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ISO/IEC JTC 1/SC7

OPENING PLENARY

MEETING

Berlin, 2008-05-19
SC7 Chairman Presentation

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History

SC7 History

- **1987 - Formation of JTC1/ SC7**
- **1990 - First Business Plan published**
- **1991:**
 - **Name changed to Software Engineering**
 - **Publication of ISO/IEC 9126 - Software Product Quality**
- **1995 - Publication of ISO/IEC 12207**
- **1996 - Publication of the first edition of the SC7 Product Plan**
- **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**

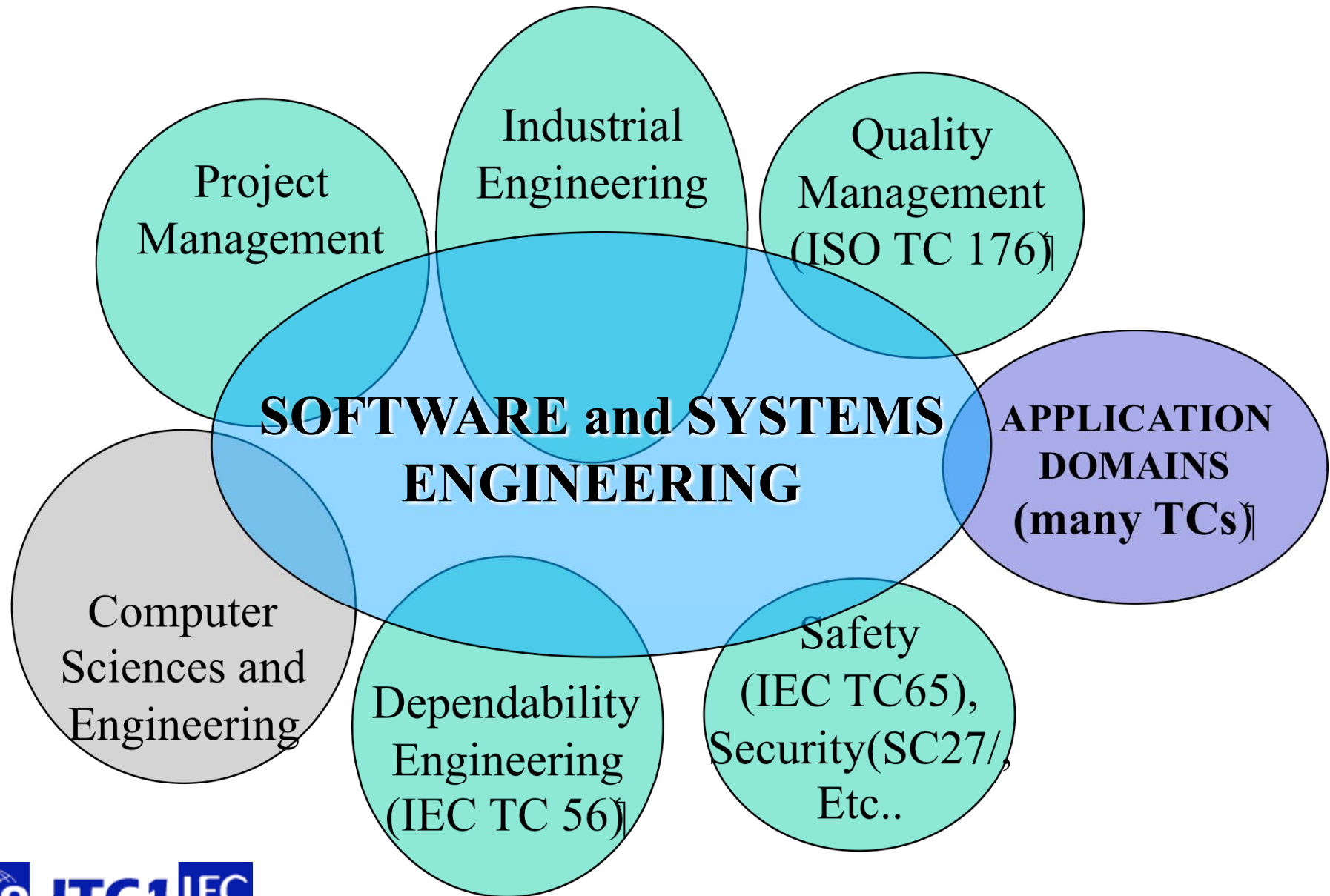
SC7 History

- **1998:**
 - **Transfer of ODP and E-LOTOS projects from SC33**
 - **Process architecture**
- **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 Management***
- **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***

