INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 15121-1

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Information technology — International Standardized Profile AOD1n — Interactive Manipulation of ODA Documents — Part 1: AOD11 — DTAM/Read Only

Technologies de l'information — Profil normalisé international AOD1n — Manipulation interactive de documents ODA —

Partie 1: AOD11 — DTAM/Lecture uniquement

Reference number
ISO/IEC ISP 15121-1:1997(E)

Contents

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. In addition to developing International Standards, ISO/IEC JTC 1 has created a Special Group on Functional Standardization for the elaboration of International Standardized Profiles.

An International Standardized Profile is an internationally agreed, harmonized document which identifies a standard or group of standards, together with options and parameters, necessary to accomplish a function or a set of functions.

Draft International Standardized Profiles are circulated to national bodies for voting. Publication as an International Standardized Profile requires approval by at least 75 % of the national bodies casting a vote.

International Standardized Profile ISO/IEC ISP 15121-1 was prepared with the collaboration of

— Asia-Oceania Workshop (AOW);

— European Workshop for Open Systems (EWOS);

— Open Systems Environment Implementors' Workshop (OIW).

ISO/IEC ISP 15121 consists of the following parts, under the general title *Information technology — International Standardized Profile AOD1n — Interactive Manipulation of ODA Documents*:

— *Part 1: AOD11 — DTAM/Read Only*

— *Part 2: AOD12 — DTAM/Insert*

— *Part 3: AOD13 — DTAM/Manipulation*

Annex A forms an integral part of this part of ISO/IEC ISP 15121. Annexes B and C are for information only.

Information technology — International Standardized Profile AOD1n — Interactive Manipulation of ODA Documents —

Part 1:
AOD11 — DTAM/Read Only

1 Scope

1.1 General

AODnn International Standard Profiles (ISPs) specify constraints on implementations of the Abstract Interface for the manipulation of ODA (Open Document Architecture) documents, ITU-T Rec. T.413 | ISO/IEC 8613-3, in order to facilitate different implementations of interactive remote document manipulation applications.

ISO/IEC ISP 15121 specifies such constraints when the Abstract Interface for the manipulation of ODA documents (AI) is used in combination with Document Transfer and Manipulation for Confirmed Document Manipulation (DTAM-DM), ITU-T Rec. T.435 and T.436. In this case, constraints on implementations of ITU-T Rec. T.435 and T.436 are also specified.

This part of ISO/IEC ISP 15121 (Interactive Manipulation of ODA Documents - DTAM/Read Only) specifies such constraints for the implementation of applications that provide read only operations on remote ODA documents in an Open Systems Interconnection (OSI) environment.

1.2 Position within the Taxonomy

This part of ISO/IEC ISP 15121 is defined in the taxonomy for Interactive Manipulation of ODA Documents, described in EWOS/TA/94/272 (EWOS/EG/SMMI/94/128). It is the lowest profile of those using DTAM (AOD1n).

This part of ISO/IEC ISP 15121 is intended for implementations where ODA documents can only be reviewed but not modified.

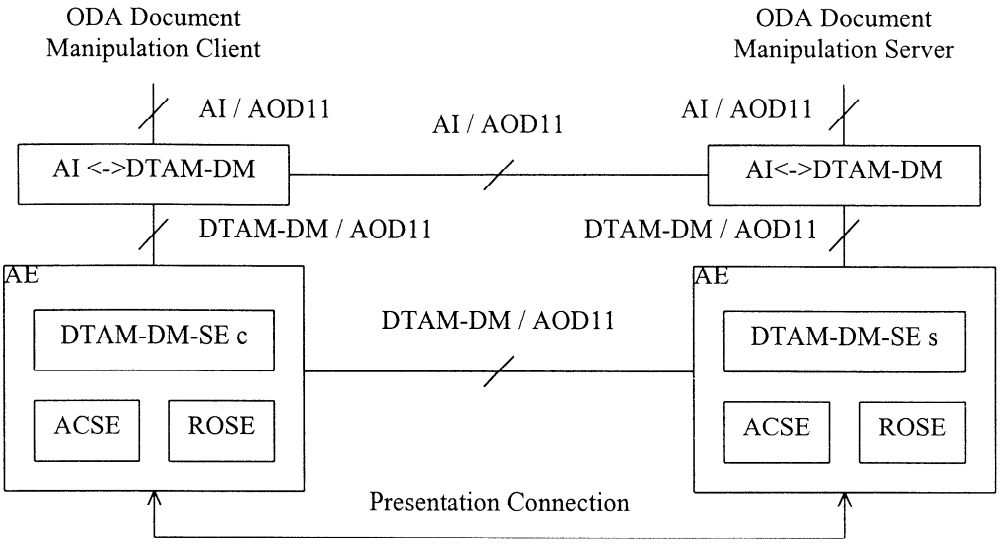
It is a subset of AOD12 and AOD13 profiles.

