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ISO/IEC JTC 1/SC7

**Chairman's Presentation
to the Opening Plenary**

Hyderabad, 2009-05-24/25

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Content

- History
- Context
- Directions
- AG Report

History

SC7 History

- **1987 - Formation of JTC1/ SC7**
- **1990 - First Business Plan published**
- **1991:**
 - **Name changed to Software Engineering**
 - **Publication of ISO/IEC 9126**
- **1995 - Publication of ISO/IEC 12207**
- **1997:**
 - **Terms of references broadened to Software Systems**
 - **First Business Planning Workshop**
 - **Vocabulary and BPG SWG established**
 - **Transfer of ISO 9000-3 from ISO/TC176**
- **1998:**
 - **Transfer of ODP and E-LOTOS projects from SC33**
 - **Process architecture**

SC7 History

- **2000 - Name changed to *Software and System Engineering***
- **2002 – Publication of ISO/IEC 15288 – System Life-Cycle**
- **2005:**
 - **Publication of ISO/IEC 19759 (SWEBOK)**
 - **Publication of ISO/IEC 20000 - IT Service Mangement**
- **2006 - Publication of the last core part of ISO/IEC 15504 - Process Assessment**
- **2008:**
 - **Publication of an harmonized edition of 12207 and 15288**
 - **Publication of ISO/IEC 38500 - IT Governance**

SC7 TERMS OF REFERENCE

Standardization of processes, supporting tools and supporting technologies for the engineering of software products and systems

Introduction

SC7:

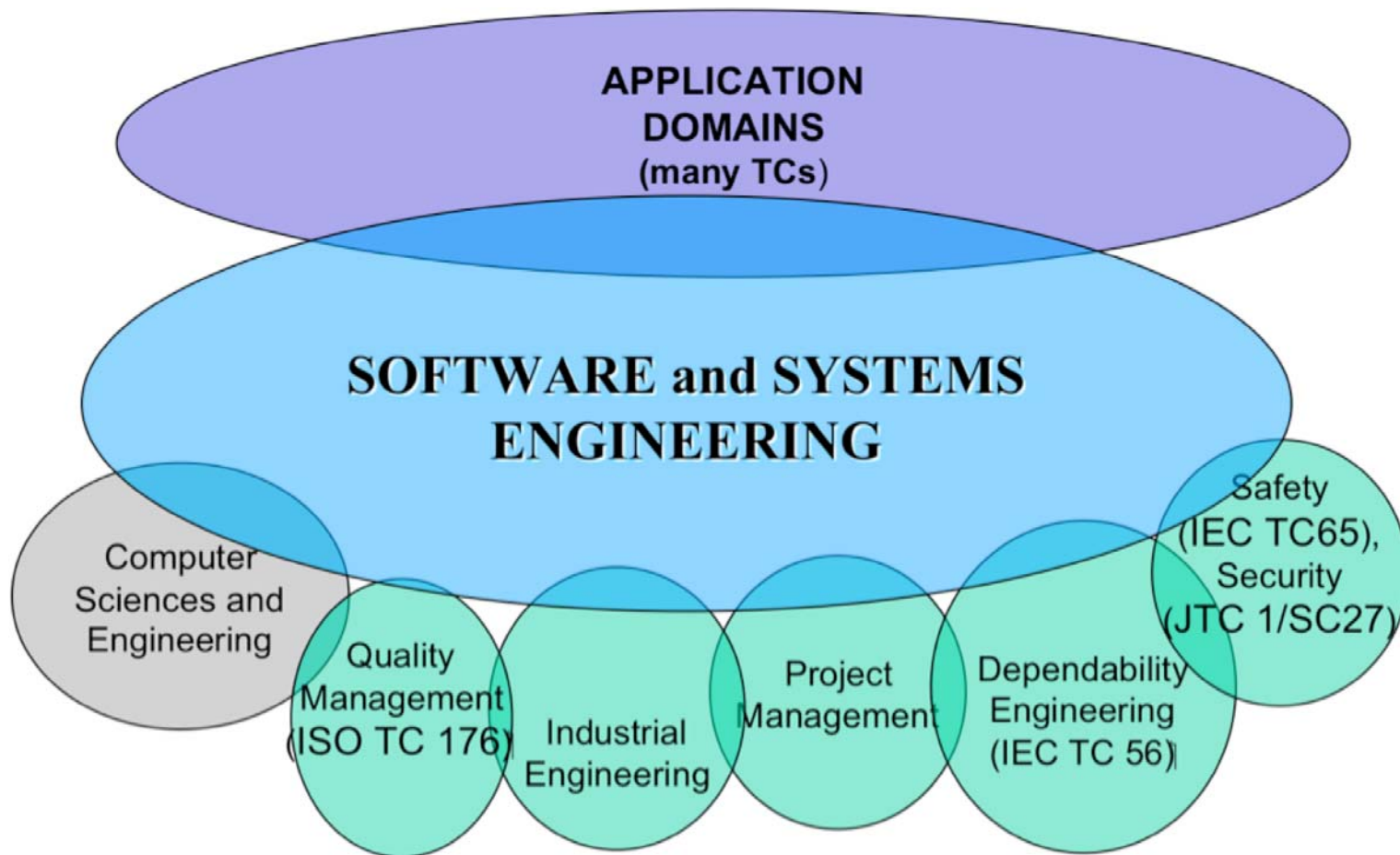
- Software and Systems Engineering
- Systems Engineering: interdisciplinary approach governing the total technical and managerial effort required to transform a set of customer needs, expectations, and constraints into a solution and to support that solution throughout its life (ISO/IEC FCD 24765, Systems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