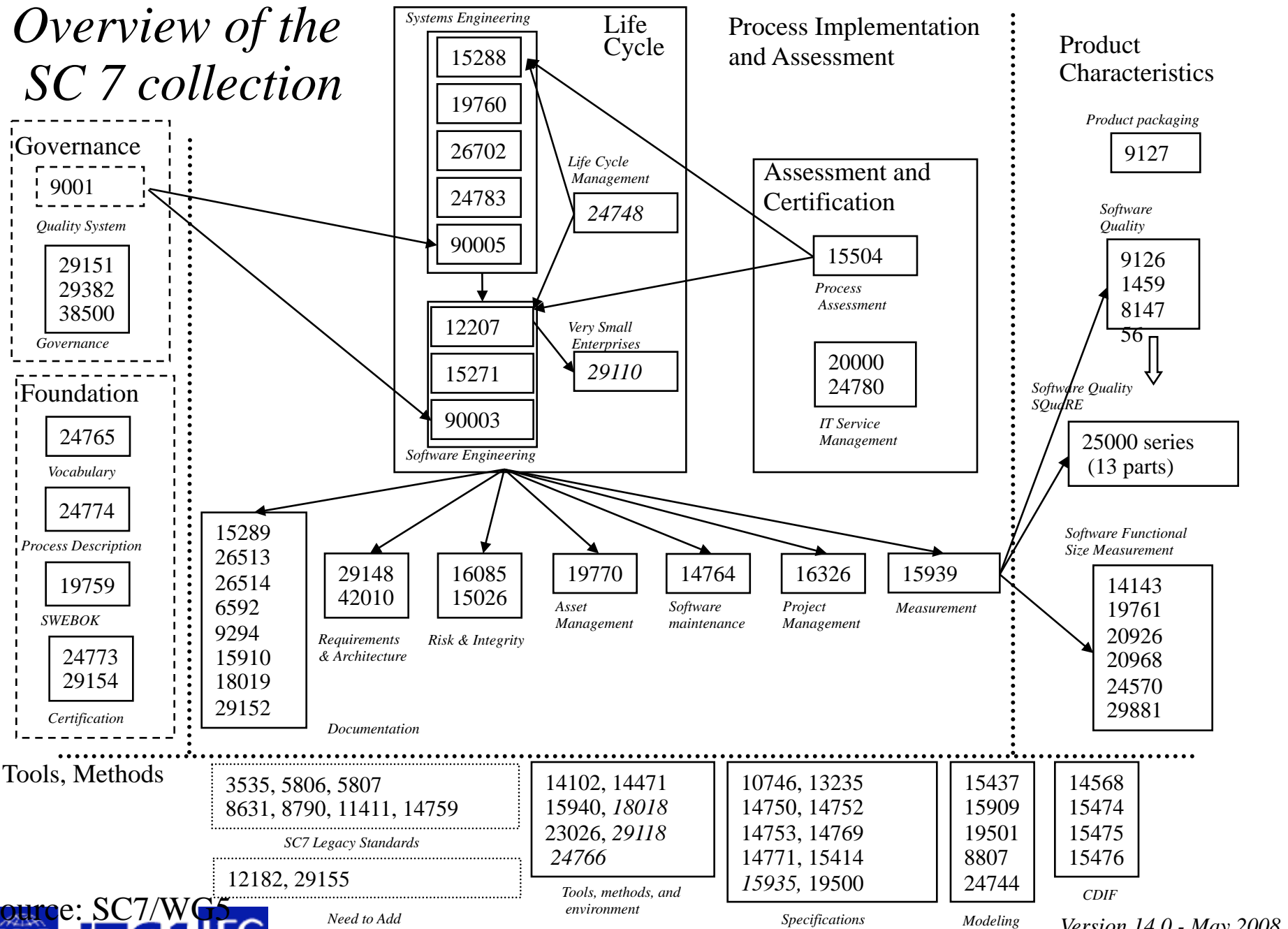
SC7 TERMS OF REFERENCE

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

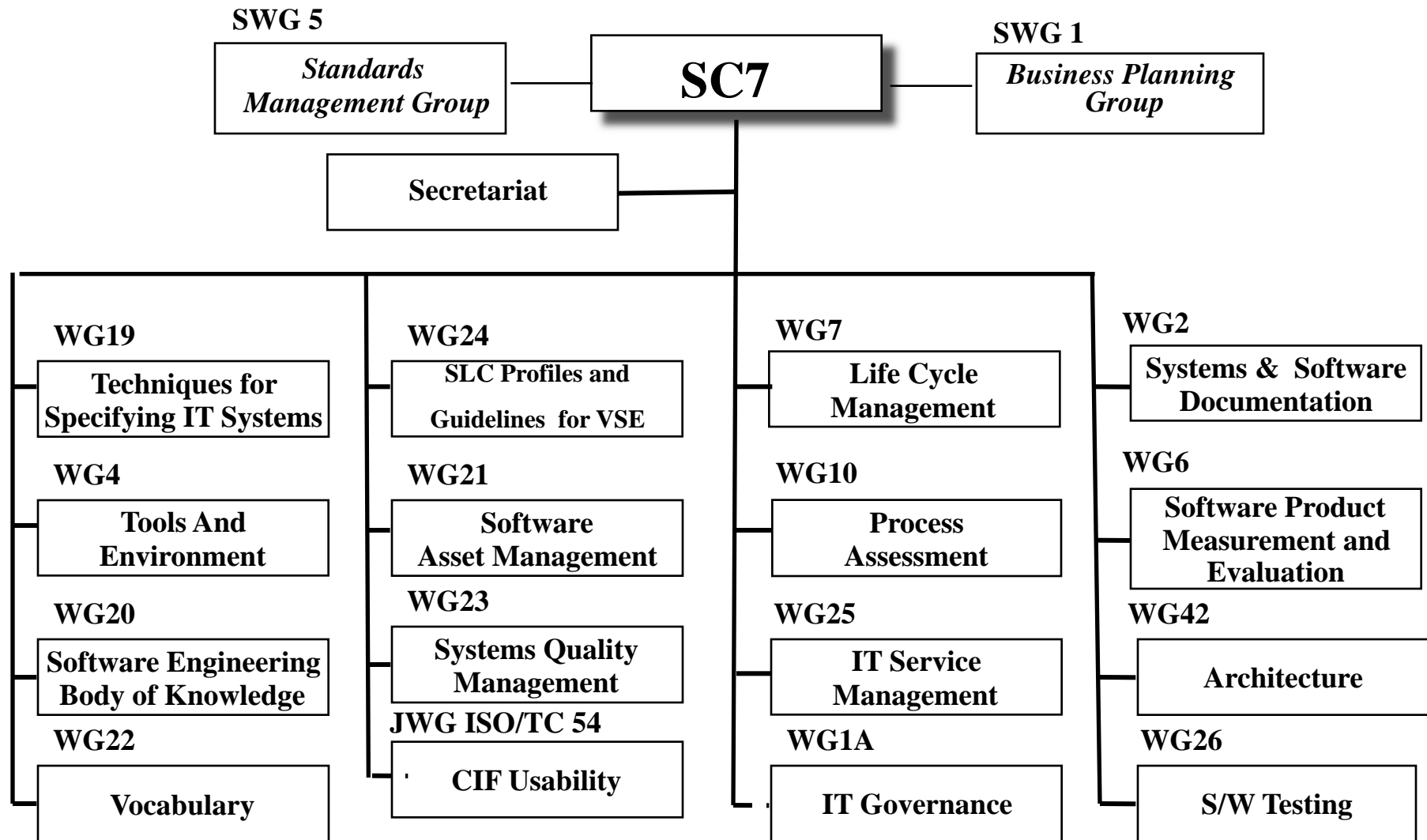
