ISO/IEC JTC1/SC7
Software & Systems Engineering
Secretariat: CANADA (SCC)

ISO/IEC JTC1/SC7 N3317

2005-07-12

Doc. Type	**NWI Proposal**
Title	**New Work Item Proposal – Software Engineering - Certification of Software Engineers**
Source	**WG20**
Project	
Status	**NP**
References	**N3190, Resolution 844**
Action ID	**ACT**
Due Date	**2005-10-12**
Mailing Date	**2005-07-12**
Distribution	**SC7_AG; JTC1 Sec.; P, O & L Members**
Medium	**PDF**
No. Of Pages	**5**
Note	**This ballot is also sent to JTC1 for a parallel endorsement balltot, as per directives. Member Bodies must use the form included on the ballot and provide answers to all questions.**

Address reply to: ISO/IEC JTC 1/SC7 Secretariat
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VOTE ON A PROPOSED NEW WORK ITEM ISO/IEC JTC 1/SC7 N3317

Date of Circulation of NP: **2005-07-12**

Date of Ballot Close: **2005-10-12**

Please return all votes and comments directly to the JTC 1/SC 7 Secretariat (secretariat@jtc1-sc7.org) by the due date indicated.

Proposal for a new work item on

Software Engineering - Certification of Software Engineers

Any proposal to add a new item to the programme of work shall be voted on by correspondence, even if it has appeared in the agenda of a meeting.

A. Vote		**YES**	**NO**	**Comments**
Q.1	Do you accept the proposal in document JTC 1 N XXXX as a sufficient definition of the new work item? (If you have responded "NO" to the above question, you are required to comment.)	____	____	____
Q.2	Do you support the addition of the new work item to the programme of work of the joint technical committee?	____	____	____
B. Participation				
Q.3	Do you commit yourself to participate in the development of this new work item?	____	____	____
Q.4	Are you able to offer a project editor who will dedicate his/her efforts to the advancement and maintenance of this project? (If "YES," please identify .....)	____	____	____
C. Documentation				
Q.5	Do you have a major contribution or a reference document ready for submittal?	____	____	____
Q.6	Will you have such a contribution in ninety days?	____	____	____

P-member Voting:	**Date:**	**Submitted by:**
National Body		Name
_____	_____	_____

NOTE: do NOT submit this form when voting by email. Simply type your vote (with comments where applicable) into an email message and send to Secretariat@jtc1-sc7.org.

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: 2005-07-12	Proposer: ISO/IEC JTC1/SC7
Secretariat: Standards Council of Canada	**ISO/IEC JTC 1 N** XXXX ISO/IEC JTC 1/SC 07 N 3317

A proposal for a new work item shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.

Presentation of the proposal

Title Software Engineering -- Certification of Software Engineers

Scope This proposal calls for the establishment of a project to develop an international standard for the certification of software engineering professionals that is consistent with the approach to certification taken by ISO/IEC 17024, with the software engineering knowledge and processes contained in ISO/IEC 12207, ISO/IEC TR 19759, and the ISO/IEC 25000 series, and with the systems engineering context for software engineering (and for the software engineering process) provided by ISO/IEC 15288. The initial focus for the project will be certification based on knowledge assessment. The project will also investigate how other approaches to certification might be effectively included in a standard. The resulting standard should provide a reference model that can be used to provide for portability and mutual recognition of professional software engineering certification. The project will also address the issue of accreditation or auditing of certification schemes.

Purpose and justification – Over the past several decades, software has come to play an increasingly critical role in all aspects of society in all countries. As a consequence, nations have realized that it is important to set up processes and procedures to give official recognition to the professional competence of those involved with the software development process. These certifications are of critical importance to the software industry. There are significant commonalities shared by the various national perspectives on certification for software engineering professionals. For example, approaches to certification tend to be based either on knowledge assessment or on peer evaluation, and certification schemes generally reference either a body of knowledge or a specific skill set. These commonalities suggest that it would be useful and feasible to think about developing a certification standard for software engineering professionals. An international standard for the certification process for software engineering professionals would make mutual recognition of professional credentials much easier, enabling professionals to move easily within an increasingly global software industry. So far, such recognition can only be achieved by bilateral negotiations.

Despite some regional successes, bilateral approaches will not be able to scale to the entire world. The project's initial goal will be to develop a standard for certification based on knowledge assessment. Such a standard could provide a reference model for the technical bases (skill set, body of knowledge) of a given national certification scheme. ISO/IEC 12207 and ISO/IEC TR 19759 are internationally accepted documents corresponding to these technical certification bases, and the systems engineering context for software engineering, and for the software engineering process, is provided by the ISO/IEC 15288 series. Other SC7 standards will also be considered for inclusion in the body of knowledge. For example, with respect to software product, the ISO 25000 series is available. It is therefore reasonable to develop an approach to standardization of certification for software engineering professionals that makes use of these documents. A reference model could be used by certification bodies in different nations to provide for portability and mutual recognition of certifications for software engineering professionals. The model must therefore take explicit account of current European efforts to develop tools that support transfer and transparency of qualifications and competences, as well as issues relating to the implications of free-trade agreements between nations.

