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SC7/WG6 N489

TITLE: SC7/WG6 Nagoya Meeting Report
The 20th SC7/WG6 Meeting
Nagoya, Japan
May 14 (Monday) to 18 (Friday), 2001

ISSUED DATE: 2001-06-01

SOURCE: M. Azuma (WG6 Convener) and T. Komiyama (WG6 Secretariat)

WORK ITEMS:

- 7-13: Evaluation of Software
 - 7-13-01: Software Product Quality
 - 7-13-02: Software Product Evaluation
- 7-24: Software packages – Quality requirements and testing

REFERENCES:

- 6/N-476 (7N2245): SC7/WG6 Prague meeting minutes
- 6/N-484 (7N2302): Calling notice and draft agenda for SC7/WG6 Nagoya meeting

DOCUMENT TYPE: Meeting Report

ACTION: FYI

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1. SUMMARY

WG6 has a very co-operative and successful meeting from May 14 (Monday) to 18 (Friday), 2001 at Nagoya Congress Center in Nagoya, Japan. Twenty-three members from ten countries joined the meeting and contributed.

WG6 has two projects 07-13 (9126 and 14598 series) and revision of 12119.

WG6 almost finished the current 9126 and 14598 series. FDIS ballots on 9126-1 and 14598-6 were closed and approved before the last SC7 Madrid meeting, and though there were some procedural problems, they will be published soon. As the other remaining work, such as 9126-2, 9126-3 and 9126-4, are during the FDTR ballot, there was no work on them.

As the SQuaRE plan was approved at the last SC7 Madrid plenary meeting, WG6 started the work on SQuaRE. The work includes four NPs, Part 10 (General Overview and Guide), Part 30 (Metrics reference model and guide), Part 31 (Base metrics), and Part 40 (Quality requirement). Though these NP ballot is not closed yet, WG6 started the work to create summary version of each document, which has two purposes, e.g. design of NP and publicity. The working documents of NP, when the NP ballots be approved, will be forwarded for WD and CD registration. They will be reviewed and revised at the next WG6 Bari meeting, and then forwarded for CD ballot.

WG6 expressed its concern on the inconsistency of definitions of key terms, such as measure and metrics between WG6 (9126-14598 series) and WG13 (15939). WG6 proposed to WG12 and WG13 to have joint ad hoc group and tried to solve the problem.

WG6 also has worked for revision of 12119. It will be forwarded for WD and CD registration ballot when it is ready after the meeting. Then it will be reviewed within WG6 and forwarded for the CD ballot after the WG6 Bari meeting.

As WG6 has many documents to create and that to revise, it has decided to create three Sub-Working Groups. Sub-WG 1 is responsible for Product quality general division, Sub-WG 2 is responsible for Quality model and metrics divisions, and Sub-WG3 is responsible for Quality requirement and evaluation divisions. WG6 nominated Witold Suryn, Nigel Bevan and Jorgen Boegh as Sub-WG leader respectively.

SC7 secretariat informed WG6 that ITTF decided to assign new numbers (25000 to 25099) to SQuaRE. WG6 discussed the renumbering of 9126 series to new 25000 series and decided the plan.

2. PARTICIPANTS

10 countries, 23 members:

Australia(1): Vipula Godamunne **Brazil(2):** Danilo Scalet, Regina Colombo **Canada(1):** Witold

Suryn **Czech Republic(2)**: Jiri Vanicek, Ota Novotony **Denmark(1)**: Jorgen Boegh **France(1)**: Gilbert Le Gall **Italy(1)**: Antonia Jeanrenaud, **Japan(11)**: Motoei Azuma, Yukio Ikeda, Chikashi Ebihara, Kazuhiro Esaki, Keiko Koga, Toshihiro Komiyama, Kenichi Sakamoto, Hideaki Tanaka, Yukio Tanitsu, Atsushi Yamada, Shigemori Yokoyama **Korea(1)**: In-soo Park **UK(1)**: Nigel Bevan **USA(1)**: Michael Gayle

