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The CMMI[®] Product Suite and International Standards – An Update

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Group - November 15, 2005**

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Agenda

What's Happening in the International Standards Arena?

Capitalizing on Synergies with Selected International Standards

Current Status



What's Happening in ISO?

Work wrapping up on process assessment model for 12207 – Software Life Cycle Processes (15504-5) – to be published Q106,

Work beginning on process assessment model for 15288 – System Life Cycles Processes (15504-6) – to be published Q308 (estimate)

Work beginning to add organizational maturity construct to 15504 (will be published as 15504-7) – to be published Q308 (estimate)

Revision of 15939 - Software Measurement Process - to encompass systems and software,

Work towards eventual “harmonization” of 12207 and 15288 – this COULD result in a single IS addressing both,

Work beginning on applying 12207 to Very Small Enterprises

Work beginning on Certification of Software Engineers

What Does This Mean!?

National boundaries (and all which that implies) continue to become less relevant to international commerce,

More pressure to either use international standards directly or ensure that “local” standards have meaningful connectivity to relevant international standards.

More pressure for “reciprocity” agreement



Impact of Globalization Pressures -1

SEI involvement in relevant international standard work since early 90s,

CMMI Product Suite manifestations:

- **A-spec for CMMI Product Suite cites as reference documents “Applicable ISO/IEC documents, including ISO/IEC 12207 and ISO/IEC 15504”; contains two “line item” requirements citing 15504,**
- **ARC draws heavily on 15504-2 requirements,**
- **SCAMPI (A) is largely 15504 compliant,**
- **Nine standards (sector, professional society or international) are cited in the CMMI model reference appendix,**
- **Six standards (sector, professional society or international) are cited in the CMMI model glossary “order of precedence”**



Impact of Globalization Pressures -2

(2000) Publication of Spice for Space method and model (S4S) by ESA for use by the European space industry,

(2001) Publication of Spice-9000 for Space method and model (S9kS),

(2003) Publication of mappings relating CMMI to 9001 by Boris Mutafelija and Harvey Stromberg,

(2004) Publication of mappings relating CMMI to 9001 and 12207 by Software Quality Institute,

(2004) Breakout session on dual outcome SCAMPI appraisals at SCAMPI Lead Appraiser workshop

(2005) Publication of Automotive SPICE (ASPICE) – a derivative of 12207 for use by automobile manufacturers to select suppliers,

(2003-5) Informal SCAMPIs with 9001-relevant outcomes reported by individual SCAMPI Lead Appraisers



Synergy With Selected International Standards -1

Identify areas where there are opportunities for synergy between key international standards and the CMMI Product Suite

Exploit these opportunities by developing appropriate work products and/or liaising with appropriate individuals and organizations



Synergy With Selected International Standards -2

Key standards identified to date are

- **ISO 900x:2000 family of standards (as well as selected domain derivatives)**
- **ISO/IEC 12207**
- **ISO/IEC 15288**
- **ISO/IEC 15504**

Note that 15504 provides a mechanism for establishing important relationships to other important process-related international standards

Revised Approach for 9001

Modified position as follows:

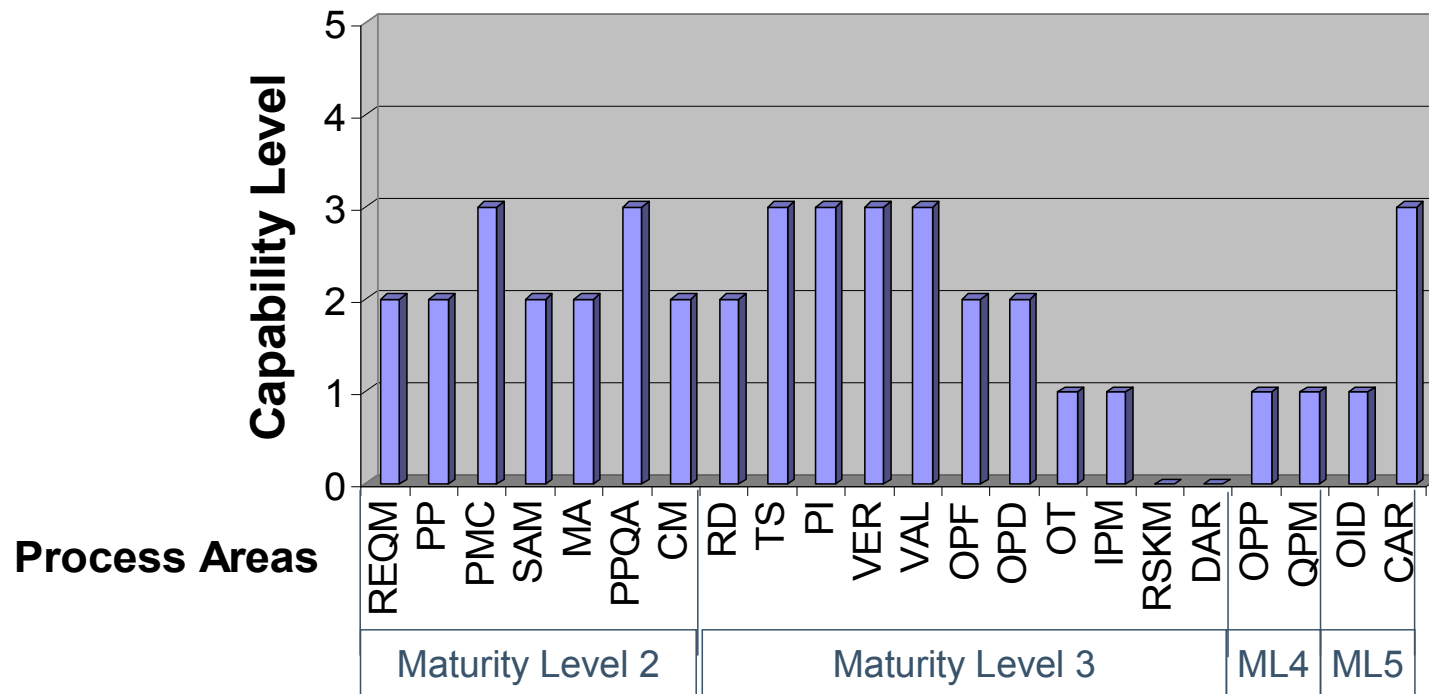
- **Current market needs are for 9001-relevant outputs from a SCAMPI as opposed to a 15504 process profile relevant to a 9001 process reference model,**
- **initial pilots will not focus on 15504 conformance,**
- **Possibility of 15504 conformance relative to a 9001 process reference model as market needs evolve**

