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1. Summary

This is a report from the Study Group that was constituted to determining whether there is a need for guidelines on applying System Quality Management to System Life Cycle Processes. If it is determined that there is a need for these guidelines then this Study Group is to make a recommendation(s) as to the most efficient and effective approach to develop these guidelines.

2. Report Background

The background for this report is presented in four sections – 1. Introduction, 2. Terms of Reference, 3. Team Members, and 4 Team Meetings

2.1. Introduction

ISO/IEC 15288 System life cycle processes was published in 2002, ISO/IEC 19760 A Guide for the application of ISO/IEC 15288 System Life Cycle Engineering was published in 2003, and ISO 9001 Quality Management Systems – Requirements was revised in 2000.

Upon the publication of these documents, it was felt that there was a need for a document to clarify the relationship between ISO 9001 and ISO/IEC 15288. In particular three points were noted in this regard:

There is a need to ensure that the objectives and coverage of ISO 9001 and ISO/IEC 15288 act in a complementary manner to minimize redundancy and assure the satisfaction of users of both of these two standards.

The differences in terminology of the two standards may make it difficult for concurrent usage.

The boundaries between the two standards are not clearly defined, there are places where the two documents overlap, and in those areas there may be perceived incompatibilities.

2.2. Terms of Reference

The terms of reference of this Study Group were to:

- Assess the need for a guidance document on ISO 9001 for System Quality Management

- If it is determined that there is a need for this guidance document then to submit a draft NWI for consideration by SC7.

2.3. Study Group Members

Members of the Study Team were –

- Shigenobu Katoh (Japan),

- Mike Gayle (US),

- Robert Marshall (ISO/TC176),

- Victoria Hayley (Canada),

- Thierry Dujardin (France)

- James Moore (IEEE-CS)

This Study Group was chaired by Kenneth Crowder (INCOSE).

2.4. Study Group Meetings

Several face-to-face meetings were held on 28 and 29 October 2003 at the Interim meeting of SC7 in Recife, Brazil. These meetings were attended by Robert Marshall, Shigenobu Katoh, and Ken Crowder. Sequent to those meetings, e-mail discussion and coordination was conduced by the Study Group. The recommendations that are contained in Section 4 of this report were prepared by and concurred with by the Study Group members that participated in the face-to-face meetings and e-mail exchanges.

3. Study Options

The Study Group considered only two options. These were:

- Prepare a set of guidelines
- Not prepare a set of guidelines

The Study Group concluded that there should be a set of guidelines however it was felt that the Study Group should not determine the type or content of the guidelines. These decisions should be left to the purview of a to-be-established development team.

4. Recommendations

The Study Group analysed the complexity of the relationship between ISO 9001 and ISO/IEC 15288. This analysis showed that several items need to be addressed and clarified, e.g.,

- Terminology
- Overlaps and gaps

As a result, the Study Group arrived at the following recommendations.

4.1. General Recommendations

The basic conclusion reached by the Study Group is that there is a definite need for a set of guidelines to assist in applying System Quality Management to System Life Cycle Processes. It is recommended that this to-be-developed document develop a mapping between ISO 9001:2000 and ISO/IEC. This will allow a Quality Management effort (as described in ISO 9001:2000) to be applied at the project level (as described in ISO/IEC 15288). Candidate structure models for the to-be-prepared document are:

- Current ISO/IEC 90003 document;
- ISO/IEC 9123 document.

4.2. More Detailed Recommendations

In addition to the general recommendations described above, the following more detailed recommendations are offered.

1. Clearly identify the areas of applicability of ISO 9001 and ISO/IEC 15288, and the interfaces between the two documents. This will help to eliminate conflicts and overlaps and to ensure a more integrated application of the requirements of these two standards.

2. Wherever possible, use a more common generally used and understandable set of terms and vocabulary from ISO 9001 and ISO/IEC 15288.

3. Where inconsistencies in terms and vocabulary appear provide an explanation as to the differences and prepare a clarification on the application / usage of such terms to promote a common use and understanding.

4. Facilitate the mapping of terms from the two standards into the terminology of the enterprise, organization or project that is applying the two standards.

5. Use these guidelines as an aid in monitoring, reviewing, auditing or assessing an enterprise, organization or project and as a means of evaluating technical performance.

6. Use these guidelines as a basis of recommendations for future revisions of ISO 9001 and ISO/IEC 15288 to improve the interface / inter-relationship between these two standards.

7. A key achievement of these guidelines must be to simplify the joint application of these two standards. To that end the scope (field of application) of this these guidelines shall be defined so that it is clear what is covered by these guidelines.

8. These guidelines should not cause major disruptions to the users of current WG7 and SC7 documents.

9. The development of these guidelines should strive for consistency and compatibility in the areas of:

- Concepts
- Terminology
- Readability
- Level of detail and / or compatibility
- Processes
- Document structure
- Normative references