3. MEETING SCHEDULE

- 5/14 (Mon) AM1 SC7 opening plenary
 AM2 WG6 opening plenary
 PM1 Guide to SQuaRE
 PM2 Base Metrics / 15939 Terminology
 Evening [Welcome Party]
- 5/15 (Tue) AM1 Review of Draft Agenda
 AM2 Parallel (Guide to SQuaRE / Metrics Reference Model / Base Metrics /
 Quality requirements / 12119 Revision) / 15939 Terminology
 PM1 Report from NWI Editors
 PM2 Parallel (Guide to SQuaRE / Metrics Reference Model / Base Metrics /
 Quality requirements / 12119 Revision)
- 5/16 (Wed) AM1 12119 Revision, Assignment of SQuaRE Project Editors
 AM2 Parallel (Guide to SQuaRE / Metrics Reference Model / Base Metrics /
 Quality requirements / 12119 Revision) / 15939 Terminology
 PM1 Creation of Sub-WG and Assignment of the Leaders
 PM2 Parallel (Guide to SQuaRE / Metrics Reference Model / Base Metrics /
 Quality requirements / 12119 Revision)
 Evening [Delegation Dinner]
- 5/17 (Thu) AM1 Report from Sub-Groups
 AM2 Parallel work (Guide to SQuaRE / Metrics Reference Model / Base
 Metrics / Quality requirements / 12119 Revision)
 PM1 Parallel work (Guide to SQuaRE / Metrics Reference Model / Base
 Metrics / Quality requirements / 12119 Revision)
 PM2 Parallel work (Guide to SQuaRE / Metrics Reference Model / Base
 Metrics / Quality requirements / 12119 Revision)
- 5/18 (Fri) AM1 Future Plan
 AM2 WG6 Closing Plenary
 PM1 SC7 Plenary

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4. DOCUMENTS

4.1. Base documents:

- 7N2415 6N480 Comment Disposition Report on PDTR 9126-3: Software Engineering – Product Quality Part 3 - Internal Metrics
- 7N2416 6N481 DTR 9126-3: Software Engineering - Product Quality Part 3 - Internal Metrics
- 7N2417 6N476 WG Meeting Minutes of ISO/IEC JTC1 SC7/WG6 Meeting, Prague, Czech Republic, November 6-10, 2000
- 7N2418 6N478 Comment Disposition Report on PDTR 9126-2.3: Software Engineering – Product Quality Part 2 - External Metrics
- 7N2419 6N479 DTR 9126-2: Software Engineering - Product Quality Part 2 - External Metrics
- 7N2429 6N482 Comment Disposition Report on PDTR 9126-4: Software Engineering – Product Quality - Part 4: Quality In Use Metrics
- 7N2430 6N483 DTR 9126-4: Software Engineering – Software Product Quality - Part 4: Quality In Use Metrics
- 7N2446 6N477 SQuaRE: Software Product Quality Requirements and Evaluation
- 7N2447 NP ISO/IEC 9126-10: Software engineering - Software product quality requirements and evaluation - Part 10: General overview and guide
- 7N2448 NP ISO/IEC 9126-30: Software engineering - Software product quality requirements and evaluation - Part 30: Quality metrics – Metrics reference model and guide
- 7N2449 NP ISO/IEC 9126-31: Software engineering - Software product quality requirements and evaluation - Part 31: Quality metrics – Base metrics
- 7N2451 NP ISO/IEC 9126-40: Software engineering - Software product quality requirements and evaluation - Part 40: Quality requirements - Quality requirements and guide
- 7N2459 6N484 Draft Agenda - JTC1/SC7/WG6 Meeting, Nagoya - Japan, May 14-18, 2001
- 6N485 WD 9126-31: Base metrics
- 6N486 WD 9126-10: Guide to SQuaRE
- 6N487 WD 9126-40: Quality requirements
- 6N488 Document List for SC7WG6 Nagoya Meeting

4.2. Nagoya meeting documents:

- 7/6-Nag-01: Proposed format for specifying quality in use requirements
- 7/6-Nag-02: US comments on DTR 9126-2
- 7/6-Nag-03: Czech Republic vote to N2410
- 7/6-Nag-04: Japanese comments on 9126-10
- 7/6-Nag-05: Proposed quality in use test report format

