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MANAGEMENT REPORT AND BUSINESS PLAN FOR

ISO / IEC JTC 1/SC7

SOFTWARE AND SYSTEMS ENGINEERING

PERIOD COVERED: October 2007 - September 2008

SUBMITTED BY: François Coallier, Chairman
Witold Suryn, Secretariat

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1.0 MANAGEMENT SUMMARY

1.1 CHAIRMAN'S REMARK

The last year saw JTC 1/SC7 completing 7 projects (May 2007-May 2008) and initiating 10 new ones. 5 additional new projects are under consideration by the SC7 members since the SC7 May 2008 plenary in Berlin, Germany. Exploration of new areas as well as consolidation of existing ones was done by its SWG 5 on architecture, ten study groups (4 till May 2008 and 7 currently active) and a newly created Advisory Group on life cycle process (LCPHAG) whose mandate is to perform an architectural analysis and recommended framework for an integrated set of process standards in software and IT systems domains..

It is noteworthy that two SC7 standards published this year were the subject of an ISO communiqué: ISO/IEC 38500 on the corporate governance of IT (2008-06-05) and ISO/IEC TR 90005 which provide guidance for the application of ISO 9001 to system life cycle process (2008-08-07).

Organization wise, the last 12 months saw also the creation of one new working group, WG1A (IT Governance). To increase our liaison activities with some important standards organizations, SC7 created at its last plenary two Special Liaison Groups with respectively ISO TC22/SC3 WG16, Road Vehicle Electrical and electronic equipment Functional Safety (SLG1) and JTC 1/SC27, IT Security (SLG2).

SC7 has now 37 'P' members, compared to 29 in 2003. The last SC7 plenary in Berlin, Germany, was a success with 199 delegates from 26 countries and 3 'A' liaison organizations. Noteworthy was the presence for the first time of delegates from Columbia and Poland. Noteworthy also is the planned attendance at the coming interim meeting in Nanning, China, of a delegate from the Ivory Coast, a new 'O' member of SC7.

Hosts for future SC7 Plenary meetings have been identified till 2011 and for the joint WG interim meeting till 2010.

While SC7 is continuing to develop and consolidate its work in software and systems engineering development standards, work to address management and operation of IT systems is intensifying. IT systems management and operations was already touched at in different degrees by SC7 in its software and systems life-cycle standards as well as its software maintenance, risk management, software systems assurance and products related standards. The newly created Advisory Group on life cycle process will help in ensuring a more systematic integration of IT systems management and operation in all SC7 standards.

As stated in its resolution 1035 (JTC1 N9256) SC7 has currently a significant number of standards that span the management control, operational governance and possibly the executive governance layers. In addition to ISO/IEC 38500, 21 standards, some of them multiparts, have been tentatively identified in the SC7 program of Work has having a governance component (07N4153). These includes, for instance: ISO/IEC 12207, 15288, 15504 series, 20000 series, 90003, 9005, etc.. Also, while the work of the JTC 1 SG on IT Governance has concentrated on information systems governance, it is also important to note that IT Governance also exists in the product engineering world, for instance, in product lines for engineering. A governance expert has been added to SWG5 to be able to address these issues more systematically.

1.2 JTC 1/SC7 STATEMENT OF SCOPE, VISION, PURPOSE AND CORE VALUES

Scope

The following "Terms of Reference" were approved by JTC1 at its 1997 Plenary in Paris:

> ***"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."***

Vision

The vision of SC7, as elaborated at its 1997 Walnut Creek business planning workshop and endorsed formally by member bodies, and updated to reflect the changes in Terms of Reference since then:

A unified set of software and systems engineering standards widely accepted by the intended class of users.

These standards will be organized in a framework, which establishes the relationships among SC 7 standards and between SC 7 standards and those of other disciplines, e.g. engineering, information technology, and quality management.

Purpose

The purpose of SC7, as elaborated at its 1997 Walnut Creek business planning workshop and endorsed formally by member bodies and updated to reflect the changes in Terms of Reference and the evolution of SC7 since then, is to:

- Provide quality software and systems engineering standards that meet user needs in broad markets.
- Manage the set of standards effectively through documented framework.
- Promote the use of standards by providing supporting materials.
- Provide leadership in software and systems engineering standardisation through:
  - The development of a comprehensive set of integrated standards with broad international and professional consensus;
  - Initiating cooperative work with international professional and standards producing organizations;
  - A framework that:
    - Facilitate the integration and sub-contracting of standards developed in other standards producing organization;
    - Facilitate cooperative development of joint standards with other international standards producing organizations;
    - Minimises the inconsistencies between major software and system related standards including those developed by other standard producing organizations.

Area of work

Systems engineering, whose origin is traceable to industrial engineering, is defined as an 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).

SC7, whose scope is Software and Systems Engineering, can thus be described as an horizontal committee who produce generic standards that are independent of the application domain. These standards are principally focused on process models and good practices (Methods and techniques).

As system engineering standards, they cover the entire life cycle of products. In ISO and IEC, a product is defined as the output of a process (ISO 9001). Product, in the context of SC&, includes thus:

- Software Systems
- Services related to software systems engineering and operations
- Services provided by software systems (from an Horizontal perspective)

The SC7 market comprises thus:

- Software Systems:
  - Embedded Systems
  - Information systems
  - Interactive media systems
- 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

We are meeting our mandate and achieving our objectives by addressing certain key areas in software and systems engineering standardization:

- Software and systems engineering processes:
  In partnership with the International Council of Systems Engineers (INCOSE), the Institute of Electrical and Electronics Engineers Computer Society (IEEE-CS), the IT Service Management Forum (itSMF), the Information Systems Audit and Control Association (ISACA), and other parties, SC7 is developing and improving on standards which describe good software and systems engineering practices, as well as standards to consistently assess organizational software and system engineering practices against a given benchmark. Work is also been done in this area to provide guidelines on the usage of SC7 standards for very small enterprise.

  A project on Requirements Engineering is under progress. A multi-part standard on systems and software assurance is also in development,

- Software system products:
  Developing and improving on standards which allow acquirers and buyers to size and document software products as well as to express measure and evaluate the quality of the software that is produced and its contribution to the final product or application system. These standards are principally found in the ISO/IEC 25000 series, commonly known as SQuaRE (Software product Quality Requirements and Evaluation). A working group is also dedicated to the area of information systems documentation (ISO/IEC 6592 and 15289).

  Work is also being done, in cooperation with the IEEE-CS and INCOSE, in software and systems architecture, with an IEEE standard having been recently adopted (ISO/IEC 42010). A new project on Software Testing has been initiated in May of 2007.

- Techniques for Specifying IT Systems:
  In partnership with the Object Management Group (OMG), SC7 is developing and improving on Open Distributed Processing (ODP) standards to integrate IT and business system definition and provide the software and system engineering tools to implement enterprise information systems. Noteworthy in these areas have been the UML standards that came through the OMG (ISO/IEC 19501) and the new standard on Metamodel for Development Methodologies (ISO/IEC 24744).

