Document type: Officer's Contribution

Title: SC 7 Chairman's Presentation to the November 2012 JTC 1 Plenary meeting in Jeju

Status: This document is circulated to JTC 1 National Bodies for review and consideration at the November 2012 JTC 1 Plenary meeting in Jeju.

Date of document: 2012-10-15

Source: SC 7 Chairman

Expected action: INFO

Email of secretary: lrachel@ansi.org

Committee URL: http://isotc.iso.org/livelink/livelink/open/jtc1
Introduction

SC7:

• Software and Systems Engineering

• Systems Engineering: interdisciplinary approach governing the total technical and managerial effort required to transform a set of customer needs, expectations, and constraints into a solution and to support that solution throughout its life (ISO/IEC FCD 24765, Systems and Software Engineering Vocabulary)
Introduction

SC7:

- Horizontal Committee (like ISO/TC176)
- Technology agnostic
- Process/Method/Techniques focused
- Coverage of the total life-cycle of (software based) products & services
What is new - Approved New Work Items

- **ISO/IEC CD 25051**
  Software engineering -- Software product Quality Requirements and Evaluation (SQuaRE) -- Requirements for quality of Commercial Off-The-Shelf (COTS) software product and instructions for testing

- **ISO/IEC NP 33016**
  Body of Knowledge for Process Assessors

- **ISO/IEC CD 30121**
  System and software engineering -- Information technology -- Governance of digital forensic risk framework

- **ISO/IEC WD 42030**
  Systems and Software Engineering -- Architecture Evaluation
What is new - Participants

- Now at 38 “P” Members as compared to 29 “P” Members in 2003. 21 ‘O’ members,
- 217 delegates from 25 countries at the last Plenary meeting in Jeju Island, Korea
What is new - Participants

- 587 members on the SC7 LinkedIn Group as of 2012-10-12
New- SC7 Web Site

Home

Introduction
As a direct result of the use of computerized devices, the world is now very dependent on software systems and their associated services. Information and communication technologies (ICT) based products and services are now ubiquitous in industrialized and emerging economics societies, be it for commercial, industrial and domestic applications. ICT based products are software systems, and the software is what make these ICT based products and services work.

The range of ICT applications and services is wide and continually getting wider, from heart pace makers, traffic control systems, information systems, entertainment through cloud based services. It is necessary to protect the interests of the consumer and to minimize risks of all kinds that may arise from the failure of software systems or mission critical IT services. Never has it has been more important for software and system engineers to deliver reliable and safe systems as well as trustworthy services to business, to industry and to society at large.

The ability to design, implement and manage ICT systems and products has greatly improved in the last twenty years. A recognized core body of knowledge in software and systems engineering now exists. Challenges still abound because of the pressure to build and deliver more complex applications, products and IT based services in ever shorter time-frame. Challenges also abound to govern and manage the delivery of IT and IT enable services in a complex environment of international outsourcing and cloud based services.

Looking forward, the challenge of developing ever more complex information systems under short schedule and delivering the required IT services in the most cost-effective fashion will remain.

Role of International Standards
International standards play an important role in this evolution. They can be used to reduce costs and complexity when buying software systems and procuring IT services and they can be used to monitor the quality of the systems and products that are produced as well as their associated services.

Internal standards also enable the exchange of goods and services. Given that the worldwide IT market is a service market, a solid set of international standards covering processes, good practices and competency is an asset.
## Wikipedia Articles

The following articles on SC7 standards and activities are available on Wikipedia. Please note that these documents are not official publications of ISO/IEC JTC1/SC7.

<table>
<thead>
<tr>
<th>Standard number</th>
<th>Description</th>
<th>Wikipedia Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO/IEC 9126</td>
<td>Software engineering – Product quality</td>
<td>Deutsch, English, Español, Français, Bahasa Indonesia, Italiano, Latviešu, Nederlands</td>
</tr>
<tr>
<td>ISO/IEC 10746</td>
<td>Information technology – Open Distributed Processing</td>
<td>English, Deutsch, Français, Pусский, Suomi, Tiếng Việt</td>
</tr>
</tbody>
</table>
## Online Video Resources

The video resources on SC7 standards and activities are available online. Please note that these videos are not official publications of ISO/IEC JTC1/SC7.

