Stable Implementation Agreements for Open Systems Interconnection Protocols: Part 1 - General Information

Output from the December 1993 Open Systems Environment Implementors' Workshop (OIW)

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Foreword

This part of the Stable Implementation Agreements was prepared by the Chair of the Open Systems Environment Implementors' Workshop (OIW).

This part replaces the previously existing chapter on this subject. There is no significant technical change from this text as previously given.

Future changes and additions to this version of these Implementor Agreements will be published as change pages. Deleted and replaced text will be shown as struck. New and replacement text will be shown as shaded.

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Part 1 - General Information

0 Introduction

This document records current stable implementation agreements of OSI protocols among the organizations participating in the Open Systems Environment Implementors' Workshop (OIW). Stable in the context of this document means the following:

a) the agreements are based on final standards (e.g., ISO-IS or CCITT Recommendations) or nearly final (e.g., ISO-DIS) with no significant changes expected;

b) the agreements have been approved by the OSE Implementors' Workshop (OIW) Plenary for progression from the Working Agreements document to this document after a period of review. These agreements are considered final; the only changes allowed will be clarifications, and certain Technical and Alignment errata. These changes must have the strong support of vendors, and be justifiable.

For these reasons, the agreements are considered advanced enough for use in product and test suite development. This means that readers can use this text as a basis for procurement references for OSI products. All of the text in this document is considered stable as defined above.

Future releases of these Stable Agreements will add and/or extend functionality offered by this edition and version. When required, new versions will be introduced on a yearly basis. It is the OSE Implementors' Workshop (OIW) intent that new versions of this Stable Agreements document will be compatible with the present version. If this proves impractical, the agreements will attempt to provide mechanisms and guidelines which maximize interoperability. Furthermore, it is the intent that these stable agreements be maintained via the Errata process as long as is appropriate. For the subject area, interworking information and other useful advice to the reader is given as appropriate. Specific "defect report" information (including extent of applicability) is provided in designated portions of each Part.

1 Scope

Agreements text is either in this Stable Document (Stable) or in the aligned Working Document (not yet stable). It is a goal that the same text not appear in the same position in both documents at once (except for part 1). Modifications to a version reflect very recent stable functionality as well as editorial, technical, and alignment errata, all applied to the previous edition.

The intended audience for this document is composed of those individuals who are interested in Stable Implementation Agreements for OSI protocols. Each part of the document covers a different subject area, and the parts are presented so as to present a consistent and unified approach. The format of this version follows the ISO directives whenever possible.

The corresponding and aligned document, "Working Implementation Agreements for OSI Protocols," records agreements which are not yet considered stable, in the sense described above. This document will be referenced as the "Working Agreements Document." This Stable document is aligned with the Working Agreements Document in the sense that the structures are identical, and pointers are given in this Stable Document to work in the Working Agreements Document which could become stable in the future.

The benefit of this document to the reader is that it gives a complete accounting of current stable agreements. Minor changes (Errata) to these agreements will be issued in replacement page format. These errata will only be applied to the current version.

Currently efforts are under way to define worldwide technically harmonized profiles. The goal is to create a consolidated global market for OSI products. This means that vendors can sell to a larger market, and users can procure products from a variety of vendors around the world. Agreements in this document are likely to be used in these alignment efforts.

This version is backwards compatible with the previous version to the maximum extent possible. This version includes all of the material from the previous version (modified by errata) as well as new stable material from the previous year.

2 Normative References

See succeeding parts.

3 Definitions

See succeeding parts.

4 Purpose of the Workshop

In February, 1983, at the request of industry, NIST organized the OSI Implementors' Workshop (OIW) for Implementors of OSI to bring together future users and potential suppliers of OSI protocols. The Workshop accepts as input the specifications of emerging standards for protocols and produces as output agreements on the implementation and testing particulars of these protocols. This process is expected to expedite the development of OSI and OSE protocols and promote interoperability of independently manufactured data communications equipment. Recently the Workshop was renamed the Open Systems Environment Implementors' Workshop (OIW).

5 Workshop Organization

The Workshop organizes its work through Special Interest Groups (SIGs) that prepare technical documentation. An executive committee of SIG chairpersons led by the overall Workshop chairperson administers the Workshop. NIST invites highly qualified technical leaders from participating organizations to assume leadership roles in the SIGs. The SIGs are encouraged to coordinate with standards organizations and user groups, and to seek widespread technical consensus on implementation agreements through international discussions and liaison activities.