- Software engineering environment:
  Developing and improving on standards which make it easier to use software engineering environments and to re-use and re-deploy the data contained in them. The main standards in this area are ISO/IEC 14102 and 15940).

- Software and Systems Bodies of Knowledge and Professionalization:
  Working with the Institute of Electrical and Electronics Engineers Computer Society (IEEE-CS) on their guide to the Software Engineering Body of Knowledge (SWEBOK), SC7 published it as an ISO/IEC Technical Report (ISO/IEC TR 19759). A project on the certification of software engineers is currently active. In addition SC7 is considering as a possible ISO/IEC Technical Report the INCOSE Systems Engineering Handbook, version 3.

- IT Service Management:
  In partnership with the IT Service Management Forum (itSMF), the Information Systems Audit and Control Association (ISACA) and other parties, SC7 is developing and improving on standards that describe good IT service management practices, including areas such as the management of software assets.

- IT Governance:
  In partnership with the IT Service Management Forum (itSMF), the Information Systems Audit and Control Association (ISACA) and other parties, SC7 is developing and improving on standards which describe good IT Governance practices. Corporate Governance of IT is defined as *the system by which the current and future use of IT is directed and controlled.* A landmark standard in this area, ISO/IEC 38500, has been published in 2008.

Core Values

SC7 core values are:

- Consensus

  At an International level and with regards to software and system engineering best practice

- Full and open deliberation
  - Active involvement with related disciplines
- Informed participation
  - Awareness of the subject
  - Awareness of the market
  - Awareness of JTC1 procedures
  - Awareness of project background
- Equality and members/tolerance
  - At a minimum to follow JTC1 procedures
- Commitment to quality
  - Maintain awareness of best practice and user needs

Commitment of participants to the process

- Recognition of the importance of continuity in standards development
- Professionalism
  - Maintaining awareness of software and system engineering practices

1.3 PROJECT REPORT

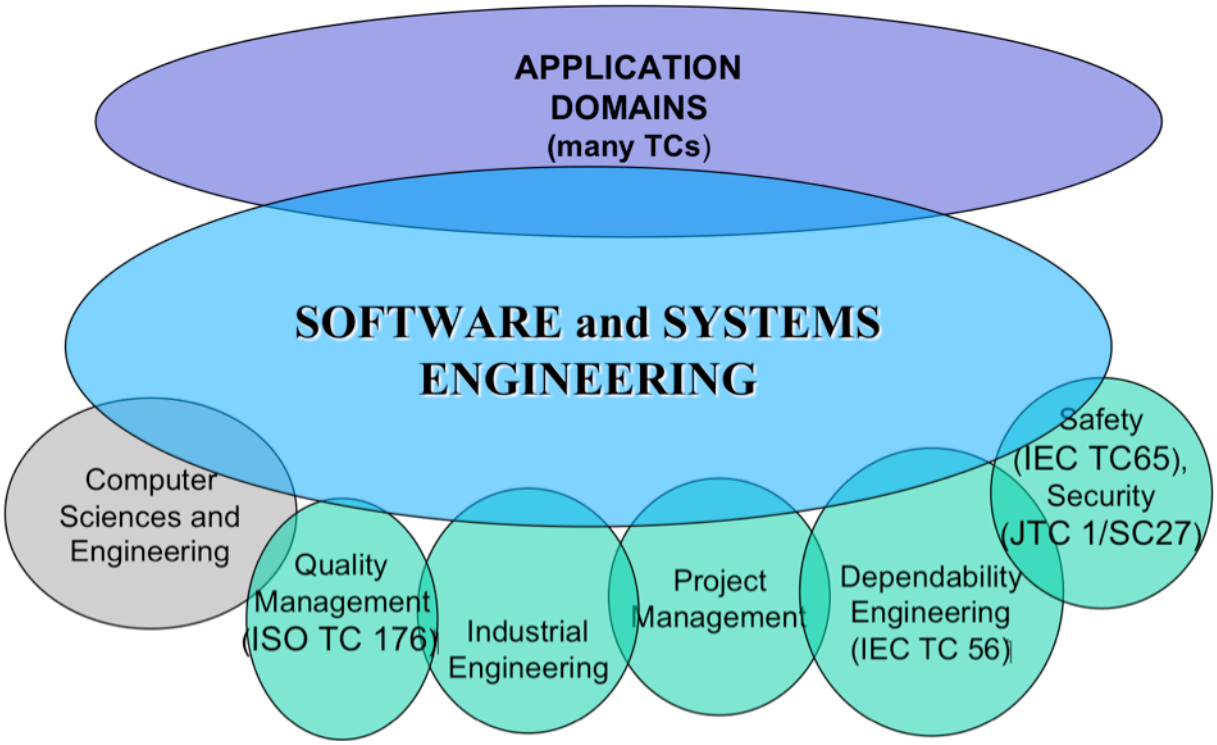
As of 2008-10-10, there were 50 active projects / sub-projects in JTC 1/SC7 (see http://www.jtc1-sc7.org/). These are handled by 15 active working groups and one joint working group with ISO/TC54 (See annex A). The following standards have been published between the last JTC 1 Plenary and 2008-10-10:

- SO/IEC TR 14471:2007
  Information technology -- Software engineering -- Guidelines for the adoption of CASE tools
- ISO/IEC TR 15504-6:2008
  Information technology -- Process assessment -- Part 6: An exemplar system life cycle process assessment model
- SO/IEC 24773:2008
  Software engineering -- Certification of software engineering professionals -- Comparison framework
- ISO/IEC 26514:2008
  Systems and software engineering -- Requirements for designers and developers of user documentation
- ISO/IEC 29881:2008
  Information technology -- Software and systems engineering -- FiSMA 1.1 functional size measurement method
- ISO/IEC 38500:2008
  Corporate governance of information technology
- ISO/IEC TR 90005:2008
  Systems engineering -- Guidelines for the application of ISO 9001 to system life cycle processes

1.4 COOPERATION AND COMPETITION

Internal

JTC 1 has recognized that its SC7 is a "process focused" SC. The diagram that follows illustrates SC7 horizontal nature and how its scope interacts with other SC's and disciplines:



All those overlaps have the potential to generate liaison challenges.

Within JTC 1, many interfaces are developing with SC27. It is important for the IT community that all JTC 1 process standards are coherent.

There are at least two other process focused TC's in ISO and IEC that also had overlap with the JTC1/SC7 program of work: ISO/TC176 and IEC/TC56. The issues of overlap between SC7 and ISO/TC 176 programs of work have been resolved through liaison and the transfer of the responsibility for the maintenance of ISO 9000-3 to JTC 1/SC7.

A final challenge is to ensure that when Domain TCs in ISO and the IEC develop engineering standards, they do so using SC7 standards as a baseline – as it is done in the quality management area.