Introduction

SC7:

- Horizontal Committee (like ISO/TC176)
- Process/Method/Techniques focused
- Coverage of the total life-cycle of (software based) products
- Product: output of a process (ISO 9001):
 - Software Systems
 - Services related to software systems engineering and operations
 - Services provided by software systems (from an Horizontal perspective)

Horizontality of SC7



Directions

Key Strategic Directions

- Respond to the evolution of the global IT market and of IT technologies
 - Increase globalization of IT Services
 - Growing importance of IT operations services
 - Growing importance of Systems Integration
 - Continual increase in IT ubiquity
 - Continual increase in the importance of the global IT infrastructure to the global economy

Key Strategic Directions (2)

- Continue:
 - Increase integration and harmonization of SC7 standards
 - Increase coverage of Systems Engineering
 - Increase harmonization of Software and Systems Engineering Standards
 - Increase coverage of IT Services
 - Integration of SC7 standards with IEEE's
 - Work closely with strategic partners:
 - IEEE, INCOSE, OMG, ITU-T, itSMF.

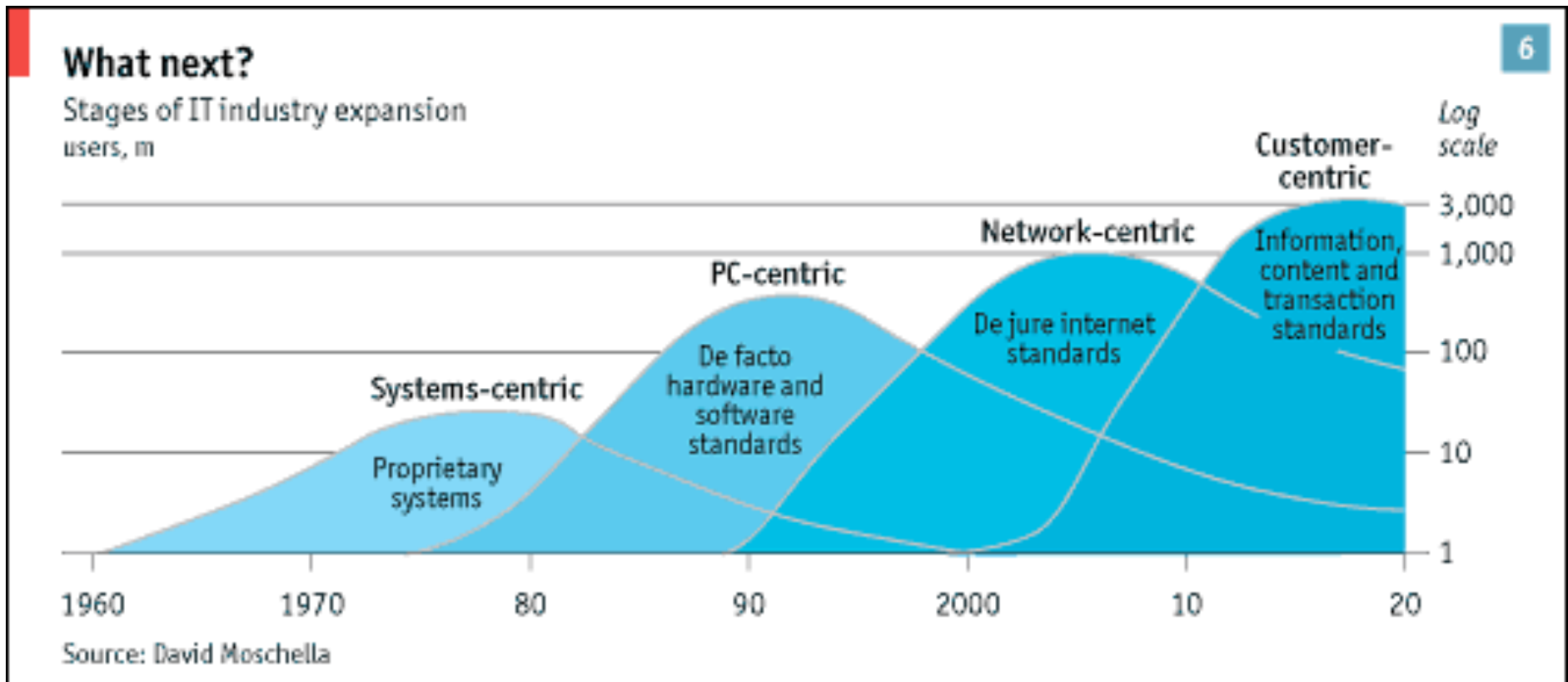
Key Strategic Directions (3)

