document. The body part shall be included in all documents that are interchanged in accordance with this International Standardized Profile.

The common part represents common content that is to be placed in reserved header and footer areas on each page of a document. Header and footer content are independently optional and so may be included in an interchanged document only if required.

6.2.3 Body part of the logical structure

6.2.3.1 DocumentLogicalRoot

DocumentLogicalRoot is a constituent constraint representing the top level in the document logical structure. Its immediate subordinates consist of a sequence of one or more constituent constraints of the type *Passage*.

6.2.3.2 Passage

Passage is a constituent constraint that represents the first level of logical subdivision of a document. It may be used to indicate a logical grouping of subordinate parts of a document that are to be regarded as an entity for reading or that have common layout and presentation characteristics.

Passages are typically used to represent:

- the contents to be placed on the title page of a report;
- the front matter in the table of contents or foreword;
- the main matter of the document;
- the back matter, consisting of appendices, glossary or index.

The immediate subordinates of a *Passage* consist of a sequence of one or more constituent constraints of the type *BodyText*.

A document contains only one class definition of the type *Passage*, which defines the common characteristics of sets of *Passages* within the document such as layout properties. For example, when the generic layout structure is present, *Passage* shall be entirely laid out in the pages of one page set.

6.2.3.3 *BodyText*

BodyText is a constituent constraint which represents the lowest level of logical subdivision of a document. This constituent constraint is a subdivision of *Passages*. This allows the layout and presentation requirements of different parts of the document to be specified.

This is a basic logical constituent that directly refers to content portions that contain character content. *BodyText* in the specific logical structure shall refer to one or more content portions each containing processable, formatted or formatted processable character content. However, this constituent in the generic logical structure shall not refer to generic content.

6.2.4 Common content part of the logical structure

6.2.4.1 *CommonContent*

CommonContent is a constituent constraint that represents common content that is to be laid out in the header and footer areas of the pages of a document. Common content consists of character content.

Any number of constituent constraints of the type *CommonContent* may be contained in a document. *CommonContent* is a composite logical object class whose immediate subordinates consist of an arbitrary ordered sequence of one or more of the following constituent constraints:

- *CommonText*;
- *PageNumber*.

When the generic layout structure is present, constituents of the type *CommonContent* and their associated subordinate constituents are constrained to be laid out in frames representing header or footer areas using the "logical source" mechanism (see 6.3.6).

6.2.4.2 *CommonText*

CommonText is a constituent constraint that represents the common character content that is to be laid out in the header or footer area of a document. For example, header or footer content that appears on each page in a sequence of pages may be represented by this constituent.

CommonText is a constituent constraint for a basic logical object class that references one content portion containing processable, formatted or formatted processable character content.

6.2.4.3 *PageNumber*

PageNumber is a constituent constraint that represents the common character content that is to be laid out in the header or footer area of a document. This constituent constraint is specifically used when it is required to present a header or footer content which contains an automatically generated page number.

PageNumber is a basic logical object class that contains a content generator. This content generator contains a reference to a page number which is automatically evaluated when the document is laid out. This provides the means of representing the page numbers that are displayed on the consecutive pages of a document.

Each page number consists of a single number which may be represented in the form of Arabic or Roman numerals or in its alphabetic equivalent. Page numbering schemes may start at 0 or any value greater than 0 at the document root or page set level.

The format of the content generators is defined in 6.6.3.

6.3 Layout characteristics

This subclause defines the constituent constraints for layout components which are provided by this International Standardized Profile to represent the characteristics of documents.

Different constituent constraints may be used to represent and distinguish parts of a document that have different layout characteristics. This subclause describes the general characteristics and typical uses of the constituent constraints that are provided.

The descriptions of the layout characteristics represented by each of the constituent constraints is provided for guidance only. It is the responsibility of the user to determine how a document is to be represented using the constituents provided. Adherence to these guidelines can enhance the mutual understanding of a document by an originator and a recipient.

6.3.1 Overview of the layout characteristics

The document structure allows the document content to be laid out and presented in one or more page sets. Each page set may be used for different parts of the document, for example, the title page, foreword, table of contents, document body and appendices.

Each page set consists of a series of pages. In general, each page may be sub-divided into three areas; the body area, which is used to layout the document body; and the header and footer areas, which may be used to layout the common content.

Page layout type supported by this International Standardized Profile is used when the character content is to be laid out horizontally (from left to right or from right to left) and from top to bottom within the body area, the header area and footer area. Portrait and landscape orientations of this page layout are illustrated in Figures 1 and 2 respectively.