To increase its liaison activities with some important standards organizations, SC7 has created at its last plenary two Special Liaison Groups with respectively ISO TC22/SC3 WG16, Road Vehicle Electrical and electronic equipment Functional Safety (SLG1) and JTC 1/SC27, IT Security (SLG2).

External

SC7 has A-liaisons with:

- IEEE Computer Society
- INCOSE
- itSMF
- ITU-T
- PMI
- QuEST Forum
- IPMA
- UNCTAD
- EC

SC7 has B liaison with:

- AES
- Ecma International
- WMO

And C liaison with:

- ISACA (WG7, 10, 21)
- EAFPUG (WG6)
- EIA CDIF (Inactive)
- ESI Software (WG 10)
- IFPUG (WG 6)
- NATO (WG 7)
- OMG (WG 19)
- The SPICE User Group (WG 10)

At its last plenary in Berlin, as per JTC 1 Gold Coast Resolution 25, JTC 1/SC7 instructs its Secretariat to recommend to JTC 1 that the following liaisons be terminated since they are inactive:

- EC (A)
- EIA CDIF (C)
- ESI Software (C)
- NATO (C)
- QuEST Forum (A)
- UNCTAD (A)

All other liaisons are either actives or very actives. The IEEE-CS, INCOSE, itSMF and ISACA had delegations of three or more experts at the last SC7 plenary.

Documents from the IEEE Computer Society, the OMG and the ITU-T were or are moving through the standardization process either as PAS, Fast Track or through the normal process.

By regard to the IEEE Computer Society liaison, the current status of the liaison is:

- Approved vision for joint program of work: 07N2742.
- Approved procedures for common work: 07N2743.
- IEEE documents are submitted either as base documents or fast track through a National Body

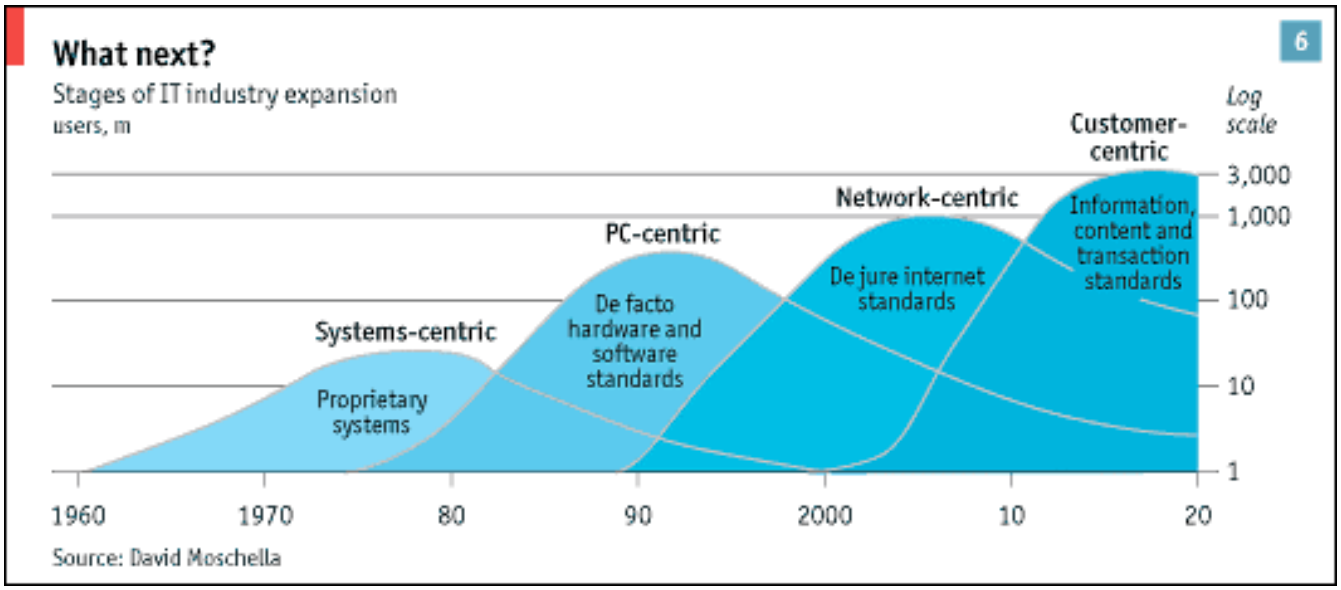
2.0 PERIOD REVIEW

2.1 MARKET REQUIREMENTS

Overall Trend

The Information and Communication Technology (ICT) sector has been going through phases of technological changes and expansions in the last 40 years. As illustrated on the next page, 3 of these phases occurred in the past and we are now entering a fourth one.

- The first phase was when the industry was dominated with large mainframe and minicomputers based systems located in centralized data centers and operated by elite groups of people. This was the time of proprietary hardware dominated systems.
- The second phase came with the microprocessor and the personal computer. Suddenly, computing moved from the small data center elite to end-users. It also started to become mass-market phenomena. A de-facto market set of standards quickly dominated this market: the so-called Wintel (Windows operating systems and Intel processor) standard.
- The third phase became visible when, in 1993, a group of students from the University of Illinois developed the first Internet browser, Mosaic [1]. Quite suddenly, the Internet moved from a network for small elite of researchers to a mass market phenomenon. At about the same time, Microsoft introduced direct support for networking in its operating systems. PCs, as well as the data centres computers, started to evolve from islands of automations to nodes of a network. This evidently had a significant impact on the design of computer applications.
- The fourth phase will be focused on an open transactional environment dominated by, among other things, machine to machine (M2M) communications and mobile computing. It will be supported by open middleware and other open standards.



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

The following summarize our perspective on Software and Systems Engineering trends:

- Technology
  - IT is getting more ubiquitous, especially with the spread of direct machine to machine (M2M) communications.
  - Software engineering is getting more mature, but still evolving.
  - An IT application is nowadays a software system whose software components can be made, bought, open-source in origin a Web service or a mashup. The Web service can be from within an Intranet, or from the Internet.
  - Information Systems (IS) are '*Systems of Systems*'.
  - Developing software systems and IT applications is much more involved that classical programming: these systems must be engineers not only to meet functional requirements but also stringent quality attributes such as performance, reliability, availability, scalability, usability, security and security.
  - In some cases, the difference between software and data is blurring.

- Markets
  - A lot of software is brought, as a product or a (Web) service – not developed
  - Open source software is taking hold in many markets
  - Software as a Service (SaaS), Mashups and Cloud Computing are not only changing the way software and information systems are developed and operated, but also how they are marketed.
  - Some Software Systems development and maintenance services are becoming commodities, other remain high value add
  - The Internet is making geography less relevant for some Software Systems engineering, maintenance and operation services
  - IT Services are now a significant part of global commerce

- Standards
  - A growing international consensus on software and systems engineering good practices is formalized.