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- 7/6-Nag-06: Japanese proposal on 9126-40
- 7/6-Nag-07: Japanese proposal on 9126-31
- 7/6-Nag-08: Working Draft 9126-30 Metrics reference model and guide
- 7/6-Nag-09: Proposed revision of definitions in ISO/IEC 9126-1 Annex B
- 7/6-Nag-09: Proposed revision of definitions in ISO/IEC 9126-1 Annex B (Rev)
- 7/6-Nag-10: Information for the ISO/IEC JTC1/SC7 meeting, May 13-17,2002, Gyeongju, Korea
- 7/6-Nag-11: Relationship among guides
- 7/6-Nag-12: SC7/WG6 Resolution
- 7/6-Nag-13: Participants List of SC7/WG6 Nagoya Meeting
- 7/6-Nag-14: Base metrics tables
- 7/6-Nag-15: 9126-31 Base Metrics - Summary
- 7/6-Nag-16: 9126-10 Summary of General Overview and Guide to SQuaRE
- 7/6-Nag-17: ISO/IEC WD 12119
- 7/6-Nag-18: Report about ISO/IEC 12119 revision
- 7/6-Nag-19: Document list for SC7/WG6 Nagoya meeting

5. MEETING REPORT

5.1 SQuaRE General

1) Summary documents

In order to clarify the scope and outline of each part of SQuaRE, it was decided that each editors group create summary of each part of SQuaRE. They can be used as specification of each part and description of each part for publicity. These summary documents are linked form the hyper media version for the latter purpose.

Template of the summary was created as follows:

Purpose

- To use as design document for detailed work
- To provide free information

Scope (1~2)

- Intended Users
- Benefits of Users
- What items are standardized

Definitions
Reference model
Requirements

– Additional Information

Contents (2 pages)

– Table of contents and associated explanations

Relationship to other standards (1)

– Square

– Other SC7 documents

2) Form WG6-SG 1,2,3

In order to carry on the project efficiently, WG6 decided to form the following three Sub-Groups within WG6:

WG6-SG1: Product Quality General is responsible for projects 07.13.01.01 and 07.13.01.02,

WG6-SG2: Quality Model and Metrics is responsible for projects 07.13.02.01, 07.13.03.01, 07.13.03.02, 07.13.03.03, 07.13.03.04, 07.13.03.05 and 07.13.03.06,

WG6-SG3: Quality Requirements and Evaluation is responsible for projects 07.13.04.01, 07.13.05.01, 07.13.05.02, 07.13.05.03 and 07.13.05.04.

SC7/WG6 recommended Dr. Witold Suryan, Dr. Nigel Bevan and Mr. Jorgen Boegh as sub working group leaders on WG6-SG1, WG6-SG2 and WG6-SG3 respectively, and they were approved by the SC7 plenary meeting. (See SC7 Nagoya meeting resolutions)

3) Nominate editors and co-editors

WG6 recommended the following editor and co-editors for each part of SQuaRE. They were approved by the SC7 plenary meeting. (See SC7 Nagoya meeting resolutions)

NWI:

Sub-project 07.13.01.01 (9126-10: Software product quality - General overview and guide)

Editor: Mr. Danilo Scalet, Co-editor: Dr. Witold Suryan and Dr. Nigel Bevan

Sub-project 07.13.03.01 (9126-30: Quality metrics – Metrics reference model and guide)

Editor: Mr. Vipula Godamunne, Co-editor: Mr. Atsushi Yamada

Sub-project 07.13.03.02 (9126-31: Quality metrics – Base metrics)

Editor: Mr. Ota Novotny, Co-editors: Dr. Jiri Vanicek and Dr. Renate Sitte

Sub-project 07.13.04.01 (9126-40: Quality requirements – Quality requirements and guide)
Editor: Mr. Jorgen Boegh, Co-editors: Mr. Michael Gayle and Dr. Nigel Bevan

Minor Change:

Sub-project 07.13.01.02 (9126-11: Software product quality - Planning and management)
Editor: Mr. Tom Ipoly, Co-editors: Dr. Witold Suryn and Dr. Kazuhiro Esaki

Sub-project 07.13.02.01 (9126-20: Quality model – Quality model and guide)
Editor: Dr. Nigel Bevan, Co-editor: Mr. Vipula Godamunne

Sub-project 07.13.03.03 (9126-32: Quality metrics – Internal metrics)
Editor: Mr. Yukio Tanitsu, Co-editor: Mr. Vipula Godamunne

Sub-project 07.13.03.04 (9126-33: Quality metrics – External metrics)
Editor: Mr. Atsushi Yamada, Co-editor: Mr. Vipula Godamunne

Sub-project 07.13.03.05 (9126-34: Quality metrics – Quality in use metrics)
Editor: Dr. Nigel Bevan, Co-editor: Dr. Witold Suryn

Sub-project 07.13.03.06 (9126-35: Quality metrics – Documentation of evaluation modules)
Editor: Mr. Jorgen Boegh, Co-editor: Ms. Antonia Jeanrenaud

Sub-project 07.13.05.01 (9126-50: Quality evaluation – Quality evaluation overview and guide)
Editor: Dr. Nigel Bevan, Co-editors: Mr. Danilo Scalet and Dr. Witold Suryn

Sub-project 07.13.05.02 (9126-51: Quality evaluation – Process for developers)
Editor: Mr. Jorgen Boegh, Co-editor: Ms. Antonia Jeanrenaud

Sub-project 07.13.05.03 (9126-52: Quality evaluation – Process for acquirers)
Editor: Mr. Gilbert Le Gall, Co-editor: Ms. Antonia Jeanrenaud

Sub-project 07.13.05.04 (9126-53: Quality evaluation – Process for evaluators)
Editor: Ms. Antonia Jeanrenaud, Co-editors: Mr. Jorgen Boegh and Ms. Regina Colombo

4) Assignment of new number 25000

SC7 secretariat informed WG6 that ITTF decided to assign new numbers (25000 to 25099) to SQuaRE. WG6 discussed the renumbering of 9126 series to new 25000 series and decided the following plan.

Software Product Quality Division 9126-10 => 25000 General overview and guide

- 9126-11 => 25001 Planning and management

Quality Model Division

- 9126-20 => 25010 Quality Model and guide

Quality Metrics Division

- 9126-30 => 25020 Quality Metrics
- 9126-30 => 25020 Metrics reference model and guide
- 9126-31 => 25021 Base metrics

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- 9126-32 => 25022 Internal metrics
- 9126-33 => 25023 External metrics
- 9126-34 => 25024 Quality in use metrics

Quality Requirement Division

- 9126-40 => 25030 Quality Requirements and guide

Quality Evaluation Division

- 9126-50 => 25040 Quality Evaluation general overview and guide
- 9126-51 => 25041 Process for developers
- 9126-52 => 25042 Process for Acquirers
- 9126-53 => 25043 Process for Evaluators

5) Procedure for forwarding a document for ballot

In order to avoid unnecessary confusion and delay for forwarding each document, WG6 decided the procedure as follows.

- The editor will send a document to the WG6 convener and the secretary.
- Either the convener or the secretary of WG6 will forward the document to SC7 secretariat for the ballot or publication.

5.2 Revision of 12119

Discussion Point:

The points to be considered when revising ISO/IEC 12119 were identified as below:

- be consistent with SQUARE Quality Model (including Quality In Use),
- take into account the experience resulting from usage of the standard, particularly by certification bodies,
- take into account the new normative context,
- take into account evaluation process in ISO/IEC 14598,
- add a clause about application of the standard,
- add a part : requirements for testing.

Status of the revision is reported by the editors as below:

- 1) Be consistent with SQUARE Quality Model: Sub-characteristics are now included in the product description (5.1), taking also into account the Quality In Use (QIU).
- 2) Take into account the experience resulting from usage of the standard, particularly by certification bodies: Some ambiguities and difficulties of the standard have been removed from the proposal based on the experience of the 12119 ISO/IEC' s usage in France.
- 3) Updating of the first paragraphs: Foreword, Introduction, Scope, Conformance and Bibliography have been updated.