1.3 User Requirements and Scenario

The model used in this part of ISO/IEC ISP 15121 is that of remote document applications using services provided by the Abstract Interface for the manipulation of ODA documents (AI), in combination with DTAM confirmed document manipulation (DTAM-DM) service and protocol, in order to get access to a remote ODA document.

In this model, the manipulating application will be called *ODA document manipulation client*, while the system to which ODA clients will remotely access for document interactive manipulation will be called *ODA document manipulation server*. The ODA server application will store the documents and will perform the operations on them.

Figure 1 illustrates the environment within which this part of ISO/IEC ISP 15121 is applicable.



Legend:

ACSE	Association Control Service Element
AE	Application Entity
AI	Abstract Interface for the manipulation of ODA documents
AI/AOD11	Abstract Interface for the manipulation of ODA documents following AOD11 profile
DTAM-DM	Document Transfer And Manipulation - Confirmed Document Manipulation
DTAM-DM/AOD11	Document Transfer And Manipulation - Confirmed Document Manipulation following AOD11 profile
DTAM-DM-SE c	Document Transfer And Manipulation - Confirmed Document Manipulation Service Element - Consumer
DTAM-DM-SE s	Document Transfer And Manipulation - Confirmed Document Manipulation Service Element - Supplier
ROSE	Remote Operations Service Element

Figure 1 - AOD11 Environment

2 Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP 15121. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of ISO/IEC ISP 15121 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 ITU-T maintains published editions of its current Recommendations.

2.1 Identical Recommendations | International Standards

- 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.422 (1995) | ISO/IEC 8613-12: 1996, *Information technology - Open Document Architecture (ODA) and interchange format: Identification of document fragments.*

2.2 Additional References

- ITU-T Recommendation T.435 (1995), *Document Transfer And Manipulation (DTAM) - Services and Protocols - Abstract service definition and procedures for confirmed document manipulation.*
- ITU-T Recommendation T.436 (1995), *Document Transfer And Manipulation (DTAM) - Services and Protocols - Protocol specifications for confirmed document manipulation.*
- ISO/IEC ISP 11188-1: 1995, *Information technology - International Standardized Profile - Common upper layer requirements - Part 1: Basic connection oriented requirements.*
- ISO/IEC ISP 11188-2: 1996, *Information technology - International Standardized Profile - Common upper layer requirements - Part 2: Basic connection oriented requirements for ROSE-based profiles.*
- ISO/IEC ISP 11188-3: 1996, *Information technology - International Standardized Profile - Common upper layer requirements - Part 3: Minimal OSI upper layer facilities.*
- ISO/IEC ISP 15121-2: 1997, *Information technology - International Standardized Profile AOD1n - Interactive Manipulation of ODA Documents - Part 2: AOD12 - DTAM/Insert.*
- ISO/IEC ISP 15121-3: 1997, *Information technology - International Standardized Profile AOD1n - Interactive Manipulation of ODA Documents - Part 3: AOD13 - DTAM/Manipulation.*

3 Definitions

For the purposes of this part of ISO/IEC ISP 15121 the definitions given in ITU-T Rec. T.413 | ISO/IEC 8613-3, ITU-T Rec. T.435 and the following definitions apply.

3.1 ODA document manipulation client: Application that remotely manipulates ODA documents.

3.2 ODA document manipulation server: System to which ODA clients remotely access for document interactive manipulation. It stores the documents and performs operations on them.

4 Abbreviations

For the purposes of this part of ISO/IEC ISP 15121 the abbreviations given in ITU-T Rec. T.413 | ISO/IEC 8613-3, ITU-T Rec. T.435 and the following abbreviations apply.

