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Subject: Minutes - WG7 Prague Meeting, 27-31 May 1996

1. Opening , Welcome, and Roll call

WG7 met in Prague, Czech Republic on 27-31 May, 1996. The Convener, Dr Raghu Singh, welcomed the WG7 members and experts. The following National Bodies were present at the meeting:

Australia, Canada, Czech Republic, France, Japan, Korea, Sweden, the United Kingdom and the United States of America.

The following persons attended the meeting either full-time or part-time:

Mr Stuart Arnold	(UK) (Project Editor, Project 07.38)
Mr. Thierry Bergier	(France)
Mr Roger Brandt	(Sweden)
Mr Andy Coster	(UK)
Mr Ken Turner Craig	(Australia)
Mr. Perry DeWeese	(USA)
Ms Darryl DiGiovanna	(USA)
Dr Jin-Ok Jeon	(Korea)
Mr Petr Kaminek	(Czech Republic)
Mr Anatol Kark	(Canada)
Dr Jerry Lake	(USA)
Mr Harold Lawson	(Sweden)
Mr John McGarry	(USA)
Mr James Moore	(USA)
Mr Noritoshi Murakami	(Japan)
Mr. Seh-woong Park	(Korea)
Mr Tom Pigowski	(USA) (Project Editor, Project 07.37)
Mr Peter Poon	(USA)
Ms Francine Portenier	(Canada)
Mr Richard Schmidt	(USA) (Project Editor, Project 07.38)
Dr Raghu Singh	(USA) (Convener)
Mr Doug Thiele	(Australia) (Project Editor, Project 07.26)
Dr Claude Vogel	(France) (Project Editor, Project 07.35)

Dr Singh introduced Messrs Gordon Hunter and Mark Schaeffer, who attended briefly on Monday, and who presented their NATO interests in the work of WG7.

2. Adoption of Agenda

The Agenda, document N107 was adopted with minor modification.

3. Appointment of Secretary

Stuart Arnold was appointed Secretary for the meeting.

4. Approval of Brisbane Minutes

WG7 reviewed the minutes of the Durban Meeting. The minutes were approved without modification.

5. Summary of Projects' Status

The Convener, Dr Raghu Singh reviewed the current status of the project activities for the benefit of delegates.

The circumstances regarding pDTR 15271 and pDTR 14759 were outlined. Comment may be submitted until the closing date of 10 June 1996 . However, many comments have already been submitted and it was proposed and agreed that these were to be discussed as Agenda items.

It was agreed that the Software Maintenance project will discuss the Working Draft 2 in preparation for Working Draft 3, which will then move forward for voting as a Draft Report.

The Convener informed the group that the JTC1 approved the project "System Life Cycle Processes Standard," JTC1 NP 15288 (see JTC1 N 4086, dated 1996-04-25). JTC1/SC7 assigned it to WG7 as Project SC7 07.38). Dr Singh outlined the background to the Systems Life Cycle Processes Standards project. Comments were received from Japan and UK, these were circulated for information and consideration. At this meeting the architecture, i.e. the partitioning, of the document is sought, then the draft outline of the document would be prepared. There was a view that the editorship may benefit by being shared to provide different perspectives. It was proposed that Mr Stuart Arnold should join Mr Richard Schmidt in editing the new Standard. This was accepted by the committee.

The background information to the Systems Life Cycle project was presented as WG7 - N108. It was clarified that multi-party contracts would be considered and that the work would address the multi-disciplinary team work. The issues of manufacture should also be considered. Whilst the 12207 document will be influential in the development of 15288, it was felt that a fresh viewpoint should be taken and that the impact of 12207 will need to respond these in its first revision.

An agenda for future development and liaison will be defined in order that the necessary and appropriate inputs from potential contributors such as TC 55, TC56 and CEN 311 can be made. Mr Gordon Hunter clarified the NATO position on software and system standards; there is desire to avoid the issuing of NATO-specific documents and a strong wish to adopt 12207 and the future 15288.

6. System Life Cycle Processes (Project 07.38)

The documents that define the purpose, requirement and scope of the project (N1331, N1361, N1385) were circulated and discussed.