SC7 Marketplace

The over-riding requirement is that the software and system engineering standards are focused on the needs of the users of those standards. We are targeting in our work the following types of standards user:

Software, Systems and IT Services Houses

Those who supply the software system and IT services needs of the consumer, commercial, industrial, defence, and public sectors, and who need to preserve their competitiveness in the face of ever changing world markets. To address international markets, they need to be able to offer services and products that will match the best available from anywhere in the world.

Software and system engineering standards from JTC 1/SC7 provide one of the means to judge what is meant by best.

Corporate Information Systems Users

Software and system engineering standards can directly serve the needs of using organizations by reducing costs, improving IT services, encouraging fair competition, allowing re-use of existing software and generally reduce risks and uncertainty.

ODP and associated standards provide enterprise architects and system developers tools to architect and design robust, modular enterprise applications and systems.

Embedded software system suppliers

This category includes a wide variety of companies supplying software embedded within systems that are themselves embedded in a product. It might be a consumer product such as a cell phone or a car, avionics, a weapons control system, or a heart pace maker. In all these cases the software is just a component of the system or final product, but it is critical that it is well engineered in the context of the overall engineering effort involved.

Interactive media system suppliers

This category includes a wide variety of companies supplying software, generally multimedia in nature, with a rich user interface. It includes gaming software, virtual reality environment, simulation systems, avionic interfaces, data visualisation, navigation and analysis, etc…

Software and System engineering educators

As mentioned earlier, JTC 1/SC7 standards define a body of knowledge of good practices. These standards, including the one specifically addressing this issue currently under development, provide a sound foundation for educators in software and system engineering. These standards also assist in the development of professional curriculums and certification schemes.

Domain specific standards developers

JTC 1/SC7 standards are, in ISO jargon, horizontal standards. This means that these standards are basically of a generic nature and can be applied in different domains such as for the development of transportation systems, space systems, security products, etc..

Organisation developing those domain specific standards will find in JTC 1/SC7 standards a foundation they can use to build on.

Methods and tools suppliers

Although this market is still formative there are already ad-hoc and proprietary standards for software and system engineering methods and tools. As the market matures it is important to remove barriers to more open use of CASE tools and methods.

2.2 ACHIEVEMENTS

See sections 1.2 and 3.2

2.3 RESOURCES

SC7 recognize that resources are an important factors for the successful the execution of the work program. At this point in time, there is sufficient support for all of the SC7 projects.

A strategy to address this is to bring in projects with documents that have been already developed by other standardizations organization. This is what was done with the OMG and the IEEE Computer Society.

2.4 ENVIRONMENTAL ISSUES

N/A

2.5 PARTICIPATION METRICS

Up to the May 2006 Plenary in Bangkok, the 50% participation to voting has been met in all ballots, although with difficulty in many cases.

At its Bangkok plenary, JTC 1/SC7 adopted the following resolution:

SC7 internal balloting

880.	JTC1/SC7 instructs its Secretariat to take whatever action necessary to convert to the ISO electronic balloting system as of the 1st of June 2006. The NBs of P members should use their Livelink accounts to cast ballots. The instruction document on electronic balloting will be available on SC7 Web site.	

Implementation of this resolution has resulted up to now in a ballot participation rate of 63 to 90%.

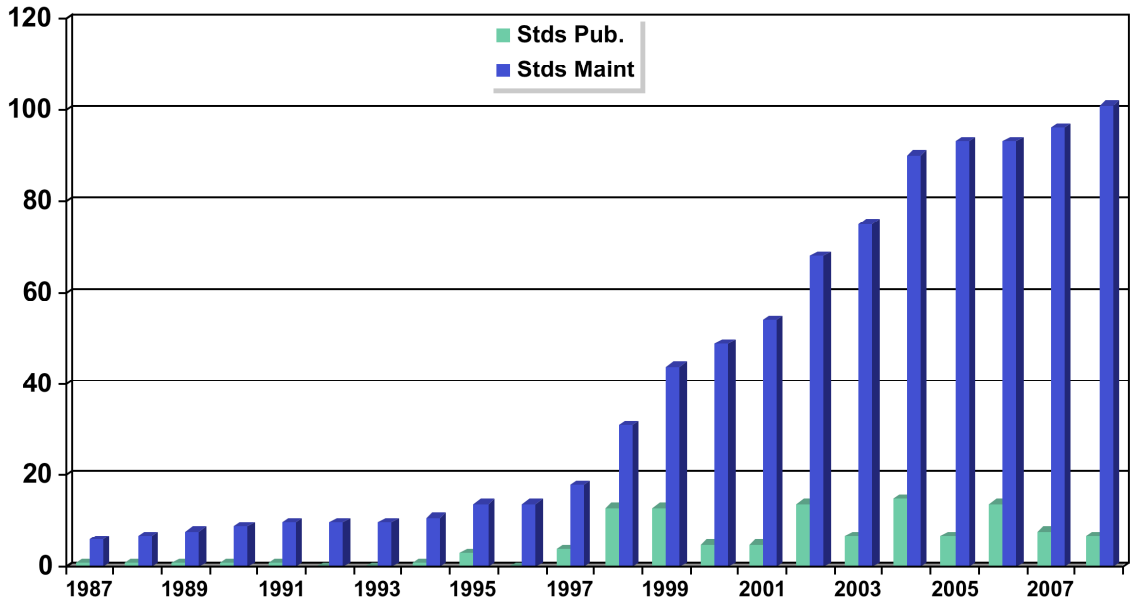
3.0 FOCUS NEXT WORK PERIOD

3.1 DELIVERABLES:

As of 2008-10-10, the following projects are near completion:

- ISO/IEC FDIS 14102
  Information technology -- Guideline for the evaluation and selection of CASE tools
- ISO/IEC FCD 15909-2
  Software and system engineering -- High-level Petri nets -- Part 2: Transfer Format
- ISO/IEC FCD 16326
  Software engineering -- Life cycle processes -- Project management
- ISO/IEC FCD 18018
  Information technology -- Configuration Management tool capabilities
- ISO/IEC DIS 19506
  Information technology -- Architecture-Driven Modernization -- Knowledge Discovery Meta-model (KDM), v1.1
- ISO/IEC FDIS 19793
  Information technology -- Open Distributed Processing -- Use of UML for ODP system specifications
- ISO/IEC DIS 20926
  Software and systems engineering -- Software measurement -- IFPUG functional size measurement method 2009
- ISO/IEC FDIS 25012
  Software engineering -- Software product Quality Requirements and Evaluation (SQuaRE) -- Data quality model
- ISO/IEC FCD 26513
  Systems and software engineering - Requirements for testers and assessors of user documentation

Standard production by SC7 is, as of 2007-05-21, looks as follows:



3.2 STRATEGIES

An SC7 Strategic Planning Workshop was held prior to the 1997 Walnut Creek Plenary and the results documented in SC7 07N1763, SC7 Direction Statement 1997. This document was accepted by SC7 member bodies after formal balloting. A revised and updated version of this document titled SC7 Draft Direction Statement 2003-2008 (07N2898) has been balloted.

