## FINAL PROGRAM

TUESDAY MAY 29, 2012

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<th>TRACK / SESSION</th>
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<tr>
<td>9:30-13:00</td>
<td>MICHAEL BORONOWSKY, TANJA WORONOWICZ, ANTONAS MITASIUNAS: innoSPICE</td>
<td>CAROL DEKKERS: Increase Project Success With Scope Management And Leadership</td>
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<td>Coffee break 11:00</td>
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<td>13:00-14:00</td>
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<td>LUNCH</td>
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<td>14:00-17:30</td>
<td>LINDA IBRAHIM, ERNEST WALLMUELLER: Process Improvement With Enterprise SPICE</td>
<td>RISTO NEVALAINEN, TIMO VARKOI: Safety Issues In Process Assessment</td>
<td>TERRY ROUT: The Role And Application Of ISO/IEC 15504</td>
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<td>Coffee break 15:30</td>
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<tr>
<td>17:30-20:30</td>
<td>SOCIAL EVENT: Welcome Tour and Reception at Bellver Castle</td>
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Room allocation:

Track A: Main lecture room (first floor)
Track B: Room 4 (first floor)
Track C: Room 5 (first floor)
innoSPICE is a process reference and assessment model that can help knowledge-intense institutions generate more innovation while helping investors and research institutions optimize public funds to achieve economic added value. It is an ISO/IEC 15504 conformant evaluation tool for technology transfer and innovation processes. The model is based on a process reference and assessment model that was developed in the BSR INTERREG 4B Project BONITA and has been successfully used by various institutions in the Baltic region in improving their technology transfer practices.

The model has been successfully used by various institutions in the Baltic region in improving their technology transfer practices. innoSPICE has recently joined the SPICE community in the form of a Special Interest Group (SIG) of the SPICE User Group. It is extending the family of other well established groups and initiatives such as Automotive SPICE ® (which addresses the software capability of the supplier in the supplier evaluation process, http://www.automotivespice.com), Enterprise SPICE (which addresses enterprise processes, http://www.enterprisespice.com), and Medi SPICE (which addresses process assessment for medical device software, http://www.medispice.com).

The innoSPICE SIG allows the SPICE community members to use innoSPICE as an international instrument for quality management in the field of innovation, knowledge and technology transfer. The standards based model is applicable to all knowledge intense institutions generating efficiency gains in the field of innovation and helping investors and research institutions optimize public funds to achieve economic added value.

The planned half day tutorial will focus on the following issues with presentations and interactive sessions:

- Introduction to the innoSPICE PRM and PAM
  - InnoSPICE in the context of innovation, knowledge and technology transfer
  - Stakeholders of innoSPICE
- Fields of applications
  - Use scenarios
  - Process Capability Management in the public sector
- Specific aspects of innoSPICE assessments
  - Guided self assessments
  - Participatory approach
- Towards certified technology transfer capabilities
- Implications for new areas of research and business
**DR. MICHAEL BORONOWSKY, TZI – UNIVERSITÄT BREMEN, GERMANY**

Dr. Michael Boronowsky, Managing Director  
TZI – Universität Bremen, Germany  
Phone: +49 421 218 64092  
mb@tzi.de

Dr. Michael Boronowsky is Managing Director of the Center for Computing Technologies, University of Bremen (Germany). In 1992 he had finished his studies in electrical engineering at University of Applied Science Aachen. After which he worked in a measurement device company as leading development engineer. He went back to university and studied Computer Science in Nijmegen (Netherlands) and received a Master in Computer Science in 1995. Since this time he is working at the University of Bremen. In the beginning he was working in the area of Artificial Intelligence research. Dr. Boronowsky finished his PhD in 2001 and became managing director of the Intelligent Systems department. Since 2002 he is managing director of the TZI. He coordinated the application of the IP-proposal “wearIT@work – Empowering the Mobile Worker with Wearable Computing”. He is an international expert in the field of knowledge- and technology transfer and representative of the European Baltic Sea Region Interreg 4B project BONITA. He is part of the team that has initiated the ISO/IEC 15504 based model innoSPICE.

**TANJA WORONOWICZ, TZI – UNIVERSITÄT BREMEN, GERMANY**

Tanja Woronowicz is a senior scientist and knowledge transfer manager at the Headquarter of TZI-Center for Computing and Communication Technologies, University Bremen, an ICT research organization that is active in technology transfer for more than 15 years. Tanja is project manager of the Baltic Sea Region project BONITA that has developed the Innovation, Knowledge and Technology Transfer capability model innoSPICE. She is co-author of innoSPICE. Tanja is also lecturer at the University of Applied Science Bremen.