Top level description of the system Life Cycle Architecture was discussed and a number of characteristics that should be present in the final Standard were identified:

- coverage of system life cycle components; interfaces, the interaction between them.
- expression of the what level, not how
- the architecture on the life cycle are constructed from a set of processes, activities and tasks, i.e. system lifecycle architecture = set of processes; process = set of activities; activity = set of tasks
- systemware = S components (products, personnel, hardware & software)
- life cycle = from inception/ ideation to final disposition
- integration of hardware, software and personnel
- integration of life cycle processes

Following a Working Group discussion it was agreed that the Standard should address:

- the definition of the system life cycle framework
- the clear distinction between system life cycle framework and the concept of system architecture,
- that there is an architecture to a process,
- the existence of lifecycle phases, which need to be defined and can be expressed in term of processes,
- how different lifecycle can be expressed, possibly with annexes providing explanation on time and non-time sequences.
- It was accepted that the term process be described. No clear term was selected for the time-phased business parts of the lifecycle.

The USA actions (Scope of Work and System Architecture) and UK actions (Process Flow Example and Interaction between Parties) resulting from the Durban meeting were considered. The USA tabled a paper describing system lifecycle architecture processes. Discussions regarding the organisational processes concluded that they exist and must be considered at least in part by the standard. The UK tabled an example of processes constructed to describe a life cycle viewed from a project context. Discussions of the two views presented concluded that they described similar ideas at different levels of abstraction.

Sweden expressed concern on the title of the project. An alternative of "life cycle processes for computer-based systems" was suggested, though the consensus was that the existing title was preferred.

It was requested that some particular issues be considered during the development, these were:

- Information model
- Emphasis on architecture
- Consider re-engineering
- Product lines
- Importance of Process Centred tool environment
- Model based system engineering, i.e. models of the system that is being designed and implemented
- this may be delivered in an appendix or may be in some future guidance document.

Sweden also presented contributory material to the standard, this was made available to the Editors Richard Schmidt and Stuart Arnold.

Japan was concerned about the inconsistency between the ISO 12207 and the candidate lifecycle processes proposed for ISO 15288. It was agreed that there must be a strong and compatible relationship. Concern was echoed that ISO 15288 impact on ISO 12207 may present difficulties to current users to ISO 12207. It was suggested that there should be timely revision of ISO 12207 with a particular view to achieving compatibility with ISO 15288. The UK suggested that the groups within the ISO 15288 project would ensure consistency. The need for this consistency was supported by the Czech Republic and a common approach to both documents was encouraged.

Sweden requested that the information model be developed as the Standard is being developed.

The editors were requested to consolidate the tabled material off-line during the meeting on behalf of the delegates and offer this for review for further discussion. A single model was presented and discussed. The term Enterprise was preferred to Organisation. The term Technical preceding Management was considered to be restrictive.

In order to assist the Editors, a brain storm was conducted to elicit WAG views on the subjects that should be encompassed by the Standard:

Analysis, Requirements Definition, Requirements Allocation, Architecture Design, Design for 'ilities', Trade-off studies, Testing, Verification, Formality & Criticality, Delta engineering, User problem solutions, Component design, Integration, Quality engineering, Prototyping, Life cycle modelling, Cost-benefit analysis, Reuse, Product line consideration, Method and Tool design, Life cycle concepts, Maintenance, Services, Training, Disposition, Deployment, Installation, Transition, Migration, Support environment, Logistics, Distribution.

The model was amended according to the changes discussed and represented to the WG. Observations were that the removal of Technical from Management should be indicated by bracketing.

An outline was circulated and it was agreed that scoping of each titled part of the outline be textually defined by the editors by 31 July 1996. In undertaking this, the Editors are prepared to receive any early views, to be identified as being from either WG members or National Bodies (schmidt@alc.com; sarnold@dra.hmg.gb). This descriptive text of the standard structure has the objective of providing visibility of ideas and establishes a concept baseline against which National Bodies can comment. The inputs received by 11 October 1996 will permit the Convener (singhr@smtp-gw.spawar.navy.mil) to gather inputs which will then be distributed by 15 October 1996 to be as a starting point for further development of the Standard in Paris, 11 November 1996.

7. Guide to 12207 (Project 07.26)

National comments, submitted in text form, from Australia, Canada, Czech Republic, Italy, Japan, South Africa, United Kingdom and the USA, were considered and the decision taken against each comment was recorded by the Project Editor in a draft PDTR Resolution Report. It was noted that further comments may be received as the ballot did not close until 10 June 1996.

The meeting agreed that due to the large number of UK comments and existing time constraints, finalisation of the comments would be considered between the respective National Delegate and the Project Editor (Mr Doug Thiele). The majority of comments from the USA and UK were decided in this manner. Comments from Italy and South Africa were considered with a volunteer acting on behalf of those nations.

The meeting agreed that any subsequent issues arising from these decisions or further comments would be resolved by E-Mail.