ACSE	Association Control Service Element
AE	Application Entity
AI	Abstract Interface for the manipulation of ODA documents
AODnn	Application Profiles for ODA
DTAM	Document Transfer And Manipulation
DTAM-DM	Document Transfer And Manipulation - Confirmed Document Manipulation
DTAM-DM-SE c	Document Transfer And Manipulation - Confirmed Document Manipulation Service Element - Consumer
DTAM-DM-SE s	Document Transfer And Manipulation - Confirmed Document Manipulation Service Element - Supplier
DTAM-DM-SYM	Document Transfer And Manipulation - Confirmed Document Manipulation Symmetric Service Element
DTAM-TK	Document Transfer And Manipulation - Token Exchange
DTAM-TK-SE	Document Transfer And Manipulation - Token Exchange Service Element
ODA	Open Document Architecture
OSI	Open Systems Interconnection
ROSE	Remote Operations Service Element

5 Conformance

This part of ISO/IEC ISP 15121 states requirements upon implementations to achieve interworking. A claim of conformance to this AOD11 is a claim that all requirements in the relevant base standards and recommendations are satisfied, that all the requirements in ISO/IEC ISP 11188-1, ISO/IEC ISP 11188-2 and ISO/IEC ISP 11188-3 are satisfied, and that all requirements in clauses 6, 7, 8 and 9, and annex A of this part of ISO/IEC ISP 15121 are satisfied. Clauses 6, 7, 8 and 9, and annex A state the equivalence between these requirements and those of the base standards and recommendations.

6 Constraints for the Abstract Interface for the manipulation of ODA documents and for DTAM confirmed document manipulation service

6.1 Support for services provided by AOD11 (Interactive Manipulation of ODA Documents - DTAM/Read Only)

The tables in this subclause specify the AI and DTAM-DM operations that are supported by this part of ISO/IEC ISP 15121.

6.1.1 'Support for services provided by AOD11' tables conventions

This subclause defines the conventions used in the tables presented in subclauses 6.1.2 and 6.1.3.

6.1.1.1 'AI Service' and 'DTAM-DM Service' columns

These columns list the AI and DTAM-DM operations as defined in ITU-T Rec. 413 | ISO/IEC 8613-3 and ITU-T Rec. T.435.

6.1.1.2 'B' column

The 'B' column (for "Base" Recommendation | International Standard) lists the level of support required for conformance to ITU-T Rec. T.413 | ISO/IEC 8613-3 or ITU-T Rec. T.435. The following terminology is used:

- 'f.s.' further study; support for this operation is left for further study in ITU-T Rec. T.413 | ISO/IEC 8613-3 or ITU-T T.435.

- 'm' mandatory; support for this operation is required for conformance to ITU-T Rec. T.413 | ISO/IEC 8613-3 or ITU-T T.435. Mandatory operations must always be present.
- 'o' optional; support for this operation is permitted, but is not mandatory for conformance to ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435. However, if this operation is implemented, it must also conform to the specifications and restrictions contained in ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435. These restrictions may affect the optionality of other operation.
- 'x' excluded; implementation of this operation is not supported by ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435.

6.1.1.3 'P' column

The 'P' column (for "Profile") specifies the level of support required for conformance to this part of ISO/IEC ISP 15121. The following terminology is used:

- 'm' mandatory; support for this operation is required for conformance to this part of ISO/IEC ISP 15121. Mandatory operations must always be present.
- 'o' optional; support for this operation is permitted, but is not mandatory for conformance to this part of ISO/IEC ISP 15121. However, if this operation is implemented, it must also conform to the specifications and restrictions contained in ITU-T Rec. 413 | ISO/IEC 8613-3 and ITU-T Rec. T.435. These restrictions may affect the optionality of other operations.
- 'x' excluded; implementation of this operation is not supported by this part of ISO/IEC ISP 15121.

6.1.2 Abstract interface for the manipulation of ODA documents

The following table specifies the AI operations that are supported by this part of ISO/IEC ISP 15121. The symbols used in the table are defined in subclause 6.1.1.

AI Service	P
List	o
Open	m
Close	m
Get	m
Search	m
Create	x
Delete	x
Modify	x
Replace	x
Copy	x
Move	x
Reserve	x
Unreserve	x
BeginGroup	x
EndGroup	x

6.1.3 DTAM confirmed document manipulation

At least the DTAM-DM 'Basic Read Only Manipulation Level' is required to support ISO/IEC ISP 15121-1.

The following table specifies the DTAM-DM operations as defined in the 'Basic Read Only Manipulation Level' in ITU-T Rec. T.435, and those supported by this part of ISO/IEC ISP 15121. The symbols used in the table are defined in subclause 6.1.1.

