INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 12069-2

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Information technology — International Standardized Profiles ADFnn — Document Filing and Retrieval (DFR) —

Part 2:
Specification of ROSE, RTSE, ACSE, Presentation and Session protocols for use by DFR

Technologies de l'information — Profils normalisés internationaux ADFnn — Classement et recherche documentaire (DFR) —

Partie 2: Spécification de ROSE, RTSE, ACSE, protocoles de session et de présentation pour emploi par DFR

Reference number
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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 indentifies 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 12069-2 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 12069 consists of the following parts, under the general title *Information technology — International Standardized Profiles ADFnn — Document Filing and Retrieval (DFR)*:

— *Part 1: Introduction to the DFR ISP*

— *Part 2: Specification of ROSE, RTSE, ACSE, Presentation and Session protocols for use by DFR*

— *Part 3: ADF11 — Common Document Filing and Retrieval — Read Only Profile*

Annexes A and B form an integral part of this part of ISO/IEC ISP 12069.

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Information technology — International Standardized Profiles ADFnn — Document Filing and Retrieval (DFR) —

Part 2:

Specification of ROSE, RTSE, ACSE, Presentation and Session protocols for use by DFR

1 Scope

1.1 General

This part of ISO/IEC ISP 12069 specifies how the Remote Operations Service Element, the Reliable Transfer Service Element, the Association Control Service Element, the Presentation Layer, and the Session Layer standards shall be used to provide the required OSI upper layer functions for DFR (see also figure 1). These specifications are therefore the common basis for all DFR Profiles as defined in the other part of ISO/IEC ISP 12069.

1.2 Position within the taxonomy

This part of ISO/IEC ISP 12069 is the second part of the DFR ISPs.

The structure of DFR ISPs is described in ISO/IEC ISP 12069 Part 1.

It may be combined with any T-Profiles (see ISO/IEC TR 10000) specifying the OSI connection — mode Transport service.

1.3 Scenario

The model used is one of two end systems running an end-to-end association using either or both of ROSE and ACSE, Presentation and Session services and protocols. RTSE is optional (see figure 1).

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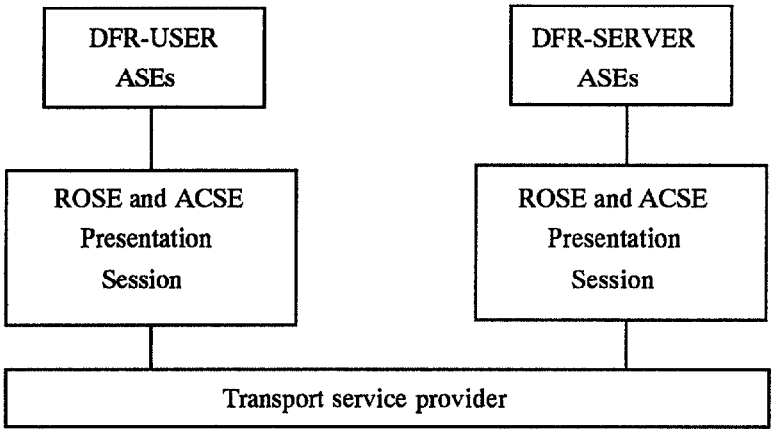


Figure 1 - Model of the supportive layers

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC ISP 12069. 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 12069 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.

ISO/IEC 8326: 1996,
Information technology —Open Systems Interconnection —Session service definition.

ISO/IEC 8327-1: 1996,
Information Technology — Open Systems Interconnection — Connection-oriented Session protocol: Protocol specification.

ISO 8649: 1988, *Information processing systems —Open Systems Interconnection —Service definition for the Association Control Service Element*.

ISO 8650: 1988, *Information processing systems —Open Systems Interconnection —Protocol specification for the Association Control Service Element*.

ISO/IEC 8822: 1994,
Information technology — Open Systems Interconnection — Presentation service definition.

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ISO/IEC 8823-1: 1994,
Information technology — Open Systems Interconnection — Connection oriented presentation protocol: Protocol specification.

ISO/IEC 8824: 1990,
Information technology — Open Systems Interconnection — Specification of 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).

ISO/IEC 9072-1: 1989,
Information processing systems — Text communication — Remote Operations — Part 1: Model, notation and service definition.