JTC 1/SC7 Is an Horizontal Committee



Overview of the SC 7 collection



SC7 Structure



Chairman's theme for Berlin

Chairman's theme for Berlin

CONSOLIDATION

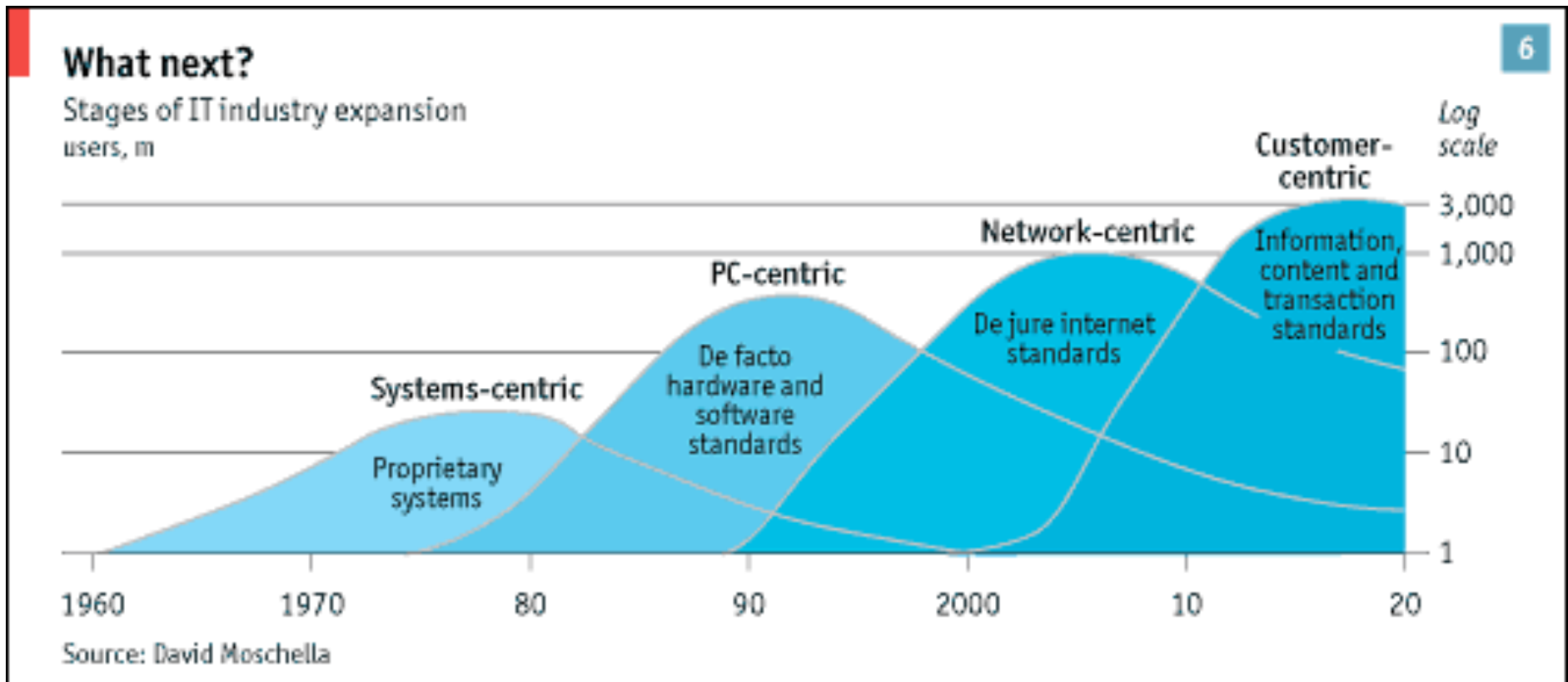
(again)

-> Taking stock, completing
ongoing activities
& optimizing
...and some exploration...