After 5 years in industry (sales management, HRD), she came back to university in 2007, working as an IT security assessor (ISO 27001) and European project manager. Tanja holds a MSc from Paris-Lodron University in Salzburg, Austria.

**PROF. ANTANAS MITASIUNAS, VILNIUS UNIVERSITY, LITHUANIA**

Antanas Mitasiunas – professor at Computer Science department of Vilnius University, founder and managing director of software development and consulting company MitSoft Ltd. Antanas is involved in process capability assessment and improvement since 1995. During last 5 years Antanas was elected Enterprise SPICE Project Advisory Board member, architecture team member, editorial team member, author and reviewer. Antanas contributed to the development of domain independent enterprise-wide process capability reference and assessment models.

Antanas is co-author of innovation and technology transfer capability maturity model innoSPICE, developed during implementation of the Baltic Sea Region programme’s Project BONITA. Antanas is co-author of Education process capability maturity model.

Since year 1998 Antanas gives the course on process capability assessment and improvement for master level students in Software Engineering at Vilnius University. He wrote two textbooks for the students on this subject. Antanas is ISO/IEC 15504-5 certified assessor.
This tutorial will introduce the participants to the structure and content of the Enterprise SPICE model and illustrate how selected Enterprise SPICE processes can be used to start enterprise-wide improvements in your organization. The tutorial will start with background information on the project, the model itself, benefits from using Enterprise SPICE, and its relationship to other standards and models. Ways of using Enterprise SPICE for assessment and process improvement will be discussed. Group exercises, self-assessment and discussions will be used to enable participants to consider the application of Enterprise SPICE processes in their various organizational contexts.

Tutorial Topics:

- **What is Enterprise SPICE** –
  - Background, benefits, rationale for use of the model
  - Overview of the model and the project
  - Relation to other SPICE initiatives
- **How can I use Enterprise SPICE** –
  - For process improvement
  - For process assessment, assessment methods
  - Relation to other standards and models
  - Usage of several standards and standard management
- **How can I start? How can I apply some specific Enterprise SPICE processes in my organization** – Examination of particular processes in participant context. Processes will likely include:
  - Enterprise Governance – to establish strategic enterprise direction and ensure the enterprise achieves its goals and objectives
  - Needs – to elicit, analyze, clarify and document evolving customer and other stakeholder needs and expectations
  - Process Improvement – to continuously and measurably improve process capability so that business can be conducted more efficiently and effectively
**DR. LINDA IBRAHIM, FEDERAL AVIATION ADMINISTRATION, USA**

Dr. Linda Ibrahim is Chief Engineer for Process Improvement at US Federal Aviation Administration where she led development of FAA integrated Capability Maturity Model, its extensions, and appraisal methods. Linda is Project Leader Enterprise SPICE, Founding Member SPICE Academy, and Enterprise SPICE Advisory Board member. She previously served as member of CMMI Steering Group, Senior Member of the Technical Staff at SEI, and in numerous academic, research, management, consulting and practitioner software engineering and process improvement positions in US, Europe and the Middle East. Linda frequently addresses international, national, and local conferences including keynotes and presentations at major events in US, Europe (several countries), Brazil, Australia, and Canada. She has published ~100 articles, papers, presentations, reports.

**DR. ERNEST WALLMÜLLER, CEO OF QUALITÄT & INFORMATIK, SWITZERLAND**

Dr. Ernest Wallmüller, CEO of Qualität & Informatik (www.itq.ch), started his carrier within research and development in the discipline of software Engineering at J. Kepler University, Linz, Austria and at the Swiss Federal Institute of Technology (ETH) Zurich, Switzerland; Manager of the "Software Engineering and Quality Assurance" at SBG Zurich; Senior Consultant at ATAG Ernst & Young in CH, A, D, and UK; Principal, Process Coach and Manager of Project Quality Office and Quality Systems of Unisys (Schweiz) AG, since 1997 Mr. Wallmüller is working for Qualität & Informatik (www.itq.ch) in Europe and Switzerland. He is author of several books, lecturer at several universities and advanced technical colleges, VDA-QMC/INTACS certified Principal Assessor for Automotive SPICE & ISO/IEC 15504, Enterprise SPICE, SEI trained CMMI Assessor. Mr. Wallmüller is an acknowledged expert for quality and process engineering and has memberships in the IEEE, ACM, SwissICT, GI, SI, and Software Test Austria.
THE ROLE AND APPLICATION OF ISO/IEC 15504 – PROCESS ASSESSMENT

TUTORIAL DESCRIPTION

The use of techniques for assessment and evaluation of the software development process has been the focus of increasing attention over recent times. The available evidence indicates that methods based on the various process assessment models provide the potential for substantial improvement in productivity and quality, as well as giving increased confidence to purchasers of software. Initiatives have been taken at the international level to develop a standard for process assessment, based on generally agreed principles. An international collaborative effort - the SPICE Network - has supported the development of an international standard for software process assessment, which is now published as ISO/IEC 15504.