<table>
<thead>
<tr>
<th>Standard number</th>
<th>Description</th>
<th>Online Video Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO/IEC 12207</td>
<td>Systems and software engineering — Software life cycle processes</td>
<td></td>
</tr>
</tbody>
</table>

**Español:**

ISO/IEC 12207

**中文:**

ISO/IEC 12207概要與應用(1/4)-軟工標準發展與ISO12207

ISO/IEC 12207與CNS14837是軟體工程的軟體過程標準，根據政府採購法，政府部門經辦人，對於公告金額以上的資訊業務招標採購，在訂定招標文件時，應選遵循 ...

ISO/IEC 12207概要與應用(2/4)-ISO12207的框架與內容

ISO/IEC 12207與CNS14837是軟體工程的軟體過程標準，根據政府採購法，政府部門經辦人，對於公告金額以上的資訊業務招標採購，在訂定招標文件時，應遵循 ...
User Engagement

- Participation at meetings and plenary remains adequate.
- Liaisons members are active and contributing.
- Most WGs are drawing from and interfacing with a dynamic user community often through organisations that have A or C liaisons status.
Known implementations

- SC7 standards are either directly used by government/industry or to document a body of knowledge.
- The Software Engineering Body of Knowledge (SWEBOK, TR19759) is an international reference for undergraduate programs in software engineering.
Overview of the SC 7 Standards Collection

2011 JTC 1 Plenary
Outreach

- Yearly international SPICE conference, May 2012
- SC7 experts are professionally active with their users communities, many of them being in active liaisons with SC7.
Challenges

- Domain specific ISO and IEC TC that are unaware of our standards and want to re-invent the wheel.
- Be agile enough to keep up with the evolution of the market.
- To address these challenges, a business planning exercise has been initiated at the Niigata Plenary (Resolution 1322) to follow up on the last major exercise that was done in 1997 and updated in 2003-4.
- A full day meeting was held on 2012-05-19, at the Korea Plenary.
### SWOT analysis (General)

<table>
<thead>
<tr>
<th>OPPORTUNITIES (Environment)</th>
<th>THREATS (Environment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business &amp; Technologies development</td>
<td>Scope § concurrence</td>
</tr>
<tr>
<td>Needs for Methods &amp; Models</td>
<td>Scope evolution</td>
</tr>
<tr>
<td>Partner (Industry) needs</td>
<td>Availability of Resources from the environment</td>
</tr>
<tr>
<td></td>
<td>Lack of relevance from External Partners</td>
</tr>
<tr>
<td></td>
<td>Misunderstandings with JTC1 Partners</td>
</tr>
<tr>
<td>The SC7 Portfolio of standards</td>
<td>Portfolio of SC7 standards quality</td>
</tr>
<tr>
<td>Technological Resources – knowledge &amp; expertise</td>
<td>Lack of technological resources</td>
</tr>
<tr>
<td>Management for standard development</td>
<td>Limited Governance</td>
</tr>
<tr>
<td></td>
<td>Management – analyse &amp; coordination</td>
</tr>
<tr>
<td></td>
<td>Lack of Human resources</td>
</tr>
<tr>
<td></td>
<td>Imposed process (Constraint)</td>
</tr>
</tbody>
</table>

Compilation done by Pierre Thory
Issues or Needs

- Been recognized as an Horizontal Committee would help since liaison resources are very limited.
Issues or Needs

- Since SC7 has now migrated its infrastructure to e-Balloting and e-Committee: ensuring that ISO IT continue to be responsive to SC7 needs.
- The migration of SC7 WG to e-Committee will be dependent on the ease for technical experts to get livelink account.
Issues or Needs

Resolution 1430

JTC 1/SC 7 requests its Secretariat to express to JTC 1 Secretariat a strong SC 7 opposition to ... accepting ballot comments only in Word document format. SC 7 finds this format much less usable with limited ability to identify, select and process ballot comments. SC 7 request that Excel documents be accepted by the ballot interface of eCommittees system.
201 – Active Study Groups

