



INCITS/SSE - Software and Systems Engineering Annual Report - April 2017 to March 2018

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Executive Summary

INCITS/SSE, the US TAG for ISO/IEC JTC 1/SC 7, (software and systems engineering) is performing effectively. SSE began operations on December 1, 2017, with a transition from the previous SC 7 US TAG administrator (IEEE Computer Society). Currently SSE has 13 voting member organizations and 4 organizations pending voting membership status. There are 45 principals and alternates (down from 62 in 2016). During the transition, SSE has functioned with an acting chair and the assistance of INCITS staff. Election of an SSE chair by INCITS EB closed March 26, 2018.

Recommended positions for the fifteen SC 7 working groups and special working groups are developed with coordination from SSE leads or ad hoc reviewers. SSE members are project editors of key standards and convenors. This report includes SC 7 activities during 2017 under the previous US TAG for an overall status of the year.

The primary areas of standardization for ISO/IEC JTC 1/SC 7 are software and system engineering processes and process assessment; the measurement and evaluation of software quality; enterprise architecture, including systems of systems; systems and software product lines and tools: systems and software documentation; and IT asset management.

Following are the SC 7 working groups and special working groups. SSE members participate in or monitor all of them except WG 19, which has a different US TAG:

- SWT 1 Business planning group
- SWG 5 Standards management (US convenor)
- WG2 Systems/software documentation (US convenor)
- WG4 Tools and environment
- WG6 Software product and system quality
- WG7 Life cycle management
- WG10 Process assessment
- WG19 Techniques for specifying IT systems
- WG20 Software and system bodies of knowledge and professionalization
- WG21 IT asset management (US convenor)
- SWG 22 Vocabulary (US convenor)
- WG24 System life cycle profile and guidance for very small enterprises (VSE)
- WG26 Software testing
- JWG 28 (joint with ISO TC 159/SC4) Common industry formats for usability reports (US convenor)
- WG 42 Architecture

Accomplishments

JTC 1/SC 7 has approximately 128 standards in various stages of development or revision, and 100 standards at a published stage (some projects are both completed and in revision). Nineteen standards were published in 2017 or early 2018\.

Significant publications during this period include the following:

- ISO/IEC/IEEE 12207:2017, Systems and software engineering -- Software life cycle processes
- ISO/IEC/IEEE 24765:2017, Systems and software engineering -- Vocabulary.
- The vocabulary is also available electronically at www.computer.org/sevocab
- ISO/IEC 19770-1:2017, Information technology -- IT asset management -- Part 1: IT asset management systems -- Requirements

Challenges

SSE and SC 7 are effectively managing a large workload. As of May 2017, the Chair and Secretariat of SC 7 transitioned from Canada, which had held the Chair for over 20 years, to India (BIS). The new SC 7 Secretariat has been quite efficient and responsive and the challenges of transition have been successfully met. However, fewer US delegates than ever before will be traveling to the May 2018 SC 7 plenary in Delhi, India. Others will attempt to participate through WebEx, where communication challenges are likely.

US Government and related contractor possible budget changes and travel limitations which may be imposed upon them impact members ability to participate in many activities including TAG and international meetings. To compensate, SSE expects to hold a single one-day face-to-face meeting annually and approximately six virtual meetings annually, reducing the cost and need for travel. Also, US travel restrictions can limit participation of other NB in US-hosted meetings.

Due to the transition from the previous SC 7 US TAG, SSE was unable to coordinate a timely offer to host the 2019 SC 7 plenary as had been requested, but may be able to extend an offer (with INCITS approval) to host the SC 7 plenary in 2020\.

Future Trends and Related Technical

Systems and software engineering processes, services, and products are fundamental to all US technical enterprises and organizations. New trends leading to future standardization needs include emphases on artificial intelligence and autonomous vehicles, blockchain, internet of things, smart cities, agile methods, DevOps, cybersecurity, and systems of systems.

The cornerstone standards of ISO/IEC JTC 1/SC 7, ISO/IEC/IEEE 12207:2017 and ISO/IEC/IEEE 15288:2015, have recently completed revision to reflect a unified model set of acquisition, organizational, technical management, and technical processes for systems and software. US editors in the SC 7 US TAG are leading the work of development and revision of specialized process standards and guides for consistency. Other fundamental standards include ISO/IEC 19770 (IT asset management series), which US Government Agencies are starting to call out in US Government Procurement language and which is being implemented by major IT vendors. New members joining SSE have primarily joined to participate in this area.

SC 7 coordinates particularly with SC 27 (software security), SC 38 (cloud), SC 40 (IT Governance and IT Service Management). and soon with SC 42 (Artificial Intelligence).

Liaisons

The following internal liaisons were confirmed or reaffirmed in the May 2017 plenary meeting of SC 7\.

- IEC TC 56 Dr. Yoshiki Kinoshita (Japan), subject to NB approval
- IEC TC65/SC65A Dr. Yoshiki Kinoshita (Japan)
- ISO CASCO, Mr. Alastair Walker (South Africa)
- ISO TC251 Asset Management Mr. David Bicket (UK) &Mr. Ramesh Jain (India)

- ISO TC159/SC4 Dr. Jonathan Earthy (UK)
- ISO TC176 Dr. Bill Curtis (USA)
- ISO TC184/SC5 Dr. Peter Bernus (AUS)
- ISO TC210 Mr. Alec Dorling
- ISO TC22 SC3 WG16 Mr. Alec Dorling (UK), Mr. Giuseppe Lami (Italy).
- ISO/IEC JTC1/SC 27 Mr. Roger Cummings (USA) & Mr. Jason Keogh (Ireland)
- ISO/IEC JTC1/SC32 Mr. Jean Bérubé (Canada)
- ISO/IEC JTC1/SC41 Dr. François Coallier (Canada)
- ISO//IEC JTC1/WG11 Dr. François Coallier (Canada)
- ISO/IEC JWG 16: Dr. Annette Reilly (USA)
- ITU-T Ms Allison Holt (New Zealand)

Special Liaison Group 1 to JTC 1/SC 40, IT Governance and IT Service Management

Special Liaison Group 6 to ISO/TC 307-Blockchain

Primary (Category A) external liaisons are with IEEE Computer Society and INCOSE.

Other Administrative Information

Adjustment from administrative procedures of the previous SC 7 US TAG are ongoing during the transition and handled through normal communication channels.

Does your committee collect funds?

No

Officers & Membership

INCITS/SSE Membership as of 03/20/2018

First Name	Last Name	Company	Role
Michael	Gayle	IEEE Computer Society	Group Chair

Company	Participant Class	Membership Class
American Society For Quality (ASQ)	Member	Voting
Anglepoint	Member	Voting
Antesignanus	Member	Voting
Booz Allen & Hamilton Inc	Member	Voting
CAST Software	Member	Voting
Cisco Systems Inc	Member	Prospective Voting
CSG Government Solutions	Member	Voting
Department of Commerce - NIST	Member	Voting
Flexera	Member	Prospective Voting
IEEE Computer Society	Member	Voting
International Function Point Users Group (IFPUG)	Member	Voting
ITAM Consulting Group	Member	Voting
Lockheed Martin Corporation	Member	Voting
Microsoft Corporation	Member	Prospective Voting
Mitre Corporation	Member	Prospective Voting
TagVault.org	Member	Voting
United States Dept of Defense	Member	Voting