Business Planning activities have been going on in SC7 for the last 8 years. To ensure proper focus and continuity, SC7 has formalized at its 1997 Walnut Creek Plenary the SC7 Business Planning Group (BPG) as a "special working group" (SWG). Its current mandate is to:

1. Support the Chair in the elaboration of directions and policies.
2. Assist the chair in the prompt resolution of issues.
3. Propose update to the JTC1/SC7 business plans and procedures.
4. Propose updates to JTC1/SC7 communications function.
5. Prepare procedures and organization responsibilities to ensure an integrated strategy planning, business planning, and management systems for JTC1/SC7.

The BPG is under the direction of the JTC1/SC7 Chair and his currently composed of:

- Mr Anukul Tamprasirt (Thailand)
- Dr. Annette Reilly (USA)
- Mr Jean Bérubé (Canada)
- Dr. Y. Yamamoto (Japan)
- Dr. Dan Lee (Korea)
- Prof. Alastair Walker (South Africa)
- Mr. Risto Nevalainen (Finland)
- Mr. Antonio Coletta (Italy)

Full day business planning activities are thus held since 1998 by the SC7 Advisory Group in each plenary meeting.

All SC7 Business Planning documents can be found at the SC7 web site http://www.jtc1-sc7.org/ under the heading *Planning*.

The key SC7 strategies documented in 07N2898 are:

- **S1** - Ensure that its standards are as consistent and coherent as possible.
- **S2** – Become more a systems integrator by focusing its development activities on integrations standards and adopting and integrating standards developed by other organizations.
- **S3** - Develop and manage key strategic partnerships with international professional and standardization organizations that operate in its mandated area. In 2002 these were the IEEE-CS, INCOSE and OMG.
- **S4** - Communicate efficiently to its intended customers about its program of work and market its accomplishments.
- **S5** - Proactively assess the relevance of its standards to the state of software and systems engineering technology and markets, and initiate maintenance or new development activities if required.
- **S6** - Increase its market share in the area of systems engineering
- **S7** - Ensure that its standards are as compatible and coherent as possible

A view of SC7 current products set strengths and opportunities as of its Brisbane may 2004 plenary meeting was summarised by the SC7 Chairman summarised in the following table:

STRENGTHS	OPPORTUNITIES
• Life-Cycle Processes • Product Metrics • Process Metrics • Formalisms • Software Engineering Body of Knowledge • Tools environment	• 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

As a result of this analysis, SC7 has initiated a series of study periods documented in its Brisbane (Document SC7 N3062) , Helsinki (SC7 N3274) and Bangkok (SC7 N3535) and subsequent plenary meeting resolutions. The current study groups are listed in annex A.

3.2.1 RISKS

SC7 is presently in a mode where its focus is to produce new standards. As documented in section 3.0, a significant number of deliverables will be produced in the next 15 months.

Risks are managed through:

- Proactive business planning
- Continuous management

SC7 has currently two Special Working Groups (SWG) in place to contribute to the above:

- SWG1 on business planning
- SWG5 on architecture management

See Annex A for further details.

3.2.2 OPPORTUNITIES

Plenary Attendance

SC7 has seen in the last few years its attendance at Plenary meetings has grown continuously to reach a plateau of between 120 and 140 (see figure). Attendance at the Montréal plenary was over 100 even if many experts could not attend because of company policy due to the presence of SARS in Toronto. Attendance at the last three plenaries has been between at over 170 delegates. SC7 plenaries are notable for the number of formal and informal joint meetings between members of its various working groups.

Participation to the last plenary was 199 delegates from 26 countries and 3 'A' liaison organizations.

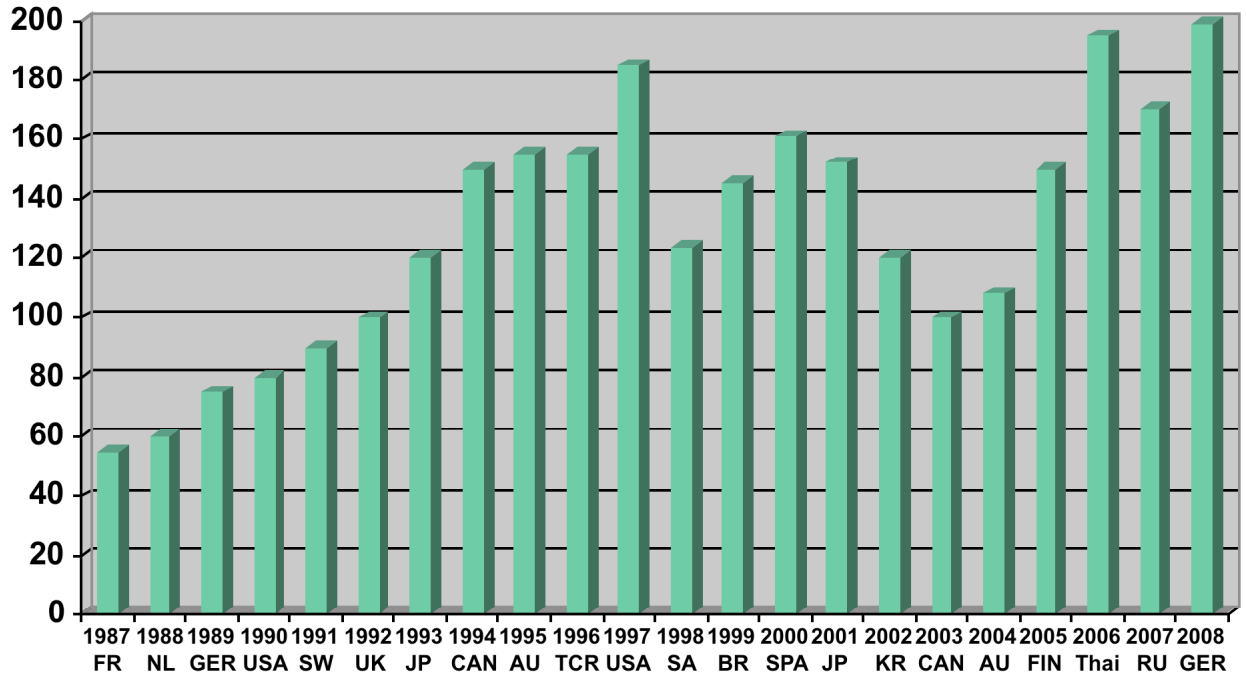
Hosts for future plenary meetings have volunteered for the next three years. These are:

- 2009 - India (to be confirmed)
- 2010 – Japan (tentative)
- 2011 – France (tentative)

Hosts have also volunteered for the combined interim WG meetings for the next three years. These are:

- 2008 – Nanning, China
- 2009 – Washington, USA
- 2010 – Cruzo city, Peru (tentative)

The growing importance of software based product and services in post-industrial society and developing economies should ensure that interest in SC7 should remains high in the foreseeable future as long as proper market relevance is maintained.