This tutorial provides a detailed analysis of the framework for process assessment in ISO/IEC 15504, placing it in the context of international developments in the area, and emphasizing the role of the framework in harmonizing existing assessment approaches such as those based upon the Capability Maturity Model. It stresses the practical issues of performing and using the results of assessment. Because of the presenter’s close involvement with the standards development effort, the information presented will be the most current available, being based upon the approved and published version of ISO/IEC 15504. The tutorial will include a detailed discussion of the relationship of the SPICE Framework to existing assessment approaches such as the Capability Maturity Model Integration, as well as to other International Standards including ISO 9001, ISO 12207, ISO 15288 and ISO 20000 (ITIL). It also discusses the continuing evolution of the Standard, and the forthcoming development of the ISO 330xx series as successor to ISO 15504. The tutorial will address the issues of assessment of organizational maturity and the certification of assessment results; included in this will be an overview of the emergence of new approaches to process assessment based on ISO 15504, including Automotive SPICE, Medi SPICE and Pathfinder.

TERRY ROUT

Terry Rout is an Emeritus Professor in the Institute for Intelligent and Integrated Systems at Griffith University, Queensland, Australia, and leads the Process Assessment and Improvement group within the Software Quality Institute at the University. He has been a leading figure in conducting empirical studies of process assessment and improvement, and in the transition of assessment technologies into general use within industry. He is the overall project editor for ISO/IEC 15504: Process Assessment, and is also involved with several other activities in the development of international standards for software engineering. He led a Study Group to determine requirements for the next revision of this key Standard, and following from this is overall Editor of the new ISO/IEC 330xx series of Standards on Process Assessment. He was a member of the international Management Board for the SPICE (Software Process Improvement and Capability dEtermination) Project from its inception, working towards the development and validation of an international standard for software process assessment. He is a founding member of the SPICE Academy and a member of the Governing Board of the International Registration Scheme for Assessors (INTRA).
With the Standish group's CHAOS report (circa 2009) proclaiming project success on a mere one-third of projects, process improvement managers have an obligation worldwide to gain control of the situation. Through concrete scope management processes combined with proven leadership principles, IT projects can embrace proven approaches to ensure success by following:

- Measurement (estimating the size of software projects);
- Streamlining (requirements articulation and management);
- Change management (imposing solid change management controls, to keep projects on time and on budget);
- Communication (based on trust between supplier and customers).

Scope management is not rocket science, however, with 2/3 of the world’s software projects deemed as failures, it is apparent that managing scope is not a natural byproduct of quality project management. Learn approaches and tips used in Europe, Australia, and North America that have dramatically increased the success on software projects by trained scope managers. Turn the tide on software success by incorporating scope management to ensure service quality on every project.

What are the three most important things the process improvement audience will learn?

1. Methodology for ensuring solid software requirements
2. Twelve step approach for measuring and managing project scope and incorporating change on software projects
3. Understanding how scope management furthers the goals of service quality

Outline:

1. Introduction to unique project management issues on software and systems projects
2. Scope management as PMBOK knowledge area - opportunities and concepts for software and systems projects
3. northernSCOPE and southernSCOPE concepts and experiences
4. Scope manager role and responsibilities
5. Scope management processes and areas of application
6. How to apply solid scope management for success on software and systems projects

Learning objectives

- Identify the unique challenges and opportunities on software and systems projects
- Clearly apply PMBOK scope management concepts to software and systems projects through globally proven scope management processes
- Embrace the role and responsibilities for professional scope management for software and systems projects
CAROL DEKKERS, PRESIDENT OF QUALITY PLUS TECHNOLOGIES, INC.,