6.3.2 DocumentLayoutRoot

DocumentLayoutRoot is a constituent constraint represents the top level in the document layout structure. Its immediate subordinates consist of a sequence of one or more constituent constraints of the type *PageSet*. The numbering schemes for pages may be initialised on this constituent constraint.

6.3.3 PageSet

PageSet is a constituent constraint that represents a grouping of pages within a document. A *PageSet* is typically used to represent a part of a document that has different layout requirements from other parts of a document. Also, a *PageSet* may correspond to a part of a document that has a certain logical significance, for example, a *PageSet* might represent the front matter in a document or an individual chapter.

Only one level of *PageSet* is allowed in a document. However, a document may contain any number of class definitions of type *PageSet* which may be used, for example, to provide a choice of alternative layouts for different parts of a document or to specify the exact layout requirements for each successive part of a document.

The immediate subordinates of a PageSet consist of a combination of constituent constraints of the types Page, RectoPage and VersoPage as described in 6.3.4.1.

6.3.4 Page characteristics

6.3.4.1 Page constituents

Three constituent constraints are provided to represent the pages within a document, namely *Page*, *RectoPage* and *VersoPage*.

The only difference in the characteristics of these types of constituent constraints concerns the values that may be specified for the parameter "side of sheet" in the attribute "medium type". In the case of *Page*, the value of this parameter may be specified as 'recto', 'verso' or 'unspecified'. In the case of *RectoPage*, the value of this parameter may be specified as 'recto' or 'unspecified'. In the case of *VersoPage*, the value of this parameter may be specified as 'verso' or 'unspecified'. The values 'recto' and 'verso' of the "side of sheet" parameter of the "medium type" attribute are non-basic.

The pages that make up a page set consist of an optional initial page which is represented by the constituent constraint *Page* and which is optionally followed by either:

- a) A sequence of pages represented by the constituent constraint *Page*. All pages in this sequence shall have the same layout characteristics but these characteristics may differ from those of the initial page.
- b) A sequence of pages which are intended to be laid out alternatively on the 'recto' and 'verso' (or on the 'verso' and 'recto') sides of the presentation medium and are represented by the constituent constraints *RectoPage* and *VersoPage* respectively. All pages in this sequence shall have the same layout characteristics but these characteristics may differ from those of the initial page.

Pages having the same layout characteristics are pages that have the same page layout (see 6.3.4.5) and for which the body area, header area (if present) and footer area (if present) have the same dimensions and positions within the page (see 6.3.4.3). Pages having the same layout characteristics do not necessarily have the same position on the presentation medium (see 6.3.4.4).

A page set shall contain at least one page.

An initial page is typically used at the beginning of a document or of a section within a document. It may be used, for example, for a title page whose layout requirements differ from the following pages.

The following restrictions also apply to the pages within a page set:

- All the pages must have the same dimensions and orientation (see 6.3.4.2);
- All pages are to be laid out on the same size of presentation medium (see 6.3.4.3).

6.3.4.2 Page dimensions

The dimensions of the pages may be specified as any value (in BMUs) that is equivalent to or less than ISO A3 or ANSI B paper sizes in portrait or landscape orientation. The dimensions may be specified in portrait or landscape orientation. Japanese page sizes B4 and B5 are also supported but the dimensions of these pages lie within the range of dimensions given above.

Dimensions equivalent to or less than the common assured reproduction area of ISO A4 and ANSI A in portrait or landscape orientation are basic values. Larger page sizes are non-basic and their use shall be indicated in the document profile.

Any default page dimensions may be specified in the document profile subject to the maximum dimensions defined above.

NOTE - The size termed "North American Letter (NAL)" in CCITT Rec. T.410 series | ISO 8613 (e.g. in CCITT Rec. T.412 | ISO 8613-2, section 7) is in this Specification called "ANSI A" in order to be consistent with the other reference to ANSI standard paper sizes.

6.3.4.3 Nominal Page sizes

The nominal page sizes that may be specified are listed in Table 1. These may be specified in portrait or landscape orientation. All values of nominal page size are non-basic and hence all values used in a document must be indicated in the document profile.

Any value of nominal page size defined in Table 1, subject to the restrictions specified above, may be specified as the default value in the document profile.

Table 1 also includes the recommended assured reproduction area (ARA). Information loss may occur when a document is reproduced if the dimensions of constituent constraints of the type page exceed the ARA for the specified nominal page size.