The Workshop meets four times a year at the National Institute of Standards and Technology in Gaithersburg, Maryland where each SIG is required to convene its meeting. In addition, a plenary assembly of all Workshop delegates is convened for consideration of SIG motions and other Workshop business. SIGs are also encouraged to hold **interim** meetings at varied locations around the world.

The Workshop is an open public forum. Registration materials, documents, and Workshop schedules are available from:

National Institute of Standards and Technology
OSE Implementors' Workshop (OIW)
Building 225, Room B-217
Gaithersburg, Maryland 20899

6 Use and Endorsement by other Enterprises

The Workshops are held for those organizations expressing an interest in implementing or procuring OSI Protocols and Open Systems. However, there is no corporate commitment to implementations associated with Workshop participation.

The Workshop and associated agreements have been endorsed by various activities and groups. See the aligned clause of the Working Agreements Document for more on this subject.

7 Relationship of the Workshop to the NIST

As resources permit, NIST, with voluntary assistance from industry, develops formal protocol specifications, reference implementations, tests, and test systems for the protocols agreed to in the Workshops. The NIST organizes, administers, and makes technical contributions to the Workshop. The NIST bears no other relation to the workshop.

8 Structure and Operation of Workshop

8.1 Plenary

The main body of the workshop is a Plenary Assembly. Any organization may participate. Representation is international. The NIST prefers for the business of Workshops to be conducted informally since there are no corresponding formal commitments within the Workshop to implement the decisions reached. For more information, consult the aligned clause of the Working Agreements Document.

8.2 Special Interest Groups

Within the Workshop there are Special Interest Groups (SIGs). The SIGs receive their instructions for their technical program of work from the Plenary. The SIGs meet independently during the Workshop week. As technical work is completed by a SIG, it is presented to the Plenary for disposition. For more information on SIGs (including SIG charters), consult the aligned clause of the Working Agreements Document.

9 Points of Contact

For information concerning the workshop, write to:

Chair, OSE Implementors' Workshop (OIW), at the address given in 1.3.

Individual points of contact are given in the aligned part of the Working Agreements Document.

10 Profile Conformance

NOTE - SIG text relating to text below may be given in some succeeding parts.

This clause presents general concepts for profile conformance. These concepts shall be observed when writing Implementation Agreements.

10.1 General Principle

Conformance to an OSI Profile (Implementation Agreements, Functional Standards) implies conformance to the referenced Base Standards.

Therefore, a Profile shall not specify any requirements that would contradict or cause non-conformance to the Base Standards to which it refers (see TR 10000-1, clauses 6.1, 6.3.1). The conformance requirements defined in ISO/IEC TR 10000-1 fully apply.

10.2 Constraints

Base standards usually provide options for PDUs, parameters, encoding choices, value ranges, etc.

A profile may make specific choices of these options and ranges of values. For the promotion of interoperability, pragmatic constraints or minimum requirements may be imposed (e.g., the limitation of Search operations, selection of encoding choices, value ranges, byte ranges for encoding). These minimum requirements of restrictions shall not contradict the conformance requirements of the respective base standards.

10.2.1 Sending/Encoding Entity

In order to promote interworking, reasonable restrictions or minimum requirements may be specified in a profile as described above.

10.2.2 Receiving/Decoding Entity

Minimum requirements of receiving/decoding capability for alternatives, permissible values, etc. may be specified in a profile. A profile shall not specify the behavior of a receiving/decoding entity when receiving data which is outside the scope of or excluded by the Profile for senders.

A Profile Conformance Test shall be limited by the scope of the profile specification and shall not probe beyond its boundaries. That means, the capability of a receiver/decoder would be tested only in the range of choices or values which are specified for the sending/encoding entity (i.e., for interworking between systems both being conformant to the Profiles).

10.3 Classification of Conformance

Conformance requirements of a profile shall be related to conformance requirements of a base standard as written in clause 6.5 and annnex C of ISO/IEC TR 10000-1. For the conformance classes, the following terminology shall be used unless otherwise specified by the base standard or equivalent conformance requirements for a profile as required by the ISO/IEC Technical Committee that is responsible for the base standard:

a) m mandatory;

b) o optional;

c) c conditional;

d) x excluded;

e) i out of scope;

f) - not applicable.