DTAM-DM Service	B	P
DTAM-DMBind	m	m
DTAM-DMUnBind	m	m
DM-DOCUMENT-OPEN	m	m
DM-DOCUMENT-SAVE	x	x

DM-DOCUMENT-DISCARD	x	x
DM-DOCUMENT-CLOSE	m	m
DM-DOCUMENT-LIST	o	o
DM-GET	m	m
DM-SEARCH	m	m
DM-CREATE	x	x
DM-DELETE	x	x
DM-MODIFY	x	x
DM-COPY	x	x
DM-MOVE	x	x
DM-REPLACE	x	x
DM-RESERVE	x	x
DM-UNRESERVE	x	x
DM-POINT	o	x
DM-MACRO-CALL	f.s.	x
DM-GROUP-BEGIN	f.s.	x
DM-GROUP-END	f.s.	x

6.1.4 'Equivalence between AI and DTAM-DM services' table conventions

This subclause defines the conventions used in the table presented in subclause 6.1.5.

6.1.4.1 'AI service' column

This column lists the AI operations supported by this part of ISO/IEC ISP 15121. Every AI operation is equivalent to the DTAM-DM operation in the same row of the table.

6.1.4.2 'DTAM-DM service' column

This column lists the DTAM-DM operations supported by this part of ISO/IEC ISP 15121. Every DTAM-DM operation is equivalent to the AI operation in the same row of the table.

6.1.5 Equivalence between AI and DTAM-DM services

This table specifies the equivalence between all the AI and DTAM-DM operations supported by this part of ISO/IEC ISP 15121. The symbols used in the table are defined in subclause 6.1.4.

When one AI operation is said to be equivalent to one DTAM-DM operation, this means that the AI operation will be mapped into the DTAM-DM operation when sending the operation request, the result or an error, and that the DTAM-DM operation will be mapped into the AI operation when receiving the operation request, the result or an error.

AI Service	DTAM-DM Service
List	DM-DOCUMENT-LIST
Open	DM-DOCUMENT-OPEN
Close	DM-DOCUMENT-CLOSE
Get	DM-GET
Search	DM-SEARCH
--	DTAM-DMBind
--	DTAM-DMUnBind

6.2 Support for AI and DTAM-DM operation arguments and results

This subclause defines the AI and DTAM-DM operation arguments and results as defined in ITU-T Rec. T.413 | ISO/IEC 8613-3 and ITU-T Rec. T.435, and AI and DTAM-DM operation arguments and results supported by this part of ISO/IEC ISP 15121.

First, there is a subclause specifying the conventions used in the 'Support for AI and DTAM-DM operation arguments and results' tables

Then, there is a subclause specifying how the AI and DTAM-DM parameters (arguments and results) must be mapped when sending or receiving an operation.

Then, there is a subclause with general restrictions for all the AOD11 operations.

Then, there is a subclause for every operation. For each of these operations, seven subclauses are defined with the following information:

- General Restrictions: General restrictions specified by this part of ISO/IEC ISP 15121 applicable to all the AI and DTAM-DM arguments and results in the operation.
- AI arguments: AI operation arguments as defined in ITU-T Rec. T.413 | ISO/IEC 8613-3, and those supported by this part of ISO/IEC ISP 15121.
- DTAM-DM arguments: DTAM-DM operation arguments as defined in ITU-T Rec. T.435, and those supported by this part of ISO/IEC ISP 15121.
- Equivalence between AI and DTAM-DM arguments: Equivalence between the AI and the DTAM-DM operation arguments as defined in ITU-T Rec. T.413 | ISO/IEC 8613-3, ITU-T Rec. T.435 and this part of ISO/IEC ISP 15121.
- AI results: AI operation results as defined in ITU-T Rec. T.413 | ISO/IEC 8613-3, and those supported by this part of ISO/IEC ISP 15121.
- DTAM-DM results: DTAM-DM operation results as defined in ITU-T Rec. T.435, and those supported by this part of ISO/IEC ISP 15121.
- Equivalence between AI and DTAM-DM results: Equivalence between the AI and the DTAM-DM operation results as defined in ITU-T Rec. T.413 | ISO/IEC 8613-3, ITU-T Rec. T.435 and this part of ISO/IEC ISP 15121.

6.2.1 'Support for AI and DTAM-DM operation arguments and results' tables conventions

This subclause defines the conventions used in the tables presented in subclauses 6.2.4 to 6.2.14.

6.2.1.1 'Ref.' column

This column specifies a reference value for the AI or DTAM-DM operation data structures and data elements in the same row of the table.

6.2.1.2 'Argument' and 'Result' columns

These columns define the argument and result data structures and its data elements for the operations as defined in ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435.

The data elements in these columns are defined in a hierarchical way.