- Increase the relevancy of SC7 standards for the three principal types of software systems:
 - Embedded Systems
 - Enterprise Information Systems
 - Interactive Medias

Context

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

IT Evolution: Some Key Points

- General
 - Increased ubiquity of IT
- Market
 - Mostly a service market
 - Global market – in expansion
- Technology
 - A more interconnected world
 - A more M2M, transactional world
 - Content (multimedia) focus
 - A more ‘intelligent’ world

Why are standards important in IT?

One perspective – Global interoperability:

- Between machines/components
- Between people
- Between organizations

SC7 Contributions

- > Enable the creation of markets
- > Enable commercial activities
- > Enable functional products
- > Enable functional infrastructures
- > Enable the perinity of digital information
- >.....

SC7 Market

Software Systems:

- Embedded systems
- Information systems
- Interactive media systems

Includes also services:

- Related to the development and operations of software systems (IT and Engineering services Outsourcing/Offshoring, IT and Engineering professional competencies)
- Provided commercially by software systems (M2M Web Services, Software as a Service) from an 'Horizontal' perspective

Embedded vs Enterprise

Embedded

- Control the 'real' world
- Hard or soft real time
- May impact Health and Safety

- Independent or interrelated systems

- May be mass manufactured

- Enter maintenance once delivered.
Many types of updates possible.

Enterprise

- Process information
- Soft real time
- Financial/Economic impacts. May impact Health and Safety in some cases
- Set of distributed heterogynous systems integrated into an organization.
- Include processes, business rules, data/information
- Continuous addition, modifications or retirements of components/subsystems/systems. Configuration changes.

Interactive Media Systems

Graphic/media intensive applications that have a interactive human interface:

- Simulators
- Immersive environments
- Computer Games
- Data Navigation Systems

Questions

Are we providing adequate coverage of the needs of the embedded software market/community?

Are we providing adequate coverage of the needs of the interactive media market/community?

Future opportunities

Possible future opportunities

- ‘Cloud Computing’ from an IT Service Management perspective
- Software as a Service (SaaS)
- Service Oriented Architecture (SOA)
- Mashup
- Intelligent Systems
- Embedded Software Systems
- Systems of Systems (SoS):
 - Enterprise architecture (C liaison under consideration with The Open Group)
 - Systems architecture

Systems of Systems (SoS)

*Multiple, heterogeneous, distributed
dedicated systems*

*that have been developed independently
through time*

*and pool their resources and capabilities
together to obtain a new, more complex,
'meta-system' which offers more
functionality and performance than simply
the sum of the constituent systems.*

Adapted from http://en.wikipedia.org/wiki/System_of_systems

Intelligent Systems

- Banff Tech Watch Recommendations for JTC 1:
 - SC7 to assess if standardizations activities are required.
 - SC7 to assess IEEE activities in this area.
- Action taken:
 - Added to SWG5 workload
 - Discussions initiated
 - Study Group to be set up at next plenary

Possible future opportunities

- Software Systems Assurance
- Interactive Media Systems
- IT and Engineering professional competencies:
 - Information Systems competencies

AG Report

Action items for the plenary

ITEM	ACTIONNEE(S)
Prepare resolutions on WG convenerships	Secretariat Drafting Committee
Refresh liaison officers appointments	Secretariat Drafting Committee
Repeat resolution on P Members participation to ballots: reminding P Members of their obligation to vote (Resolution 939)	Secretariat Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Update/Correct SC7 Work Program on ISO Web Site N4304	Secretariat Drafting Committee
WG6 Request to extend projects schedule	Secretariat Drafting Committee
Circulation of SC7 Work Program to JTC 1	Secretariat Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Application Management Fast Track N4286	WG7 Study Group to conclude Drafting committee
IT Enabled Service NWIP N4292	Indian experts to meet with WG25, WG7 Drafting committee
Software Process Quality Framework N4291	Indian experts to meet with WG6, WG7