- Study Group on Emerging Software Asset Management (SAM) standard requirements
- Study Group on feasibility of preparing a separate VSE profile for specific domains
- Study Group to investigate the possibility of new standards on variability mechanisms for software and systems product line platform
- Study Group on feasibility of preparing an Ontology for the SC7 domain and standards
201 – Active Study Groups

- Study Group on frameworks for business information management and governance
- Study Group on feasibility of preparing guides and profiles based on ISO/IEC 20000 and targeted at Very Small Entities
- Continuation of Study Group on Service Oriented Systems Engineering (SOSE)
- Continuation of Study Group on Governance of Consumer IT in a Business Domain
Next Meetings

Plenaries:
- 2013 – Canada
- 2014 – Australia
- 2015 – Brazil (to be confirmed)

Interim meetings:
- 2012 – Argentina
25 years ago – and looking forward
IT Evolution
(technology waves and social impacts)

From: The fortune of the commons. In Coming of Age - A Survey of the IT Industry
The Economist, May 8th 2003
SC7 Evolution

- Creation as a ‘Software Engineering’ SC

- First transformation were the Systems Engineering discipline was brought in and integrated. This transformation occurred during the second half of the 1990’s and the early 2000’s.

- Second transformation were the ‘Service’ dimension was brought in. This transformation was initiated at the 2002 Plenary were an Ad Hoc on BS 15000 was held. The result of this Ad Hoc was resolution 784 inviting BSI to fast track BS 15000.
Software Engineering

# SC7 Direction Statement

(From the 2003 Montréal Plenary presentation)

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Author</th>
<th>Modifications / Additions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-08-04</td>
<td>1.0</td>
<td>SC7 AG BPG</td>
<td>First version sent as a letter ballot. Titled <em>SC7 Direction Statement 1997</em> – Document number N1763</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Session at Walnut Creek (USA)</td>
<td></td>
</tr>
<tr>
<td>1997-12-09</td>
<td>1.1</td>
<td>SC7 BPG</td>
<td>Updated and more comprehensive version. Titled New <em>SC7 Strategic Direction</em> – Document number SC7 BPG – N127</td>
</tr>
<tr>
<td>1998-05-22</td>
<td>Published as 4.0</td>
<td>SC7 BPG</td>
<td>07N1927</td>
</tr>
<tr>
<td>2002-11-05</td>
<td>2.0</td>
<td>SC7 BPG</td>
<td>Revised and updated version prepared for circulation to the BPG. Titled <em>SC7 Direction Statement 2003</em> – D</td>
</tr>
<tr>
<td>2002-11-07</td>
<td>2.1</td>
<td>SC7 BPG</td>
<td>Revised and updated version</td>
</tr>
<tr>
<td>2002-11-08</td>
<td>2.2</td>
<td>SC7 BPG</td>
<td>Revised and updated version</td>
</tr>
<tr>
<td>2003-04-11</td>
<td>2.3</td>
<td>SC7 BPG</td>
<td>Revised and updated version – circulated as a draft for review at the 2003 SC7 Plenary in Montréal – 07N2825</td>
</tr>
</tbody>
</table>
Some SC7 changes since 2003

• Number of ‘P’ members increased from 29 to 38, with 21 ‘O’ members
• SC7 collection of standards has grown from 72 to 143;
• Creation of WG21 (Software assets management) in 2003
• Creation of WG24 (VSE) in 2006
• Creation of WG42 (Architecture) in 2006
• Creation of WG25 (IT Services Management) in 2006
• Creation of WG26 (S/W Testing) in 2007
• Creation of WG1A (now WG40 and JTC 1/WG6) in 2008
• Creation of WG27 (BPO/ITS) in 2010
• New liaisons:
  • iTSMF
  • ISACA
Overview of the SC 7 Standards Collection
ICT Market 2011

*Figure 5 - ITC Market Revenues ($US) Category By Offering – Year to Q3 2011*

Source: ITCandor, 2011
http://srmsgblog.burtongroup.com/cloud-security/

2012 JTC 1 Plenary