



# **FISMA NEWSLETTER**

# **SC7 PLENARY**

## **Finland hosted ISO/IEC JTC1 SC7 Plenary in May**

SC7 Software and systems engineering subcommittee kept its 2019 Plenary meeting in Finland, May 19-24. The venue was Aalto university in Otaniemi, Espoo. About 180 guests from 19 countries participated. Most of the 21 Finnish delegates are also active in FiSMA so the meeting invigorates also FiSMA!

**FiSMA – For better  
management**

**ISO/IEC JTC1 SC7 Plenary**

**Nuclear SPICE for safer  
systems development**

### **Next events**

29-30.8.2019

Good product specification  
(Hyvä järjestelmäkuvaus)

10.9.2019

Scope Manager Forum

25.9.2019

Research Forum

**Enjoy your summer break!**



**Finnish Software  
Measurement Association**

**FiSMA**

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[www.fisma.fi](http://www.fisma.fi)

# FISMA – FOR BETTER MANAGEMENT

Finnish Software Measurement Association is a non-profit, independent network focusing on better management through improving the quality and measurability of software & systems engineering and IT service management. Since 1992 FiSMA has offered a platform for interaction between academic and industry experts. The main target is to support Finnish ICT field by increasing awareness and boosting utilization of ISO standards.

Senior advisors of FiSMA and many representatives of the member organizations in cooperation with SFS are actively representing Finland in the ISO/IEC JTC1 subcommittee SC7 Software and systems engineering.

FiSMA network consists of about thirty organizational members, in addition there are also about thirty people having a personal membership. Standards create added value for software industry through shortening time-to-market by offering common concepts for all stakeholders. This is especially valued by companies operating internationally, but also local software companies benefit of using standards.

FiSMA's services for members are:

- **knowledge sharing** in work group meetings about current standardization, productivity, size measurement and quality topics
- arranging **seminars** on selected actual themes – targeting always to have speakers from both academic and industry sides
- FiSMA arranges **training courses** related to new standards according to the needs of the members
- FiSMA is open for partnership in different kinds of local and international **research projects** as an expert focused on standardization issues.

Members of the board in 2019 are Tuukka Haarni, Kiwa Ltd (chair); Pertti Renko, Fujitsu Finland Ltd (vice chair); Jarkko Augustin, Knowit Ltd; Lars Gröndahl, Stratcommunications Ltd; Markku Tukiainen, University of Eastern Finland; Anne Valsta, Scope manager.

*Erkki Savioja, FiSMA Managing Director*

# FINLAND HOSTED ISO/IEC JTC1 SC7 PLENARY IN MAY

ISO/IEC JTC1 SC7 Software and systems engineering subcommittee had its 2019 Plenary meeting in Finland in late May. Aalto university was the venue for the meeting. About 180 guests from 19 countries participated. Finnish standardization organization SFS was the responsible host, in partnership with FiSMA and other national IT organizations. Tieto Oyj was the main sponsor of the event.

SC7 has 12 working groups (WG). Most of the practical standardization work is done in the WG's. Some of the popular topics include lifecycle processes for systems and software engineering, product and process quality and system architecture. Total number of standards is approaching 200. For example, SPICE and SQUARE standards have currently both about 20 separate items.

Wider awareness of the SC7 standardization is needed in the professional communities. For that reason, SFS, FiSMA and Tivia organized an SC7 seminar on Tuesday May 21. Seminar presentations included SC7 overview; Impact of emerging and new technologies on software engineering; Autonomous Systems - Challenges and Opportunities for Standardization; and the ISO/IEC 29110 Series of Systems and Software Engineering Standards and Guides for Very Small Entities.

Standardization will focus on the future needs. Some emerging topics in SC7 work program are Agile & DevOps; Autonomous systems; and Model based software and systems engineering. These new topics raised interest in the meeting and will keep SC7 dynamic and busy also in the future.

The Finnish delegation in the SC7 Plenary meeting was very active. We participated in almost all working groups and could contribute in many standards and new initiatives. Most of the 21 delegates had experience in standardization in advance, because they are already FiSMA activists and enthusiasts. We got positive boost from this action for a long time!

*Risto Nevalainen, FiSMA Senior Advisor*



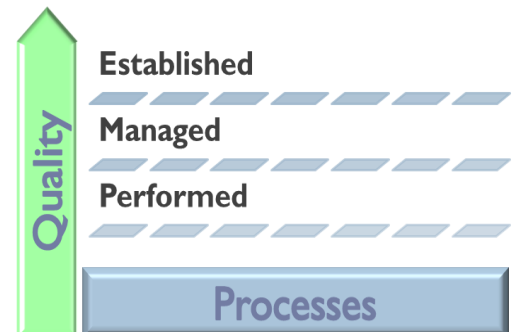
# PROCESS ASSESSMENT METHOD FOR NUCLEAR POWER DOMAIN

## Nuclear SPICE for safer systems development

Nuclear SPICE is a powerful, reliable and flexible tool to evaluate the development processes when delivering systems in the nuclear power domain. Nuclear SPICE provides a cost-efficient way to address the acquirer/supplier interface, to reduce risks in deliveries and to systematically collect evidence for safety qualification.

The Nuclear SPICE method consists of a process assessment model and an assessment process. It is based on the latest ISO/IEC process assessment standards and process models, domain specific safety standards and regulatory requirements. The method has already been used in several process assessments of safety-critical systems development projects. Nuclear SPICE is applicable to systems and software engineering process. The method has been developed in Finland within a large safety research project SAFIR. During the years 2011-2018 altogether 13 research reports and 14 research articles were published. FiSMA has provided the main resources for the development.

Nuclear SPICE Process Assessment Model (PAM) is a two-dimensional model of process quality. The process performance dimension describes each process with name, purpose and a set of outcomes. The process quality dimension presents the process attributes and quality levels. Nuclear SPICE applies process capability as the quality measure as defined in the standard ISO/IEC 33020. The assessment results are expressed as achieved capability levels for each assessed process.



Typically, software is a relatively small part of the systems used in nuclear power plants, and software-oriented practices are few in the I&C systems engineering. Requirements that are relevant to acquisition of digital instrumentation and control (I&C) systems including software, can be found in international IEC standards and national regulatory instructions. To address the most typical situations and to simplify assessment planning, Nuclear SPICE offers two pre-defined process sets: one for supplier selection, and another for project evaluation.

FiSMA certifies Provisional and Lead Assessors for Nuclear SPICE.

*Timo Varkoi, FiSMA Senior Advisor*