8. Mockup and Prototype Guide (Project 07.35)

National comments, submitted in text form, from USA, UK, South Africa, Italy were considered individually and the decisions taken against each comment from each country was recorded by the Editor (Dr Claude Vogel). Voting closes on 10 June.

9. Resolutions to Plenary

The Paper on Resolutions from WG7 to the Plenary (WG7 N114) was circulated. Each Resolution was proposed and agreed:

Resolution 1 - Mr. Stuart Arnold as co-editor for the System Life Cycle Standard project. This Resolution was re-worded and agreed.

Resolution 2 - NATO liaison. Again This Resolution was re-worded and agreed.

Resolution 3 - Software Process Measurement. Minor rewording and agreed.

Resolution 4 - *In memoriam, The Late Jean Claude Utter.*

Resolution 5 - Retirement; Dr. Wolfgang Heidrich

10. Responses from JTC1/SC7 on the comments in JTC1 N4086

With very minor rewording, each of the responses detailed in WG7- N115 was agreed by the WG for submission to the JTC1/SC7.

11. WG7 Deliverables Schedule

The dates for completion of each of the progressive documents steps was discussed and agreed and designated WG7 N116

12. Study Group - Framework for Software Process Measurement

Mr. John McGarry, Leader of the Study Group, introduced background, concepts and goals of a prospective New Work Item. Views were expressed regarding potential overlap of this work with the activities of other working groups, e.g. WG6, and a danger that this may lead to several sources being required to establish actions in a software projects. It was clarified that the subject of this Study is a framework for one of the 12207 sub-processes, i.e measurement.

Following the study report, WG7 will discuss the results in Nov 96 and issue the final report in Dec 96. This will be submitted to SC7 with its recommendations, in particular a New Work Item may be proposed. If this were to be the outcome then the earliest start date of a New Work Item would be June 97, though it was acknowledged that this does not preclude preparatory work.

13. Software Maintenance Standard (Project 07.37)

The Editor of the Standard on Software Maintenance, Mr. Tom Pigoski, provided a summary of project actions to date, together with background material. This lead into some items of discussion.

A discussion centered around the very nature of the Standard. Questions that were discussed included the following:

- Should the Standard be a standalone document or part of the ISO/IEC 12207 family?
- Should the Standard state requirements or provide guidance?
- Should the Standard be contractual in nature or provide guidance?

A view emerged that ISO/IEC 12207 is the contract standard and that the Standard on Software Maintenance should provide guidance. This was unopposed in a vote. It was agreed that the Standard would be part of the ISO/IEC 12207 family and not a stand alone document. It was also agreed that the Standard would provide guidance and not be contractual in nature. Further, it was agreed that the only 'shall' in the Standard would be those from ISO/IEC 12207.

The architecture of the Standard and the use of diagrams in the Standard were discussed. The previously approved architecture was composed of activities, tasks, and task-steps, with the task-steps providing the detail necessary to implement the tasks. It was reaffirmed that this is the proper architecture for the standard.

The number and placement of diagrams in the Standard was also discussed. It was agreed that diagrams were only necessary at the activity level, since any further decomposition would make the Standard too lengthy. However, it was agreed that the Editor should be permitted to add additional diagrams if a task was either critical or confusing.

The wording of the Working Draft was confusing in that reviewers were not sure if the Standard would accommodate single or multiple changes. During the discussion, it was noted that the SCM Standard is for single changes and this was seen to be a problem. Accordingly, it was agreed that the Standard must accommodate multiple changes at one time.

The format of the diagrams was discussed. The current WD uses the IEEE 1219 format as agreed to at the SC7 Plenary in Brisbane. Several reviewers of the WD suggested that IDEF0 format be used instead of the IEEE 1219 format.

Decision 4: It was agreed that the IDEF0 format would be used for the diagrams.

14. Adjournment

Dr Raghu Singh, the Convener, thanked the attendees for their participation and adjourned the meeting. He advised of provisional acceptance of an offer to visit Paris, France 11-15 November 1996 and expressed the hope of seeing all present in France at the next meeting.

Referenced Documents

- N108 Brief N15288 System Lifecycle Processes
- N109 Guide Comments
- N110 Guide Ballot Disposition
- N111 Membership List
- N112 Mock up and Prototype Comment
- N113 Mock up and Prototype Ballot Disposition
- N114 Resolutions from WG7
- N115 Responses to JTC1 N4086
- N116 Deliverable Schedules
- N117: WG7 Prague Meeting Minutes
- N118: Convener's report to SC7 Plenary.