New projects

The following projects have been initiated in the last 18 months:

- ISO/IEC NP TR 20000-5 Information Technology - Service Management - - Incremental conformity based on ISO/IEC 20000
- ISO/IEC NP TR 15504-8 Information technology - Process assessment - Part 8: An exemplar process assessment model for IT service management.
- ISO/IEC CD TR 20000-4 Information Technology - Service Management Process Reference Model
- ISO/IEC CD 25045 Software Engineering - Software Quality Requirements and Evaluation (SQuaRE) - Evaluation Module for Recoverability
- Revision of ISO/IEC 15026 - Systems and Software Engineering - Systems and Software Assurance
- Amendment to ISO/IEC 24744 -Software Engineering - Metamodel for Development Methodologies: addition of an informative annex for notation

The following new project proposals are currently under consideration:

- NWIP: ISO/IEC 19770-3 Information technology -- Software asset management -- Part 3: Software entitlement tag
- NWIP: Information Technology – Guidelines for the application of ISO 9001:2000 to IT service management.
- NWIP: Revision of ISO/IEC 90003, Software Engineering – Guidelines for the application of ISO 9001:2000 to software.
- NWIP - Information Technology –The application of conformity assessment methodology to process capability and organizational maturity
- New Work Item Proposal: Information Technology – Corporate Governance of IT Implementation Guide

3.3 WORK PROGRAM PRIORITIES

SC7 work program strategy is to suspend or cancel any project that does not have sufficient resource. Consequently, SC7 priorities are to ensure that its present work program is executed in a timely fashion while producing quality documents. Another element of the SC7 strategies is to adopt suitable documents produced by external organizations.

ANNEX A: SC7 ORGANIZATION

The following WG are active:

WG	SCOPE	CONVENER	WEB SITE
2	*Development of standards for the documentation of software systems.*	**Richard Hodgkinson UK**	YES
4	*Development of standards and technical reports for tools and Computer Aided Software/System Engineering (CASE) environments*	**D. Lee - Korea**	
6	*Development of standards and technical reports for software products evaluation and metrics for software products & processes.*	**Motoei Azuma - Japan)**	
7	*Development of standards and technical reports on Life Cycle Management.*	**Anatol Kark - Canada**	YES
10	*Development of standards and guidelines covering methods, practices and application of process assessment in software product procurement, development, delivery, operation, evolution and related service support.*	**Alec Dorling - UK**	YES
19	*The development of standards to enable the integration of business and IT system specifications, and to facilitate the provision of software and system engineering tools and techniques to implement information systems.*	**Jean Bérubé - Canada**	YES
20	*Software and Systems Bodies of Knowledge and Professionalization.*	**Juan Garbajosa - Spain**	SWEBOK
21	*Software Asset Management Process standards development.*	**David Bicket - UK**	YES
22	*Software and Systems Engineering Consolidated Vocabulary.*	**Annette Reilly - USA (2004 - N3062)**	
23	*Systems Quality Management.*	**Shigenobu Katoh - Japan**	
24	*Software Life Cycles for Very Small Enterprises.*	**Tanin Uthayanaka Thailand**	
25	*IT Operations.*	**Jenny Dugmore - UK**	
26	*Software Testing*	**Dr Stuart Reid - UK**	
42	*Architecture*	**Johan H Bendz - Sweden**	
1A	*IT Governance*	**Alison Holt - New Zealand**	
JWG with ISO/TC54	*Common Industry Format for Usability*	**M.F. Theofanos - USA**	

Two Specials Working Groups (SWG) have been created to handle Business Planning and Architecture:

SWG1	***Business Planning Group (Resolution 683)***
Convener	***François Coallier - SC7 Chairman***
Scope:	1. Support the Chair in the elaboration of directions and policies. 2. Assist the chair in the prompt resolution of issues. 3. Propose update to the JTC1/SC7 business plans and procedures. 4. Propose updates to JTC1/SC7 communications function. 5. Prepare procedures and organization responsibilities to ensure an integrated strategy planning, business planning, and management systems for JTC1/SC7.
Members:	• Mr Anukul Tamprasirt (Thailand) • Dr. Annette Reilly (USA) • Mr Jean Bérubé (Canada) • Dr. Y. Yamamoto (Japan) • Dr. Dan Lee (Korea) • Prof. Alastair Walker (South Africa) • Mr. Risto Nevalainen (Finland) • Mr. Antonio Coletta (Italy)

SWG5	***Architecture Management***
Chairman ***Convener***	***François Coallier - SC7 Chairman*** ***Cheryl Jones – USA***
Scope:	1. Elaborate and Maintain JTC1/SC7 Architecture standing documents 2. Provide counsel to JTC1/SC7 Conveners and editors on standards architecture and vocabulary consistency issues 3. Recommend to JTC1/SC7 standard maintenance strategies 4. Report on its activities to the JTC1/SC7 BPG and AG 5. Include in its scope the IEEE systems and software engineering standards collection
Members:	• Kiyoshi Ogawa (Japan) • Garry Roedler (USA) • Bud Lawson (Sweden, INCOSE) • Terry Rout (Australia) • James Moore (IEEE-CS) • Peter Fagg (UK) • Serge Oligny (Canada) • Dennis Ravenelle (itSMF) • Max Shanahan (ISACA)

An Advisory Groups (AG) has been created to handle Life Cycle Process Harmonization:

Life Cycle Process Harmonization Advisory Group (LCPHAG)

1093	JTC 1/SC 7 instructs its Secretariat to establish a Life Cycle Process Harmonization Advisory Group (LCPHAG) to perform an architectural analysis and recommended framework for an integrated set of process standards in software and IT systems domains. The LCPAAG shall work in cooperation with SWG5. The Advisory Group shall make recommendations regarding the future content, structure and relationships of ISO/IEC 12207, ISO/IEC 15288 and their guides as well as other related SC 7 documents. LCPAAG should also consider the issues related to a possible process repository and associated issue by electronic publishing of the SC 7 Standards. The Group shall consult with and contain members from SWG 5, WG 10, WG 25, IEEE CS, INCOSE, and other interested organizations. The LCPHAG shall carefully consider and respond to the recommendation of the WG 7 Study Group presented in the document WG 7 N1103 "Strategy for Integration Phase of the Harmonization Project" and liaise with other stakeholders within ISO and IEC. A preliminary project plan is contained in SC 7 Nxxxx. A detailed plan for the first year will be presented at the Interim meeting in 2008. Contributions to the study group are invited from National Bodies and Liaison organizations that choose to contribute. The Advisory Group shall be co-chaired by Cheryl Jones (SWG 5) and Terry Doran (USA). Its membership shall consist of the Editorial Team for the current revisions of 12207/15288/24748) i.e. • James Moore (IEEE) • Garry Roedler (USA) • Dick Kitterman (INCOSE) • Dennis Ahern (USA) • Johan Amsenga (ZAF) as well as: • Robert Kormanak (Slovakia) • Noritoshi Murakami (Japan) • Matthew Young (AUS) • X2 (WG 10) • Melanie Cheong (South Africa, WG 25 subject to agreement) • Jonathan Earthy (UK, TC 159/SC4) Additional members can be added until 2008-07-15. Nominations must be sent to the Chair of the Advisory Group. The Advisory Group shall submit a final report by 2011-03-31 at which point it will be disbanded. The Advisory Group shall submit interim reports to SC 7 at each SC 7 Plenary meeting. The group is authorized to conduct its work by correspondence, telephone conferencing, web conferencing and meetings.	WG7