Usage Scenarios

Initial pilots this year and next are focused on addressing the following scenarios:

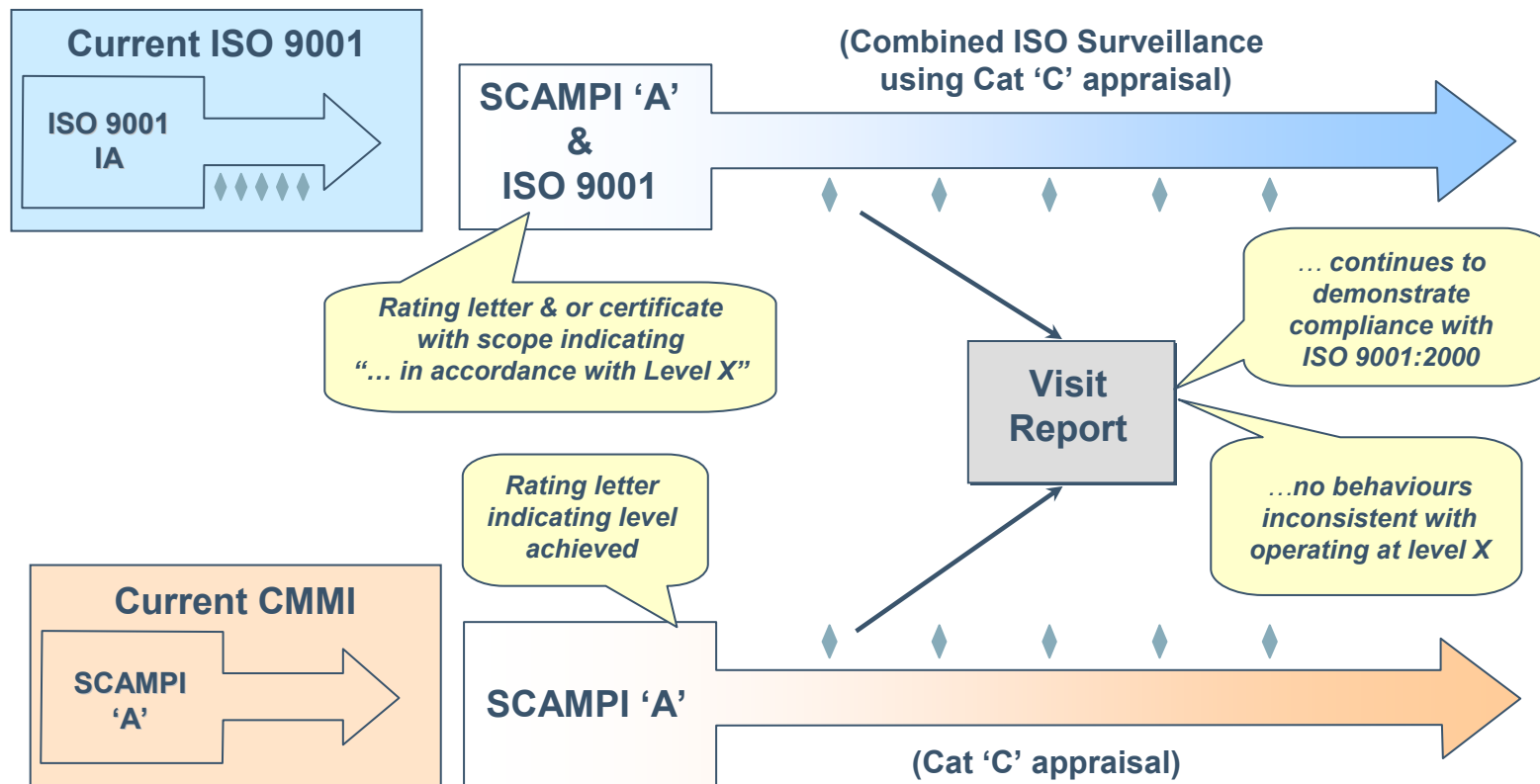
- “we are also working towards 9001 compliance – how are we doing?”
- “we have already achieved 9001 certification and we would like to see how our [CMMI initiative, 9001 certification] is supporting our [9001 accomplishments, CMMI initiative]”
- Variations of above:
 - If we are CMMI maturity level x, what are the implications for 9001 certification?
 - If we are 9001 certified, what are the implications for CMMI maturity?

CMMI - ISO9001:2000 Capability Profile by Equivalent Staging



Courtesy of Rout et al, QualCon 2004

The possible options for assessment and surveillance





Current Status

October 2005 - “Shadow appraisal” as an initial step towards identifying and capitalizing on synergies with 9001,

2005-6 - Possible collaboration with US Tag to TC176 for development of guidance document useful to 9001 and CMMI communities,

February 2006 - Full SCAMPI appraisal to test ability to generate 9001 outcomes as well as a 12207 process profile generated in compliance with 15504-2,

Technical Note (s) to document lessons learned and provide guidance