6.2.1.3 'B' column

The 'B' column (for "Base" Recommendation | International Standard) lists the level of support required for conformance to ITU-T Rec. T.413 | ISO/IEC 8613-3 or ITU-T Rec. T.435. The following terminology is used:

'm' mandatory; support for this feature is required for conformance to ITU-T Rec. T.413 | ISO/IEC 8613-3 or ITU-T T.435. Mandatory parameters must always be present.

'o' optional; support for this feature is permitted, but is not mandatory for conformance to ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435. However, if this feature is implemented, it must also conform to the specifications and restrictions contained in ITU-T Rec. 413 | ISO/IEC 8613-3 and ITU-T Rec. T.435. These restrictions may affect the optionality of other features.

'o.n' optional; support for this feature depends on certain conditions as specified in ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435, and under the tables in which they appear.

'x' excluded; implementation of this feature is not supported by ITU-T Rec. 413 | ISO/IEC 8613-3 or ITU-T Rec. T.435.

6.2.1.4 'P' column

The 'P' column (for "Profile") specifies the level of support required for conformance to this part of ISO/IEC ISP 15121. The following terminology is used:

'm' mandatory; support for this feature is required for conformance to this part of ISO/IEC ISP 15121. Mandatory parameters must always be present.

'o' optional; support for this feature is permitted, but is not mandatory for conformance to this part of ISO/IEC ISP 15121. However, if this feature is implemented, it must also conform to the specifications and restrictions contained in ITU-T Rec. 413 | ISO/IEC 8613-3 and ITU-T Rec. T.435. These restrictions may affect the optionality of other features.

'o.n' optional; support for this feature depends on certain conditions as specified in this part of ISO/IEC ISP 15121 , and under the tables in which they appear.

'x' excluded; implementation of this feature is not supported by this part of ISO/IEC ISP 15121.

6.2.1.5 'Constraint / value' column

This column specifics constraints established by this part of ISO/IEC ISP 15121 on the use or range of values permitted for each feature.

6.2.2 Equivalence between AI and DTAM-DM arguments and results

When one parameter (or element of a parameter) of an AI operation is said to be equivalent to one parameter (or element of a parameter) of a DTAM-DM operation, this means that the AI parameter (or element of the parameter) value shall be used to generate the DTAM-DM parameter (or element of the parameter) when sending the operation or the result.

When one parameter (or element of an parameter) of a DTAM-DM operation is said to be equivalent to one parameter (or element of a parameter) of an AI operation, this means that the DTAM-DM parameter (or element of the parameter) value shall be used to generate the AI parameter (or element of the parameter) when receiving the operation or the result.

6.2.3 General Restrictions

Permanent document identifiers shall be used in AOD11 in the List / DM-DOCUMENT-LIST operations result, and in Open / DM-DOCUMENT-OPEN operations argument. Once a document is opened using a permanent document identifier, a non-permanent document identifier shall be returned in the Open / DM-DOCUMENT-OPEN result.

The base standards define the document identifier as optional in the Get / DM-GET and Search / DM-SEARCH operations argument. As in this part of ISO/IEC ISP 15121 only one document is allowed to be opened at a time, no

document identifier shall be necessary for the argument because all the Get / DM-GET and Search / DM-SEARCH operations shall be performed on the opened document.

The non-permanent document identifier returned by the Open / DM-DOCUMENT-OPEN result shall be used in the Close / DM-Close operation argument. Once the document is closed, the new permanent document identifier shall be returned in the Close / DM-Close operation result.

6.2.4 AI List / DTAM-DM DM-DOCUMENT-LIST

6.2.4.1 General restrictions

The set of Document Profile Attributes to appear in the query of the list-argument are restricted to the following document management attributes:

- Document description:
  - "title"
  - "subject"
  - "document type"
  - "abstract"
  - "keywords"
- Dates and times:
  - "document fragment date and time"
  - "creation date and time"
  - "local filing date and time"
  - "expiry date and time"
  - "start date and time"
  - "purge date and time"
  - "release date and time"
  - "revision history"
- Originators:
  - "organizations"
  - "preparers"
  - "owners"
  - "authors"
- Other user information:
  - "copyright"
  - "status"
  - "user-specific codes"
  - "distribution list"
  - "additional information"
- External references:
  - "references to other documents"
  - "superseded documents"
- "local file references"
- Content attributes:
  - "languages"

6.2.4.2 AI List arguments

The following table defines the AI List operation arguments as defined in ITU-T Rec. T.413 | ISO/IEC 8613-3, and those supported by this part of ISO/IEC ISP 15121. The symbols used in the table are defined in subclause 6.2.1.