Table 1 - Nominal page sizes

Page type	Size in inches or millimeters	Size in BMUs	ARA in BMUs
ISO A5	148 mm x 210 mm	7 015 x 9 920	not defined
ISO A4	210 mm x 297 mm	9 920 x 14 030	9 240 x 13 200
ISO A3	297 mm x 420 mm	14 030 x 19 840	13 200 x 18 480
ANSI legal	8,5 in. x 14 in.	10 200 x 16 800	9 240 x 15 480
ANSI A	8,5 in. x 11 in.	10 200 x 13 200	9 240 x 12 400
ANSI B	11 in. x 17 in.	13 200 x 20 400	12 744 x 19 656
Japanese legal	257 mm x 364 mm	12 141 x 17 196	11 200 x 15 300
Japanese letter	182 mm x 257 mm	8 598 x 12 141	7 600 x 10 200

6.3.4.4 Page offset

The page offset is the distance of the position of the left and top edges of the page relative to the left and top edges respectively of the presentation medium on which each page is reproduced. Any value of page offset may be specified provided that no part of the page area lies outside the area of the nominal page. Also, page offsets specified for the initial, recto and verso pages within a given page set may differ. The default page offset may be specified in the document profile.

6.3.4.5 Page layout characteristics

Each page in a document may be subdivided into three rectangular areas, as follows:

- a body area which is reserved for content that belongs to the body part of the document (see 6.3.5);

- a header area which is reserved for common header content (see 6.3.6);
- a footer area which is reserved for common footer content (see 6.3.6).

The body area is mandatory and shall occur on every page in a document. The header and footer areas are both optional.

Also, these three areas shall be entirely contained within the page area and shall not overlap.

For the style of page layout supported by this International Standardized Profile, the header and footer areas are placed above and below the body area respectively. The layout paths in the header, body, and footer area always have a value 270 degrees, as shown in Figures 1 and 2. As this International Standardized Profile only supports a layout path of 270 degrees, which is the standard default value specified in CCITT Rec. T.412 | ISO 8613-2, the layout path shall not be explicitly specified in a document.

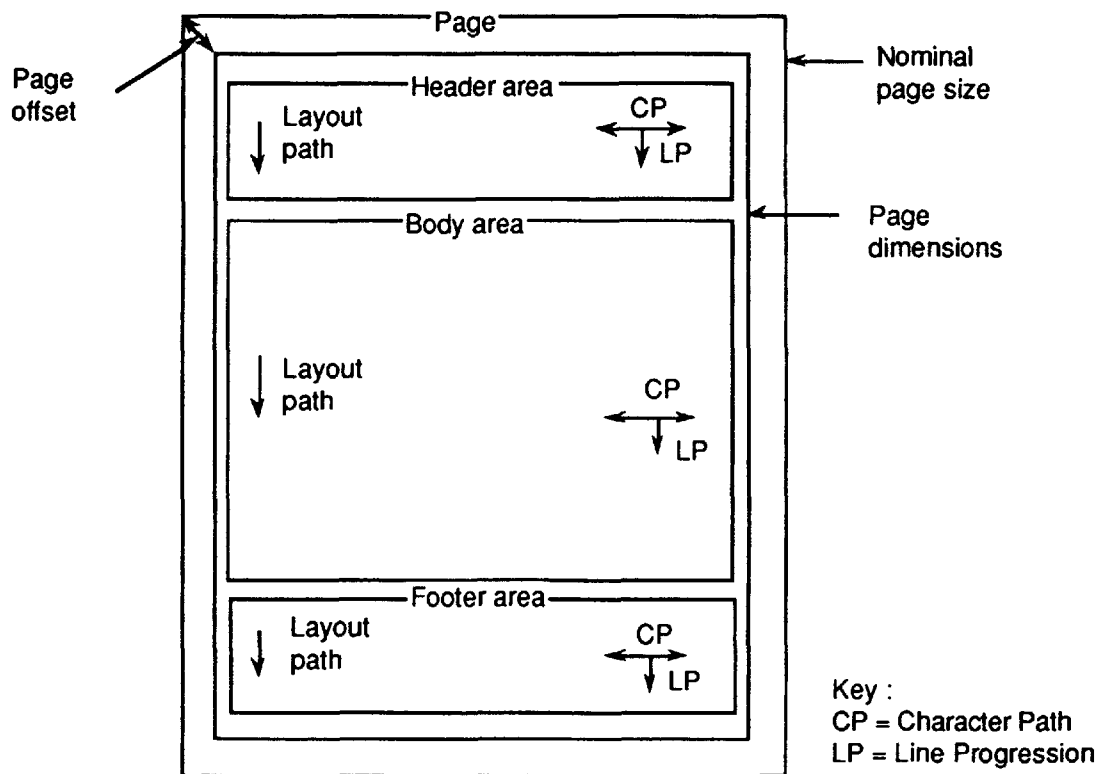


Figure 1 - Page layout (portrait orientation)