Immediate works to do are:

- Several parts of the French proposal (not distributed because written in French) still need to be introduced

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(definition, requirement for testing) ;

- Verification of the new normative reference used in the document (mainly for the certification field);
- Verification of the internal references (between last and new edition of the 12119);
- Verification of the conformity to SQUARE;
- Edition of a clause about the application of the standard;
- Verification of the definition coming from the French proposal to the revised definition between SQUARE and the ISO/IEC 15939;
- Correction of some editorial problems;
- Distribution of the document as it is (before verification and correction) for reviewing and calling new proposals.

Action Plan:

- WD & CD registration: May 30/ 2001
- CD ballot: December 15/ 2001
- FCD: May 30/ 2002
- FDIS: December 15/ 2002

5.3 WD 2500 Guide to use of 9126 and 14598 series

Discussion Point:

The document will be forwarder for not as a technical report but as an international standard. It will include (1) general (high level) requirements, (2) reference model and terminology that are common in SQuaRE, and (3) guide to use the SQuaRE.

Action Plan:

- WD & CD registration: May 30/ 2001
- CD ballot: December 15/ 2001
- FCD: May 30/ 2002
- FDIS: December 15/ 2002

5.4 WD 25020 Metrics reference model

Discussion Point:

As there are two major input, 9126-1 normative annex and the common part of 9126-2,-3,-4, there is no issue. Therefore the editors group made good progress on the document.

Action Plan:

- WD & CD registration: May 30/ 2001

- CD ballot: December 15/ 2001

- FCD: May 30/ 2002

- FDIS: December 15/ 2002

5.5 WD 25021 Base metrics

Discussion Point:

Action Plan:

- 30 WD & CD registration: December 15/ 2001

- CD ballot: May 30/ 2002

- FCD: December 1/ 2002

- FDIS: May 30

5.6 WD 25030 Quality requirements

Discussion Point:

Action Plan:

- 30 WD & CD registration: December 15/ 2001

- CD ballot: May 30/ 2002

- FCD: December 1/ 2002
- FDIS: May 30

5.7 Other Topics

1) Other SQuaRE Documents

- Revision of other SQuaRE Documents
 - WD & CD registration: December 15/ 2001
 - CD ballot: May 30/ 2002
 - FCD: December 1/ 2002
 - FDIS: May 30
- Minor revision (First track – Subject of decision at Bari meeting)
 - WD & CD registration: December 15/ 2001
 - FCD ballot: May 30/ 2002
 - FDIS: December 1/ 2002

2) Quality in use requirement and report document (Nagoya 1 and 5)

- Propose as a family of SQuaRE
- Assign different number within 25000
- WG6 has concern and interest on these document
- Nigel will distribute any information about NIST ballot to WG6 list
- Nigel will supply the revised documents. WG6 will review them and related documents in Bari meeting

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Definition of terms (ISO/IEC 15939)

M. Azuma and Nigel Bevan had ad hoc meeting with members of WG12 and WG13.

The issue was solved by joint Ad hoc group. Major results are as follows.

measure (noun)

A variable to which a value is assigned to represent one or more attributes. The term “measures” is used to refer collectively to base measures, derived measures, and indicators.

base measure

A measure of a single attribute defined by a specified measurement method. A base measure is functionally independent of other measures.

derived measure

A quantity that is defined as a function of two or more base and/or derived measures.

measurement function

An algorithm or calculation performed to combine two or more base and/or derived measures.

6. MEETING PLAN

The following meeting plan was discussed and approved.

- 2001, November, 5-9, Bari, Italy, Confirmed
- 2002, May 13-17, Gyeongju, Korea, Confirmed
- 2002, November, Cape Town, South Africa, tentative
- 2003, May, Open
- 2003, November, Melbourne, Australia, tentative
- 2004, May, Open
- 2004, November, France, tentative