- A recent past president of the International Function Point Users Group (IFPUG) Board of Directors. Previously held various volunteer positions including 13 years of service to the IFPUG board and membership (5 years on the Board).
- Technical advisor to the International Software Benchmarking Standards Group (ISBSG)
- Past Chair of PMI Metrics SIG, past member of PMI Leadership Institute LI’04 class,
- Member of the American Society for Quality (ASQ) Software Division council, and track chair for the annual Congress – Software Division track (Since 2002)
- Project editor to ISO on Functional Size Measurement (ISO/IEC JTC1 SC7 WG 12), and a current U.S. delegate to ISO SC7 (Software Engineering) since 1994.
- Professional designations include: Certified Management Consultant (CMC), Certified Function Point Specialist (CFPS), Information Systems Professional (ISP), and Professional Engineer (P.Eng.-Canada)
- Recognized expert in the software metrics field and author of many articles on function points, software metrics, and the human aspects of introducing change.
- Recent visiting scientist for measurement with the Software Engineering Institute (SEI) at Carnegie Mellon University.
- Management consultant, trainer and practitioner with international experience in software metrics, function points and measurement program start-up.
- Frequent presenter and trainer at metrics and quality conferences including IFPUG, Quality Assurance Institute (QAI) , American Society for Quality Control (ASQC), Applications of Software Measurement (ASM), Canadian Information Processing Society (CIPS), Applied Computer Research (Client/Server conference).
- Carol’s system development background includes ten years of progressive experience in all phases of the systems development life cycle across a wide range of methodologies and development technologies. Her project management experience involved financial, judicial, MIS, engineering and scientific systems, in both private and public sectors.
- She is co-author of two books: Practical software measurement: Advice from the experts (IFPUG, Addison-Wesley, 2004), and Practical Project Estimation, 2nd Edition (ISBSG, 2005), and the forthcoming IFPUG book on software metrics due for publication in March 2012.
SAFETY ISSUES IN PROCESS ASSESSMENT

TUTORIAL DESCRIPTION

Organizations are compelled to deal with hazards and risks related to their operations and products. Dependability and safety are topics that we face when trying to prepare for the future. Management of risks requires promotion of safety culture, which can be supported by process assessments.

ISO/IEC 15504 has been applied in several domains, where safety is one main characteristic for software and systems. Process assessment supports directly qualification of safety-critical applications but is less relevant for certification of platforms and environments. Certification as a whole supports qualification and makes it more effective. It is possible to adapt and evolve process assessment so that it supports both qualification and certification.

Typical process assessment is aimed at improvement. In qualification and certification that is not so relevant as conformance and management of risks. In this tutorial we discuss the possibilities to develop process assessment to achieve that goal. In most cases assessment is a combination of several models and standards, both generic and domain specific. One important topic is the combination of process assessment and product evaluation approaches.

Tutorial topics:

- Introduction, participant background, aim of the tutorial
- Safety culture, dependability, overview on safety standards,
- Process assessment with safety issues, assessment types, assessment rigour, possible assessment indicators based on safety standards, examples for process assessments
Mr. Risto Nevalainen (Lic. Tech.) has long experience in software measurement and quality topics. He has been managing director of Spinet Oy for the last 8 years. He is also managing director of Finnish Software Measurement Association FiSMA. His working experience includes position as managing director of Finnish Information Technology Development Center during 1989-1995. Before that he had different research and management positions for example in Technical Research Centre (VTT) and Technical University of Helsinki (HUT). Mr. Nevalainen has participated in ISO/IEC 15504 (SPICE) standard development since the beginning. He is Competent SPICE Assessor and ISO9001 Lead Assessor.

Mr. Nevalainen has participated in the development of the SPICE based assessment model for nuclear domain for several years. First version TVO-STEP was purposed for safety-related software. Current phase of development is to define an assessment model and method Nuclear SPICE for most safety-critical software. Work is part of the Finnish nuclear safety SAFIR 2014 research program.

Mr. Timo Varkoi (Lic. Tech.) has studied Computer Science at Tampere University of Technology and graduated Master of Science in 1989 and Licentiate of Technology in 2000. His working experience includes both software development and management responsibilities in industrial software organizations. Recently he has been working as a project manager in research and expertise service projects to improve software processes with Finnish software companies. He is a competent SPICE assessor, an active member of the Finnish Software Measurement Association (FiSMA), and a member of the SPICE Academy. His current interests include software process assessment and improvement related research, expertise and training combined with development of software intensive organizations. He is also the editor of ISO/IEC 29110-3 VSE Assessment Guide and the soon to be published update of ISO/IEC 15504-5 Exemplar Software Process Assessment Model, and a member of the Standards Management Group (SWG5) of ISO/IEC JTC1 SC7.

Mr. Varkoi contributes in the development of the Nuclear SPICE assessment model and method for the nuclear domain.
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