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ISO/IEC JTC1/SGFS	
Title:	ISO/IEC JTC1 Special Group on Functional Standardization
Secretariat:	NNI (Netherlands)

Title: Profile Versions and ISP Revisions

Source: Editor TR 10000-1

Date: October 1992

Status: Comment on SGFS N619; for discussion in SGFS.

Profile Versions and ISP Revisions

In SGFS N619, the issue raised by the proposed change to the FOD Taxonomy is discussed, with the emphasis on the question of whether or not "version numbers" should be used in elaborating the taxonomy of a class of Profiles. The SGFS comment is that "appropriate re-issues of the ISPs, when the base standard(s) change, is more appropriate." In N501, OIW comments that the proposed "Version No." in the Taxonomy does not represent the version number of a particular Base Standard, but "a specific collection of base standards, addenda and corrigenda upon which one or more ISPs are based".

While considering revision of TR 10000-1, it became clear that the resolution of this issue will need to be reflected in improved generic text on the Taxonomy in clause 7, and also in the specification of the contents of ISPs in Annex A.

Annexed to this contribution is a relevant paper from JTC1 SC21 (N6943 Rev + Addendum), which discusses a similar issue, but in the context of **versions** of protocols (and abstract syntaxes, and data structures etc). It relates the need for unambiguous and consistent identification of these to the question of successive **editions** of the documents in which they are specified, and hence to the problem of the continued availability and maintenance of the documents. This clarification of terminology between version and edition is important, and should be adopted also in SGFS for discussion about ISPs and Profiles.

The implication is that one Profile (i.e. represented by a unique identifier in the Taxonomy) may quite legitimately exist in a number of successive **versions** and hence that the ISP (or ISP-part) specifying that Profile may go through a corresponding number of **editions**. The decision as to whether the revision of the Profile represents a new version of the same Profile ("same functionality"), or a new Profile ("greater, lesser, or different functionality") with a different identifier, is at the heart of the discussion on the purpose of Taxonomy (for instance, N592 from the USA), and on the FOD Taxonomy. TR 10000-1 will need to give authoritative general guidance on this.

If, as a result, a **new Profile** is created, there is no problem - a new ISP is required.

If, however, a **new Profile version** is indicated, the Taxonomy remains unchanged, and a new **ISP edition** is created. This new edition may need to coexist with the old edition, as indicated in SC21 N6943 clauses 4 and 5. The SGFS Secretariat is requested to work with the SC21 Secretariat and/or JTC1, in order to ensure that the solution adopted for SC21 in conjunction with ITTF is available also to SGFS. (This should surely be a JTC1-wide resolution with ITTF, not just SC21?).

The provisions in N6943 clauses 1-3 regarding **version numbers** should also be adopted by SGFS for Profiles,

There is a further implication for SGFS and TR 10000-1 in N6943 clause 5, which indicates the clear need for an ISP to be able to continue to reference old editions of a base standard while revision of a referencing Profile is undertaken.



DATE: 1992-08-20

ISO/IEC JTC 1/SC 21
INFORMATION RETRIEVAL, TRANSFER &
MANAGEMENT FOR OSI
SECRETARIAT: U.S.A. (ANSI)

TITLE: Requirements and Proposed Recommendations of the Protocol Version Numbers Pre-Meeting (and the Initial ITTF Response)

SOURCE: Protocol Versions Numbers Pre-Meeting Held 18 May 1992 in Ottawa and subsequently reviewed by the SC 21 Plenary Meeting held 2-3 June 1992 in Ottawa

Attached Addendum received from the ITTF

PROJECT:

STATUS: SC 21 N 6943 rev. is an output document from the SC 21 Ottawa meeting for review and comment by SC 21 National Bodies and Liaison Organizations. The SC 21 Secretariat has already entered into a dialogue with the ITTF on the topics contained in the proposed recommendations 6 & 7. The ITTF's initial response to these proposed recommendations is attached. The SC 21 Secretariat will continue to discuss these topics with the ITTF and will advise SC 21 of any further developments.

REQUIRED ACTION: As per SC 21 Ottawa Resolution 5.2, this document is circulated to SC 21 National Bodies and Liaison Organizations for review and comment. Comments submitted on this document should reach the SC 21 Secretariat no later than 15 April 1993.

DISTRIBUTION: Mr. P.D. Bartoli, Chmn JTC 1/21
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INTRODUCTION

It is important to distinguish between the "Version" of a protocol (i.e. something having a unique protocol version number) and the "Edition" of a Specification (i.e. the published text in the form of an International Standard or CCITT Recommendation). In this document and in related discussions the term "version" should only be used for the former concept (i.e. the protocol version), and the term "edition" should be used for the latter (i.e. the edition of the published text).

Although this document is focussed on protocol versions, the same concept of version applies also to other things that are standardized (e.g. abstract syntaxes and data structures).

Related documents are

- SC 21 N 6060 - Proposed Draft answer to Q6/1 on Version and Extensibility
- Protocol Version Identification, section 28 in the Commentaries on ISO 7498-1984.