ISO/IEC 9072-2: 1989,
Information processing systems — Text communication — Remote Operations — Part 2: Protocol specification.

ISO/IEC ISP 11188-1: 1995,
Information technology — International Standardized Profile — Common upper layer requirements — Part 1 : Basic connection oriented requirements.

ISO/IEC ISP 12069-1: 1996,
Information technology — International Standardized Profile ADFnn — Document Filing and Retrieval (DFR) — Part 1: Introduction to the DFR ISP.

3 Definitions

For the purposes of this part of ISO/IEC ISP 12069, the following definitions apply, in addition to the definitions defined in the ISO/IEC ISP 12069-1.

Terms used in this part of ISO/IEC ISP 12069 are as defined in the normative references of this part of ISO/IEC ISP 12069.

4 Abbreviations

For the purposes of this part of ISO/IEC ISP 12069, the following abbreviations apply, in addition to the abbreviations defined in ISO/IEC ISP 12069-1.

Abbreviations used in this part of ISO/IEC ISP 12069 are as defined below.

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AC Application context
AE Application Entity
AP Application Process
PICS Protocol Implementation Conformance Statement

5 Conformance

This part of ISO/IEC ISP 12069 states requirements upon implementations to achieve interworking. A claim of conformance to this part of ISO/IEC ISP 12069 is a claim that all requirements in the relevant base standards are satisfied, that all the requirements in ISO/IEC ISP 11188-1 are satisfied, and that all requirements in the following clauses and in the annexes of this part of ISO/IEC ISP 12069 are satisfied. Annexes A and B state the relationship between these requirements and those of the base standards.

5.1 Conformance statement

The subsequent part of ISO/IEC ISP 12069 specify the requirements for support of particular DFR application contexts. The requirements for conformance to this part of ISO/IEC ISP 12069 are as appropriate to the DFR application context(s) for which support is claimed, in accordance with ISO/IEC 10166.

For each implementation claiming conformance to this part of ISO/IEC ISP 12069 an appropriate set of PICSs shall be made available stating support or non-support of each option identified in this part of ISO/IEC ISP 12069.

5.2 Relationship with base standards

5.2.1 ROSE conformance

Implementations claiming support of DFR application context which includes the Remote Operations Service Element (ROSE) shall implement all mandatory support (**m**) features (as specified in clause 6) unless those features are part of an unimplemented optional feature. They shall state which optional support (**o**) features are implemented.

5.2.2 ACSE conformance

To conform to the Association Control Service Element (ACSE) protocol used in this part of ISO/IEC ISP 12069 implementations shall implement all mandatory support (**m**) features (as specified in clause 7) unless those features are part of an unimplemented optional feature. They shall state which optional support (**o**) features are implemented.

5.2.3 Presentation layer conformance

To conform to the Presentation protocol used in this part of ISO/IEC ISP 12069, implementations

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shall implement all mandatory support (**m**) features (as specified in clause 8) unless those features are part of an unimplemented optional feature. They shall state which optional support (**o**) features are implemented.

5.2.4 Transfer syntax conformance

Implementations conforming to this part of ISO/IEC ISP 12069 shall support the "Basic Encoding of a single ASN.1 type" as specified in ISO/IEC ISP 11188-1.

5.2.5 Session layer conformance

To conform to the Session protocol used in this part of ISO/IEC ISP 12069, implementations shall implement all mandatory support (**m**) features (as specified in clause 9) unless those features are part of an unimplemented optional feature. They shall state which optional support (**o**) features are implemented.

6 Remote Operations Service Element (ROSE)

The Remote Operations Service Element (ROSE) shall be supported.

The support of functions and parameters for ROSE is as specified in annex B of this part of ISO/IEC ISP 12069.

7 Association Control Service Element (ACSE)

The support of functions and parameters for the Association Control Service Element is as specified in ISO/IEC ISP 11188-1, any additional requirements are described in annex A of this part of ISO/IEC ISP 12069.

8 Presentation layer

The support of functions and parameters for the Presentation protocol is as specified in ISO/IEC ISP 11188-1, additional requirements are described in annex A of this part of ISO/IEC ISP 12069.