Note that the European standardization body CEN has replaced EN 45013, the previous European standard for certification bodies, with EN-ISO/IEC 17024: 2003, which adopts ISO/IEC 17024 as a whole.

Programme of work

If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed?

_X __a single International Standard

___ more than one International Standard (expected number: .....)

____ a multi-part International Standard consisting of ..... parts

____ an amendment or amendments to the following International Standard(s) .....

____ a technical report , type .....

And which standard development track is recommended for the approved new work item?

_X__a. Default Timeframe

____b. Accelerated Timeframe

____c. Extended Timeframe

Relevant documents to be considered:

ISO/IEC 12207:1995 Information technology -- Software life cycle processes, ISO/IEC 12207:1995/Amd 1:2002, ISO/IEC 12207:1995/Amd 2:2004

ISO/IEC TR 19759 Software Engineering -- Guide to the Software Engineering Body of Knowledge – SWEBOK

ISO 9712:1999 Non-destructive testing -- Qualification and certification of personnel

ISO 9712/DIS Non-destructive testing -- Qualification and certification of personnel

ISO/IEC 17024:2003 Conformity assessment -- General requirements for bodies operating certification of persons (supersedes EN45013)

ISO/IEC 15288:2002 Systems engineering -- System life cycle processes

ISO/IEC 15504-1:2004 Information technology -- Process assessment -- Part 1: Concepts and vocabulary

ISO/IEC 25000 series: Software product quality requirements and evaluation

Co-operation and liaison

Preparatory work offered with target date(s) N3190: Final report of JTC1/SC7 Study Group on international certification of software engineers.

Signature:

Will the service of a maintenance agency or registration authority be required? No
- If yes, have you identified a potential candidate? .....
- If yes, indicate name .....

Are there any known requirements for coding? No
-If yes, please specify on a separate page

Does the proposed standard concern known patented items? No

- If yes, please provide full information in an annex

Comments and recommendations of the JTC 1 or SC 7 Secretariat - attach a separate page as an annex, if necessary

Comments with respect to the proposal in general, and recommendations thereon:
It is proposed to assign this new item to JTC 1/SC 7/WG 20

Voting on the proposal - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

Date of circulation:	Closing date for voting:	Signature of Secretary:
2005-07-12	2005-10-12	Witold Suryn

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
A. Business Requirement		
A.1 Market Requirement	Essential ___ Desirable __X_ Supportive ___	
A.2 Regulatory Context	Essential ___ Desirable ___ Supportive _X__ Not Relevant __	
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes ___ No_X__	
B.2 Commitment to other organisation	Yes ___ No_X__	
B.3 Other Source of standards	Yes ___ No_X__	
C. Technical Status		
C.1 Mature Technology	Yes _X__ No__	
C.2 Prospective Technology	Yes ___ No_X__	
C.3 Models/Tools	Yes ___ No_X__	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes ___ No_X__	

D.2 Interoperability	Yes ___ No_X__	
E. Cultural and Linguistic Adaptability	**Yes__**X**__** **No_____**	
F. Other Justification		

Notes to Proforma

A. Business Relevance. That which identifies market place relevance in terms of what problem is being solved and or need being addressed.

A.1 Market Requirement. When submitting a NP, the proposer shall identify the nature of the Market Requirement, assessing the extent to which it is essential, desirable or merely supportive of some other project.

A.2 Technical Regulation. If a Regulatory requirement is deemed to exist - e.g. for an area of public concern e.g. Information Security, Data protection, potentially leading to regulatory/public interest action based on the use of this voluntary international standard - the proposer shall identify this here.

B. Related Work. Aspects of the relationship of this NP to other areas of standardisation work shall be identified in this section.

B.1 Competition/Maintenance. If this NP is concerned with completing or maintaining existing standards, those concerned shall be identified here.

B.2 External Commitment. Groups, bodies, or fora external to JTC 1 to which a commitment has been made by JTC for Co-operation and or collaboration on this NP shall be identified here.

B.3 External Std/Specification. If other activities creating standards or specifications in this topic area are known to exist or be planned, and which might be available to JTC 1 as PAS, they shall be identified here.

C. Technical Status. The proposer shall indicate here an assessment of the extent to which the proposed standard is supported by current technology.

C.1 Mature Technology. Indicate here the extent to which the technology is reasonably stable and ripe for standardisation.

C.2 Prospective Technology. If the NP is anticipatory in nature based on expected or forecasted need, this shall be indicated here.

C.3 Models/Tools. If the NP relates to the creation of supportive reference models or tools, this shall be indicated here.

D. Conformity Assessment and Interoperability

D.1 Indicate here if Conformity Assessment is relevant to your project. If so, indicate how it is addressed in your project plan.

D.2 Indicate here if Interoperability is relevant to your project. If so, indicate how it is addressed in your project plan

E. Cultural and Linguistic Adaptability Indicate here if cultural and linguistic adaptability is applicable to your project. If so, indicate how it is addressed in your project plan.

F. Other Justification Any other aspects of background information justifying this NP shall be indicated here