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

Markets Size (10⁹ US \$)

ICT Vendor 2002

**Reference: R.Fulton,
COM-15-1667, Predicts
2002 – What's Ahead for
the IT Industry, Gartner
Research, Research Note,
2002-01-08 [http://
www.adabasnatural4ever.
com/industry_news/media
predicts_2002_whats_ahead_for_the_it_industry.p
df](http://www.adabasnatural4ever.com/industry_news/media/predicts_2002_whats_ahead_for_the_it_industry.pdf)**

Telecommunications equipment	380
Computer Systems Hardware	240
Software Licenses	70
Project Oriented IT Services	250
Semiconductors	150
Support/Management IT Services	350
TOTAL	1 440

IT Evolution: Some Key Points

- General
 - Increased ubiquity of IT
 - Safety Critical
 - Mission Critical
- Market
 - Mostly a service market
 - Market that is getting more global
- 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 Markets

Includes Producer/Consumers/Operator/... of

- Embedded Software Systems
- Corporate/Enterprise Information Systems (IS)
*(Management Information Systems (MIS);
Data Processing)*
- Interactive Media Systems;

What is Enterprise IS?

Enterprise IS is a Systems of Systems:

*Multiple, heterogeneous, distributed systems
that are embedded in networks at multiple
levels.*

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

*...and have been developed independently
through time*

Embedded vs Enterprise

(Traditional) Embedded

- Control the 'real' world
- Hard or soft real time
- May impact Health and Safety (**safety critical**)
- 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 (**mission critical**). 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

Directions

Outputs from the 2004 Brisbane Plenary

Opportunities

- Systems Engineering
- **Software and Systems Assurance**
- Systems Architecting
- IT Operations and Services
- **Re-use**

- **Agile Processes**
- **Open Source Software (OSS)**
- Curricula and Certification
- **Application Domains Acceptance**
- Data ?

OUTPUTS -> status

- **NWI and Fast Track**
- **Study Group -> Project**
- **Study Group -> WG42**
- **ISO/IEC 20 000 -> WG25**
- **Study Group -> No action...but Product Lines**
- **No action..**
- **Study Group -> No action**
- **Study Group -> Project**

- **NWI -> Standard**

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
 - Integration of SC7 standards with IEEE's
 - Work closely with strategic partners:
 - IEEE, INCOSE, OMG, ITU-T, itSMF (and ISACA).

Key Strategic Directions (3)

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

Chairman's perception of opportunities

- **Enterprise Architecture** – should we talk to The Open Group?
- **Systems of Systems** – well covered by our standards?
- **Transactional Systems** - well covered by our standards?
- **Embedded Software** – need for guidelines in using our standards (see JTC 1 Tech Watch)?
- **IT Service Management / Measurements** – Service Level definition/measurement.
- **IT Outsourcing** – need for guidelines in using our standards?
- **Agile Approaches** - well covered by our standards?
- **Interactive Media Systems** -well covered by our standards?

Terms of References

SC7 Terms of References

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

Note: The processes, tools and technologies are within the scope of JTC1 terms of references and exclude specific tools and technologies that have been assigned by JTC1 to other of its SC's.”

Need to Retouch SC7 Terms of References

- To correct some legacy wordings
- To better reflect the total life-cycle coverage of SC7 standardization activities

Last Version of Proposed new Terms of Reference

*Standardization of processes, **methods** and supporting technologies for the engineering and management of software and systems throughout their life cycles.*

Note: The processes and technologies are within the scope of JTC1 terms of reference and exclude specific technologies that have been assigned by JTC1 to other of its SCs.”

Recommendation

To wait until JTC 1 sort out the issue of IT Governance before going back to JTC 1.

We may need to have a more comprehensive scope definition. Being too succinct can be confusing to some parties.

Exploratory Work in Progress

Actives SC7 Study Groups

- Study Group on IT Governance (now WG1A)
- Study Group on Agent Technologies
- Study Group on the Relationship of Processes and IT Services
- Study Group on Market interest in Assessing the SAM Process

Areas to explore

- Gold Coast Tech Watch Recommendations for JTC 1:
 - Standards for Embedded Systems
 - Fault isolation for embedded systems
 - Grid Service Guidelines
- Action taken:
 - Added to SWG5 workload

Consensus

- Key concept in the development of International standards
- ISO defines consensus as:

General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all concerned parties and to reconcile any conflicting arguments.

Consensus

In a nutshell, this means:

- That all the involved parties were able to voice their views.
- That the best effort was made to take into account all of the above views, and resolve all issues (meaning all comments tabled during a ballot).
- That nearly all or (ideally) all the parties involved can at least live with the final result.