Two Liaison Groups are currently active:

SLG 1: Liaison to ISO TC22 SC3 WG16

1104	JTC 1/SC 7 establishes a Special Liaison Group (SLG1) to support its liaison officers to ISO TC22 SC3 WG16 with the mandate to: 1. advise its liaison officers on approach towards the liaison 2. assist its liaison officers in the prompt resolution of issues 3. assist in the review and of relevant ISO 26262 WDs and balloting documents relevant to SC7 program of work 4. encourage and establish where possible alignment of ISO 26262 processes with SC7 system and software lifecycle processes and process capability assessment to provide consistent standards 5. issue at least once a year liaison statement(s) and/or reports to ISO TC22 SC3 WG16 The JTC1/SC7 Special Liaison Group (SLG1) will be chaired and convened by Mr. Kiyoshi Ogawa (Japan). The SLG 1 membership shall be composed of: • Mr Kiyoshi Ogawa (Japan) • Mr. Antonio Coletta (Italy) • Prof Bernd Hindel (Germany) • Mr Alec Dorling (UK) • Mr Fabrizzio Fabrini (Italy) • Risto Nevalainen (Finland)	WG10

SLG 2: Liaison to JTC 1 SC27

1105	JTC 1/SC 7 establishes a Special Liaison Group (SLG2) to support its liaison officers to JTC 1 SC27 with the mandate to: 1. advise its liaison officers on approach towards the liaison 2. assist its liaison officers in the prompt resolution of issues 3. assist in the review and of relevant SC27 WDs and balloting documents relevant to SC7 program of work 4. respond, if required, to SC27 liaison statements and reports 5. issue at least once a year liaison statement(s) and/or reports to JTC 1/SC 27 6. encourage and assist JTC 1/SC27 to maintain compatibility between their standards and JTC 1/SC7 standards The JTC1/SC7 Special Liaison Group (SLG2) will be chaired and convened by Mr. Satoshi Fushimi (Japan). The SLG 2 membership shall be composed of: • Mr Jim Moore (USA) • Mr Johann Amsenga (South Africa)	BPG

The following Study Groups are currently active:

Study Group on Revision of ISO/IEC 15504

1092	JTC1/SC7 instructs its Secretariat to establish a study group on the revision of ISO/IEC 15504. The terms of reference of this study group are to: • Review and define the requirements for the revision of ISO/IEC 15504; • Address the optimal restructuring required to encompass the existing and developing parts of the Standard in a coherent framework. • Develop recommendations for the development and recognition of Process Assessment Models based on ISO/IEC 15504. • Address the actions required to ensure harmonization of ISO/IEC 15504 with other relevant SC7 Standards, and related standardization efforts in other Committees. The Study Group is to be chaired by Terry Rout (Australia) as overall Project Editor of ISO/IEC 15504, with Tom McBride (Australia) as deputy chair. Other members of the Study Group will include: • Alec Dorling (UK) • Berndt Hindel (Germany) • Anotnio Coletta (Italy) • Jonathan Earthy (UK) • Michel Picard (Luxembourg) • David D. Walden (INCOSE) • Clenio Figueiredo Salviano (Brazil) • Yasuko Okazaki (Japan) • Yutaka Fukuchi (Japan) • Alan Cutler (UK) • Risto Nevalainen (Finland) • Ho-Won Jung (Korea) • Dr. Kiyoshi Ogawa (Japan) The Study Group will include nominated members from WG7, WG24 and WG25; other Working Groups and Liaison Organizations are invited to nominate members. Additional members can be added until 2008-07-31; nominations must be sent to the SC7 Secretariat. The study group will operate using virtual communications with a meeting to be convened during the interim meeting in China, November 2008 co-located with WG10.	WG10

Study group to investigate the possibility of new standards or guidance in the area of system integration

1094	JTC 1/SC7 instructs its Secretariat to establish a study group to investigate the possibility of new standards or guidance in the area of system integration. The study group shall make recommendations on scope and direction for SC7 activities in this area of interest. The study group shall take into consideration: • Whether existing and upcoming SC7 standards exist and adequately address this area of interest. • The availability and coverage of other standards from other relevant bodies. • The perceived need for standards in this area. The study group will be chaired by Dennis Ravenelle (itSMF International). Study group membership includes: • Cheryl Jones (SWG5) • Dick Kitterman (INCOSE) • Stewart Arnold (UK) • Matthew Young (Australia) • Serge Oligny (Canada) • JG (Spain) Membership and contributions are solicited from all Working Groups, National Bodies, and liaison organizations. Additional members can be added until 2008-08-30. Nominations should be sent to the SC7 Secretariat. The study group will co-locate with SWG5 and WG7. The group is authorized to conduct its work by correspondence, telephone conferencing, web conferencing and meetings.	SWG5

Study group to investigate the possibility of new standards or guidance in the area of Agile Development

1095	JTC 1/SC7 instructs its Secretariat to establish a study group to investigate the possibility of new standards or guidance in the area of Agile Development. The study group shall make recommendations on scope and direction for SC7 activities in this area of interest. The study group shall take into consideration: • Whether existing and upcoming SC7 standards exist and adequately address this area of interest. • The availability and coverage of other standards from other relevant bodies. • The perceived need for standards in this area. JTC 1/SC7 would appreciate if the IEEE CS could contribute its draft standard 1648 to the Study Group. The study group will be chaired by Ian Hirst (AU). Study group membership includes: • Max Shanahan (ISACA) • Peter Fagg (UK) • Jim Moore (IEEE CS) • Juan Garbajosa (Spain) • Mika Johansson (Finland)	SWG5

	Membership and contributions are solicited from all Working Groups, National Bodies, and liaison organizations. Additional members can be added until 2008-08-30. Nominations should be sent to the SC7 Secretariat. The study group will co-locate with SWG5 and WG7. The group is authorized to conduct its work by correspondence, telephone conferencing, web conferencing and meetings.	