REQUIREMENTS

1. Each edition of a protocol specification, including the first edition, shall specify explicitly the protocol version number of each protocol version that it specifies. Note that a single edition may specify more than one version.
2. The protocol version number shall be identified implicitly or explicitly in each instance-of-communication using that protocol. This may but need not be by use of a protocol version number field (e.g. it could be implied in an Object Identifier).
3. Each edition of a protocol specification shall specify unambiguously what constitutes each protocol version that it specifies. Thus, it shall be clear what conformance to each version means.
4. If a revision of a protocol specification specifies extensions to the protocol without specifying a new version number, then those extensions shall be optional in the base specification of the protocol (although they may be made mandatory for a profile in a referencing profile specification).

The proposed recommendations that follows are in four groups :

- a) Those advising WGs on how to meet the requirements in existing and new protocols (Recs. 1, 2, 3, 10 and 11).
- b) Those getting out how the requirements should be met when extensions or enhancements are undertaken (Recs 4,5).

c) Those dealing with the administrative consequences of multiple versions (Recs 6, 7 and 8).

d) Those getting out how this topic might be dealt with by others (Recs. 9 and 12).

PROPOSED RECOMMENDATIONS

1. Each protocol defining group should ensure that, when the first edition of each new protocol specification is produced, it identifies explicitly the protocol version as number one.

2. Each protocol defining group should ensure that, when a new edition of a protocol specification is produced, it identifies explicitly each protocol version that it specifies and it specifies unambiguously the meaning of conformance to each of those versions.

3. All SC 21/WGs should review their published and soon to be published protocol standards to see whether or not the requirements above (particularly 1 and 3) are met (even for version one of the protocol) and wherever they are not met to raise defect reports to correct the situation.

4. When a new edition of a protocol specification is being produced, it should be realised that it may do any of the following and the text should make clear which of these it does :

a) specify extensions to the protocol without creating a new protocol version ; in this case, the new edition specifies the same version as the previous edition ;

b) specify a new protocol version without continuing to specify the previous protocol version(s) ;

c) specify both a new protocol version and the previous protocol version(s).

5. Whenever a new edition of a protocol specification specifies a new protocol version without continuing to specify the previous protocol version(s), there is a need for some period of time to :

a) keep available the previous edition of the specification ;

b) maintain the previous edition of the specification (in the sense of being prepared to process defect reports raised on that edition).

This may also be true in some cases when the revised edition specifies both the old and new versions, because the presentation of the specification of the old version may be completely revised.

This situation arises because there will always be a time-lag between the publication of a new edition and the market ceasing to require and use implementations of the version based on the previous edition. This situation is compounded by the existence of profile specifications which reference the previous edition.

6. SC 21 should therefore recommended to ISO/IEC (ITTF) that they provide a means of keeping available old editions of protocol specifications. Similarly, CCITT should be asked to do the same (although it is believed that already do this). If it does not appear that such a mechanism will prove to be possible, ITTF and CCITT should be requested to consider copyright release of the old editions to a suitable third party.

7. SC 21 should create and maintain a catalogue of old editions of SC 21 standards that it is maintaining (in the sense of being prepared to process defect reports on them). SC 21 should then ask ISO/IEC (ITTF) to do the same (i.e. create a composite catalogue across the whole of JTC 1).

Thus, in the future, SC 21 will need to decide at some point for each maintained old edition that it will no longer maintain that edition. What it cannot do, however, is prohibit anyone from continuing to use an unmaintained obsolete standard.

8. SC 21 should propose changes to SD 5 and, when fully agreed, to the JTC 1 maintenance procedures, Section 6.13 Maintenance/correction of defects in JTC 1 standards, to reflect these requirements and recommendations. In particular, people should be advised that whenever they begin to work on amendments to standards they should consider carefully that sort of new edition of the standard they intend to produce (in line with recommendation 4 above).

9. SC 21 should liaise with SC 6 and SC 18 on this issue to inform them of its actions and propose that they do the same.

10. All SC 21/WGs should review their superseded and soon to be superseded editions of protocol standards and decide which ones they are prepared to maintain (in the sense of accept and process defect reports) and provide the results of this analysis to SC 21 to enable the SC 21 catalogue of old but maintained editions to be created.

11. WG 1 should reflect these requirements and recommendations in appropriate standards (e.g. ISO/IEC 7498 and/or ISO/IEC 9646).

12. All SC 21/WGs (especially WG 3 and WG 7) should consider which of their standards and intended standards other than protocol standards have a similar need for version numbers. Corresponding actions should then be taken in such cases.



ADDENDUM TO N6943 Rev.

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To: Ms. Lisa Rajchel
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Dear Lisa,

Protocol versions

Thank you for your fax on the above subject. At first view we do not see a major problem. One suggestion however: it would be preferable if SC 21 were to set-up a "Maintenance Group" for the specific purpose of maintaining the previous versions (editions) of the specifications. We would include this information in the new edition of a standard and the group could then effectively operate like a maintenance agency, i.e. issue defect reports and corrigenda to implementors still using previous versions. As you know, a new edition of an International Standard (normally) automatically cancels the previous edition and we do not include a list of previous editions in the ISO Catalogue. However, given the special needs of SC 21 and the fact that we do in one case (TC 20) retain old editions for maintenance purposes, we would be prepared to consider the same approach for SC 21. (I have yet to discuss with our sales department.)

Please let me know the result of the meeting.

Kind regards.

Keith Brannon