9 Session layer

The support of functions and parameters for the Session protocol is as specified in ISO/IEC ISP 11188-1, additional requirements are described in annex A of this part of ISO/IEC ISP 12069.

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Annex A
(normative)
Profile Requirement List for this part of ISO/IEC ISP 12069 - Specification Upper Layer Requirement for Session, Presentation and ACSE

A.1 General

In the event of a discrepancy becoming apparent in the body of this part of ISO/IEC ISP 12069 and the tables in this annex, this annex is to take precedence.

The tables of this annex specify the level of support for the Session, Presentation and ACSE protocols, required by all DFR International Standardized Profiles. Where features of these protocols are not specified in the tables of this annex, then the requirements for conformance to this part of ISO/IEC ISP 12069 are as specified in the corresponding annex of ISO/IEC ISP 11188-1. Any elements which are marked as (i.e., referencing ISP's choice) in the corresponding annex of ISO/IEC ISP 11188-1 and which are not resolved in this annex are to be considered as optional for the purposes of conformance to this part of ISO/IEC ISP 12069.

A.2 Classification of requirements

In each table, the "Base" column reflects the level of support required for conformance to the base standard and the "Profile" column reflects the level of support required by this ISP. The specification is as follows.

m: mandatory support
o: optional support
c: conditional support
i: out of scope
-: not applicable

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A.3 Session protocol

A.3.1 Supported functions

Ref	Function unit	Base	Profile
3	Half-duplex	o	c2
4	Duplex	o	c3
8	Minor Synchronize	o	c2
12	Exceptions	c1	c2
13	Activity Management	o	c2

c1 - if half-duplex (3) is supported then **o** else -

c2 - if RTSE is included in any supported AC then **m** else **o**

c3 - if a supported AC includes ROSE but not RTSE then **m** else **o**

A.3.2 Protocol versions implemented

Ref	Version	Base	Profile
1	Version 1	o	o
2	Version 2	o	o

A.3.3 Protocol mechanisms

Ref	Mechanism	Base	Profile
1	Use of transport expedited data	o	i
7-10	Segmenting	o	i

A.3.3.1 Connection initiator/responder capabilities

Ref	Capability	Base	Profile
1	Initiating capability	o	c1
2	Responding capability	o	c1

c1 - if supported for the Presentation protocol then **m** else **o**

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A.4 Presentation protocol

A.4.1 Major mechanisms, functional units and capabilities

A.4.1.1 Connection initiator/responder capabilities

Ref	Capability	Base	Profile
1	Initiator	o	c1
2	Responder	o	c1

c1 - if supported for the ACSE protocol then **m** else **o**

A.4.1.2 Protocol mechanisms

Ref	Mode	Base	Profile
1	X.410 (1984)	o	-
2	Normal	o	m

A.4.1.3 Functional units

Ref	Presentation functional unit	Base	Profile
2	Presentation Context Management	o	i
3	Presentation Context Restoration	c1	i

c1 - if Presentation Context Management (2) is supported then **o** else -

A.5 Association Control Service Element

A.5.1 Supported functions

Ref	Protocol Mechanism	Base	Profile
1	Normal mode	o	m
2	X.410-1984 mode	o	-
4	Supports operation of Service V2	o	m

A.5.2 Initiator/responder capability

Ref	Capability	Base	Profile
1	Association initiator	o	o
2	Association responder	o	m

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Annex B
(normative)
Profile Requirement List for ISO/IEC ISP 12069 - Specification for ROSE

B.1 General

In the event of a discrepancy becoming apparent in the body of this part of ISO/IEC ISP 12069 and the tables in this annex, this annex is to take precedence.

The tables of this annex specify the level of support for the ROSE protocol, as required by all DFR International Standardized Profiles. Where features of this protocol are not specified in the table of this annex then the requirements for conformance to this part of ISO/IEC ISP 12069 are as specified in ISO/IEC 9072-2.

B.2 Classification of requirements

In each table, the "Base" column reflects the level of support required for conformance to the base standard and the "Profile" column reflects the level of support required by this ISP. The specification of levels of support is defined as follows.

m: mandatory support
o: optional support

B.3 Supported functions

Ref	Protocol Mechanism	Base	Profile
1	Class 2 operation	**o**	**m**

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