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>Prepare resolutions on WG convenerships</p> <ul style="list-style-type: none"> •WG19 TBD •WG7: TBD 	<p>Secretariat Drafting Committee</p>
<p>Refresh liaison officers appointments.</p>	<p>Secretariat Drafting Committee</p>
<p>Add to liaison officer resolution short text describing the duties of liaison officers</p>	<p>Secretariat Drafting Committee</p>

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>WG7 Presentation:</p> <p>Joint meeting with WG25, WG23 and other interested parties on SG findings</p>	<p>WG7, WG25, WG23</p>
<p>WG 20 Presentation:</p> <ul style="list-style-type: none">•resolution for new title of WG20•Name of NWI TR too close to name of standard?	<p>WG20</p> <p>Drafting committee</p>

Action items for the plenary

ITEM	ACTIONNEE(S)
WG 4 Presentation on NWI on product lines: <ul style="list-style-type: none">•Prepare NWI•Vocabulary issue•Spillover to WG7, 42, 1A	WG4, 7, 42, 1A SWG5

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>Take appropriate action on inactive external liaisons:</p> <p>EC (A liaison with JTC1)</p> <p>EIA CDIF (C)</p> <p>ESI Software (C)</p> <p>NATO (C)</p> <p>QuEST Forum (A)</p> <p>UNCTAD (A)</p>	<p>Secretariat</p> <p>Drafting Committee</p>
<p>IEC TC67</p>	

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>Create a SWG (SWG27) to interface with SC27. This SWG will be chaired by the SC7's SC27 liaison officer and have the following mandate:</p> <ul style="list-style-type: none">• Respond in a timely fashion to SC27 liaison statements• Comments in a timely fashion on SC27 documents• Issue regularly liaison statements to SC27	<p>Drafting Committee NB's</p>

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>Chair of SC7 will send a letter to SC27 chair notifying him on the SWG creation and also on issues on risk management and assurance standards.</p>	<p>Chair</p>
<p>OMG – PAS proposal (N3960, N3976, N3977):</p> <ul style="list-style-type: none"> •WG19 and WG42 to sort up who will be prime •SC7 resolution to welcome PAS from OMG 	<p>WG19, 42</p> <p>Drafting Committee</p>

Action items for the plenary

ITEM	ACTIONNEE(S)
ISO TC22 SC3 WG16 - ISO 26262 Automotive: Create a SWG?	NB's Drafting Committee
Assess the proposal for IAITAM and BSA to become Type C liaison to WG21 (N3719)	WG21

Action items for the plenary

ITEM	ACTIONNEE(S)
Revise proposed modifications to the SC7 Terms of Reference to make them more explicit. Aim: letter ballot 3d Q 2008	Jean Bérubé Secretariat
SC7 Chairman 4th Term	NBs

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>Study Group on Relationship of Processes and IT Services: Decide if need to be re-created, and if yes with which mandate.</p>	SG
<p>Study Group on IT Governance</p>	Now WG1A
<p>Study Group on Agent Technologies</p>	Report to be presented to SWG5 Wenesday
<p>Study Group on Market interest in Assessing the SAM Process</p>	WG21 to assess

Action items for the plenary

ITEM	ACTIONNEE(S)
<p>SWG5 to address Gold Coast Tech Watch Recommendations for JTC 1:</p> <ul style="list-style-type: none"> •Standards for Embedded Systems •Fault isolation for embedded systems •Grid Service Guidelines 	<p>SWG5</p>
<p>IEEE-CS Liaison Report (N3722)</p>	<p>BPG, WGs</p>

Action items for the plenary

ITEM	ACTIONNEE(S)
Futures Plenary: 2009 : India 2010: Japan 2011: ?	Chairman NBs
Future Interim Meetings: 2008: Nanning 2009: Washington 2010: ? 2011: ?	Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Repeat resolution on P Members participation to ballots: reminding P Members of their obligation to vote (Resolution 939)	Secretariat Drafting Committee
Repeat resolution on facility fees	Secretariat Drafting Committee
Repeat resolutions on SWG1 and SWG5.	

Action items for the plenary

ITEM	ACTIONNEE(S)

Action items for the plenary

ITEM	ACTIONNEE(S)

Action items for the plenary

ITEM	ACTIONNEE(S)