Study group to determine the justification for, priority of, and schedule for, the development of standards and Technical Reports about the Governance of IT

1096	JTC 1/SC7 instructs its Secretariat to establish a study group to determine the justification for, priority of, and schedule for, the development of standards and Technical Reports about the Governance of IT. The Study Group shall take into consideration: • ISO/IEC 38500 • TMB 31000 • ISO 9000 serie. • ISO/IEC 27000 serie • ISO 14000 • ISO/IEC 15288 • ISO/IEC 15504 serie • ISO/IEC 20000 • AS/NZ 4360 • ITIL • COBIT, ValIT There are several organizations that are working in this area that should be investigated for possible liaisons: • ISACA/ ITGI • OECD • OCEG • TC 236 • itSMFI • COSO As well as other interested SCs within JTC1 – specifically SC 27. The study group will make recommendations the creation of new standards or TR. Its membership will consist of: • Alison Holt (New Zealand) • Brian Cusack (New Zealand) • Christophe Feltus (Luxembourg) • K.T. Hwang (Korea) • Erik Johnson (US) • Enrico Viola (Italy) • Pieter Neethling (South Africa) • Mark Toomey (Australia) • Yasuhiro Kikushima (Japan) Additional members can be added until 2008-06-15. Nominations must be sent to the	WG1A

	SC7 secretariat. The study group will be chaired by Miles Shepherd (UK) and will submit a report by Nov 2008.	

Study group to start the investigation into the possibility of additional standards or guidance in the area of IT Governance for digital forensics

1097	JTC1/SC7 instructs its Secretariat to establish a study group to start the investigation into the possibility of additional standards or guidance in the area of IT governance for digital forensics ("the management of digital data for courtroom evidence").As part of the scope of this study group, the direction of future activities will be determined to see if its scope is contained in the area of software and systems engineering; noting that target is the principles and policies of forensic activity. The study group arises from an existing requirement in New Zealand. The study group shall liaise closely with the SC27 study group addressing digital forensics, which is understood to be focusing on management and process elements. The Study Group shall take into consideration: • ISO/IEC15504 • ISO/IEC15489 • ISO/IEC 17021 • ISO/IEC 17025 • ISO/IEC 20000 • ISO 27000/1/2/3 • ISO/IEC 31000 • ISO/IEC 32000 • ISO/IEC 38500 • ISO 9000 • Australian HB 171-2 and other relevant national developments in the area of corporate governance for digital forensics. There are several organizations that are working in this area that should be investigated for possible liaisons: • ISACA and ITGI • OECD • IEEE • OCEG • NIJ • NIST • IOCE • SC27 • Other interested SCs within JTC1. The study group will make recommendations on changes to existing standards/guidance and/or the creation of new standards or TR. Its membership will consist of: • Pieter Neethling (South Africa) • Alison Holt (New Zealand) • Alex Brooks (Australia) • Erik Johnson (United States) • Robert Stroud (United States) • Sushil Chatterji (ISACA/ITGI)	WG1A

	• Brian Cusack (New Zealand) • Christophe Feltus (Luxembourg) • K.T. Hwang (Korea) • Mark Toomey (Australia) • Antoni Bosch-Pujol (Spain) • Rory O'Connor (Ireland) • Melanie Cheong (South Africa) • Yasuhiro Kikushima (Japan) Additional members can be added until 2008-09-15. Nominations must be sent to the SC7 secretariat. The study group will be chaired by Brian Cusack (New Zealand) and co-chaired by Pieter Neethling (South Africa) and will submit a full report by 2009 May Plenary in India. The study group will meet concurrently with WG 1A.	

Study group on the Application of Governance Principles to IT operations

1098	JTC1/SC7 instructs its Secretariat to establish a study group: to research the need and the opportunity for standardisation in the area of the Governance in IT operations; and if a need is established to draft a new work item for consideration with its report. Its membership will consist of : • Mark Toomey (Australia) • KT. Hwang (Korea) • Alison Holt (New Zealand) • Myles Ward (New Zealand) • Max Shanahan (Australia) • Miles Shepherd (UK) • Mark Taillefert (Canada) • Yasuhiro Kikushima (Japan) WG25 liaisons will be added. Additional members can be added until 2008, September 30. Nominations must be sent to the SC7 secretariat. This study group will be co-chaired by John Graham (Australia) and Wim Van Grembergen (Belgium). The study group will submit a report in time for the 2009 SC7 Plenary.	WG1A

Study group on service and systems management standards and their integration into SC7

1099	JTC1/SC7 instruct its Secretariat to establishes a study group on service and systems management standards and their integration into SC7. The study group objectives are to clarify: • The scope, objectives and target market of service and systems management standards • The relationship between service and systems management standards and other standards within SC7 with an important service component • The relationship between service management standards and methods and	WG25

frameworks commonly used in conjunction with service management standards
- The relationship between established service management standards such as ISO/IEC 20000 (Parts 1 and 2) to management system standards such as the ISO 9000 and ISO/IEC 27000 series.
- The market and its needs for service and systems management standards and combinations of standards. This to be done by review of industry data, market research and consultation with industry experts.
- The need for a new standard (as proposed in WG 7 N1123) for a Technical Report covering Integrated Lifecycle Management.

The Study group should have representation from the widest range of interests including other SC, TCs, liaison groups, trade bodies and users of standards.

Output will include graphical representation showing the relationship between common elements of standards of interest to the service management industry.

Input will include, but will not be not limited to:

- SWG5 Plans for a survey on SC7's standards
- SC7 and JTC1 IT (ICT) Governance studies
- The Interim Report from the Study Group on the relationship of
- Life Cycle Processes and IT Services, ISO/IEC JTC1/SC7 /N3860

The Study Group Report for the application of ISO 9001 to the full scope of SC7 standards (Updated) SC7/ WG7 N1123, WG 7 N1103 Strategy for Integration Phase of the Harmonization Project Study Group Report.The study group will be chaired by Katoh Shigenobu, (subject to confirmation by the Japanese National Body) and co-chaired by Jenny Dugmore (UK).

Its membership will consist of :

- Alec Dorling (WG-21)
- Alison Holt (WG-1A)
- Anita Myrberg (Sweden)
- Colin Rudd (itSMF)
- Dave Bickett (WG-21)
- John Graham (Australia)
- Luis Rosa (Spain)
- Lynda Cooper (UK)
- Marc Taillefer (Canada)
- Olivier Martin (France)
- Rainer Schmidt (Germany)
- Pierre Thory (France)
- Bill Powell (USA)
- Cheryl Jones (SWG5)
- Terry Doran (IEEE)
- Antonio Coletta (Italy)
- Jyrki Lahnalahti (Finland)
- Rogert Kormanak (Slovakia)

Membership will be open until 17th of July 2008. Membership requests must be sent to the SC7 Secretariat. The study group shall submit an interim report by 2008-09-30 for the interim meeting of SC 7 working groups and a final report by 2009-04-15 for the plenary meeting of SC 7. The group is authorized to conduct its work by correspondence, telephone conferencing, web conferencing and meetings.

The Study Group will meet at the Interim meetings in Nanning November 2008.

ANNEX B: *Overview of the SC 7 collection*