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Title: ISO/IEC JTC 1 Special Group on Functional Standardization
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REQUESTED ACTION: for information. As per SC 21 Arles resolution 4.3, this document will be sent to the appropriate liaison body.

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1. Introduction

This liaison statement contains items on specific aspects of Profile Testing methodology progressed and agreed at the ISO/IEC and CCITT conformance rapporteur meeting held in Phoenix, 7-14 February 1991, and at the ISO/IEC SC 21 meeting in ARLES, 20-31 May 1991.

2. Nature of profile conformance

Profile conformance testing should not deviate from the principles established in ISO/IEC 9646. For profile conformance testing, the important distinction to be made is testing conformance to the profile of an implementation as a sender, and as a receiver. It was, therefore, agreed that the PICS double-character or double-column notation distinguishing "Implemented" and "used" is not required. Stating "support" of a feature in a PICS proforma oriented to a profile means "supported when using the profile". The PCTR for an implementation claimed to conform to a profile will relate only to conformance to the profile and not to the base protocol standards.

As stated in TR 10000, profiles should not restrict dynamic behaviour allowed in base standards. For the exceptional cases where this is necessary, an ISP should clearly define the specific course of action to be taken when excluded behaviour occurs ; this is necessary to allow tests to be run for that requirement.

3. Scope of profile testing

Conformance to a profile implies conformance to the set of base standards which it references, changes derived from the optional with base standard requirements.

In some cases, optional requirements of the base standards can become out of scope, implying that there is no conformance requirement or excluded, meaning required not to be used.

For the case of excluded capabilities, it shall be tested that the protocol implementation does not initiate capabilities that are excluded by the profile requirements.

If an excluded behaviour is observed, 'a Fail verdict shall be assigned to that test.

There shall be no provocative tests driving the implementation outside the profile definition by a service request coming from the upper tester or the user for instance.

Profile specifiers should carefully consider exclusions of valid base standard dynamic behaviour. Such exclusions may lead to interoperability problems with base standard protocol implementations.

4. Profile configurability

An implementation have the ability to operate according to several profiles, and make use of various capabilities of the same base standards. If such an implementation needs to be configured to comply with the profile capability, this configuration must occur during the test preparation phase using the extra information for testing the protocol (IXIT) supplied by the implementer. The scope of conformance testing is then limited to single profile testing.

The scope of profile configurability does not include protocol negotiation mechanisms that may exists in base standards. Such mechanisms are part of the protocol and as such are subject to conformance testing.

5. Responsibility for PTS

The close relationship between a PTS and the associated profile specification is acknowledged. Thus, when the profile specification is an ISP, the responsibility for maintaining the PTS would lie with the organisation submitting the PTS for standardization, with SGFS being responsible for the progression of the PTS through the ISO/IEC process. However, SC 21/WG 1 wishes to emphasise the need for relevant ISO groups (e.g. SC 21/ULCT and SC 6) to be involved to ensure alignment between the PTS and the ATs that it references, and the need for timely meetings with these groups for the purpose of resolving specific comments on the PTS and/or related ATs.

6. Requirement list (RL) and Implementation Conformance Statements (ICS)

In order to clarify technology usage, SC 21/WG 1 proposes the following definitions :

The profile conformance requirements are expressed by :

- The PICS proforma of each protocol relevant for the profile ;
- The profile requirement list, expressing constraints on the set of protocols related to the profile. In case of an ISP, this becomes the IPRL.
- The Profile Specific Requirement list, giving additional profile specific constraints on the profile, not directly linked to any specific protocol.

The product implementer, when submitting the implementation for a test campaign, defines which of these constraints have been implemented, by filling in this ICS proformas.

These are :

- the PICS of each relevant protocol
- the Profile specific ICS

In case of an ISP, the ISPICS as defined in TR 10000 consists of the PICSS, the profile specific ICS, and the requirement lists previously described.

7. Progression of PPTM and PICS work

In progression the PTS material, SC 21/WG 1 has utilised the material on profile conformance contained in TR 10000-1. In order to present a coherent picture on protocol profile testing within ISO/IEC, and avoid duplication of material, SC 21/WG 1 requests that it be given the responsibility for all text on protocol profile conformance and testing which is specific to OSI and that the associated material removed from TR 10000-1 as soon as possible after ISO/IEC 9646-6 reaches DIS status (currently estimated to be in 1992).

Currently, the Protocol Profile Testing Methodology have reached the status of PDAM on 9646-1, 2, 4, 5 and CD 9646-6. Also a revised version of the catalogue of PICS proforma notations has been produced together with a proposal for a new work item to produce a part 7 of 9646 on PICS issues, to bring all such requirements and guidance into a single standard.