Action items for the plenary

ITEM	ACTIONNEE(S)
Framework of establishing coding guidelines for embedded system development	Need to position by regards to SC7 scope Japan NB
IFPUG PAS – Disposition of comments N4302	Need to issue meeting calling notice at JTC 1 Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Future of WG1A	WG1A has draft NWI to consider WG1A will come back to AG on Thursday with recommendations

Action items for the plenary

ITEM	ACTIONNEE(S)
WG26 Presentation	Joint meeting with WG6
WG10 Presentation: No action required	

Action items for the plenary

ITEM	ACTIONNEE(S)
Identify active C liaisons	Secretariat
Take appropriate action on inactive C liaisons	WGs

Action items for the plenary

ITEM	ACTIONNEE(S)
SLG 1: Liaison to ISO TC22 SC3 WG16	No action
SLG 2: Liaison to JTC 1 SC27 (N4296, N4297)	SL2, Chairman Respond to N4296

Action items for the plenary

ITEM	ACTIONNEE(S)
Respond to JTC 1/SC27 WG1: Guidelines for the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000-1 (N4296)	WG25 Drafting Committee
Respond to JTC 1/SC27: Information technology – IT Security techniques (N4297)	SL2, Chairman

Action items for the plenary

ITEM	ACTIONNEE(S)
ISO TC 176/SC3	New liaison to formally establish with SC7
IEC/TC56	Document to review
ISO/TC 159/SC4	Send to liaison any additional information of 25060 (ballot closed)
ISO/TC 184/SC5	Joint meetings held

Action items for the plenary

ITEM	ACTIONNEE(S)
SC7 Terms of References	To be discussed at BPG and Thursday AG
SOA	To be discussed further during the plenary. SWG5
ISO TC 176/SC1	Need a liaison officer

Action items for the plenary

ITEM	ACTIONNEE(S)
SC7 project environment getting very complex	Explore electronic collaborative environment Explore having Ad Hoc on cross-WG issues working electronically

Action items for the plenary

ITEM	ACTIONNEE(S)
Reports of the Life Cycle Process Harmonization Advisory Group (LCPHAG)	Will meet during the week
Study Group on Revision of ISO/IEC 15504 (N4288)	Meetings to finalize recommendations
Study group to investigate the possibility of new standards or guidance in the area of system integration	No report To be extended till the 2010 plenary Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Study group to investigate the possibility of new standards or guidance in the area of Agile Development (N4289)	WG4, WG7, WG20, WG23 to consider recommendations
Study group to determine the justification for, priority of, and schedule for, the development of standards and Technical Reports about the Governance of IT	No report WG1A to assess

Action items for the plenary

ITEM	ACTIONNEE(S)
Study group to start the investigation into the possibility of additional standards or guidance in the area of IT Governance for digital forensics	WG1A to assess recommendations
Study group on the Application of Governance Principles to IT operations (N4290)	Report recommend no further action

Action items for the plenary

ITEM	ACTIONNEE(S)
Study group on service and systems management standards and their integration into SC7	SG to work during the plenary Report to next AG
	SC7 should consider to register the ISO/IEC 20 000 series as Systems Managements Standards

Action items for the plenary

ITEM	ACTIONNEE(S)
SWG 5 Report	Meeting, Wednesday, 1700, in the SWG5 room to consider SoS and SOA
IEEE – CS Liaison Report	<ul style="list-style-type: none"> •Encourage participation of SC 7 experts in review of SWEBOK Guide and invite fast-track submission of the revision. •Invite submission of draft P1648 for study; and IEEE Std 1648 (Agile Methods), when completed. •Resolution re IEEE Std 828, SW CM: <ul style="list-style-type: none"> •Invite contribution for study, or •Invite for fast-track and coordinated revision, or •Invite fast-track of revision when completed

Action items for the plenary

ITEM	ACTIONNEE(S)
Futures Plenary: 2010: Japan 2011 : France	Drafting Committee
Futures Plenary: 2012: ?????	Chairman NBs
Future Interim Meetings: 2009: Peru 2010: Washington 2011: ???	WG7 & 10 Conveners

Action items for the plenary

ITEM	ACTIONNEE(S)

Action items for the plenary

ITEM	ACTIONNEE(S)