



ISO/IEC JTC1/SC7
Software and Systems Engineering
Secretariat: CANADA (SCC)

ISO/IEC JTC1/SC7 /N3113

2004-09-27

Document Type Management Report And Business Plan

Title ISO/IEC JTC 1/SC7 Management Report And Business Plan for the JTC 1 Plenary, Berlin, 2004-10-25 to 29

Source JTC 1/SC7 Chairman

Project

Status Final

Reference

Action ID FYI or ACT

Due Date

Distribution JTC 1 Secretariat, SC7 AG

No. of Pages 23

Note Sent to the JTC 1 Secretariat.

This document has been put together with material presented and/or discussed at the SC7 Brisbane Plenary and also material published on the SC7 Web site.

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

Address reply to: ISO/IEC JTC1/SC7 Secretariat
École de technologie supérieure – Département de génie électrique
1100 Notre Dame Ouest, Montréal, Québec Canada H3C 1K3
secretariat@jtc1-sc7.org

www.jtc1-sc7.org

MANAGEMENT REPORT AND BUSINESS PLAN FOR

ISO / IEC JTC 1/SC7

SOFTWARE ENGINEERING

PERIOD COVERED: January 2004 -December 2004

SUBMITTED BY: François Coallier, Chairman
Witold Suryn, Secretariat

TABLE OF CONTENT

TABLE OF CONTENT	2
1.0 MANAGEMENT SUMMARY	3
1.1 JTC 1/SC7 STATEMENT OF SCOPE, VISION, PURPOSE AND CORE VALUES	3
Scope.....	3
Vision.....	3
Purpose	3
Area of work	4
Core Values.....	4
1.2 PROJECT REPORT	5
1.3 COOPERATION AND COMPETITION	6
Internal	6
External.....	6
2.0 PERIOD REVIEW	8
2.1 MARKET REQUIREMENTS	8
Overall Trend.....	8
SC7 Marketplace.....	9
2.2 ACHIEVEMENTS	11
2.3 RESOURCES	11
3.0 FOCUS NEXT WORK PERIOD	12
DELIVERABLES:	12
STRATEGIES	13
As a result of this analysis, SC7 has initiated a series of study periods documented in annex A.	14
RISKS	15
OPPORTUNITIES	16
Plenary Attendance	16
New projects	17
WORK PROGRAM PRIORITIES	17
ANNEX A: SC7 ORGANIZATION	18

1.0 MANAGEMENT SUMMARY

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

Scope

The following “Terms Of Reference” were approved by JTC1 at its Plenary in Paris and endorsed by SC7 at its 1997 Plenary in Walnut Creek:

“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 system 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 since then, is to:

- Provide quality software and system 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 system 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

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

- Software and system engineering processes: in partnership with the International Council of Systems Engineers (INCOSE) and other parties, we are developing and are improving on standards which describe good software and system engineering practices, as well as standards to consistently assess organisational software and system engineering practices against a given benchmark;
- Software system products: we are developing and are improving on standards which allow purchasers 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;
- Enterprise architecture: in partnership with the Object Management Group ([OMG](#)), we are developing and are 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.
- Software engineering environment: we are developing and are improving on standards which make it easier to use software engineering environments and to re-use and re-deploy the data contained in them.
- Software engineering body of knowledge: we are working with the Institute of Electrical and Electronics Engineers Computer Society ([IEEE-CS](#)) on their guide to the Software Engineering Body of Knowledge (SWEBOK), with the objective to publish it as a ISO/IEC Technical Report.
- Management of software assets: we are working on the development of a standard that will describe the basic requirements of a software asset management environment.

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

1.2 PROJECT REPORT

As of 2003-09-27, there were 22 active projects / sub-projects in JTC 1/SC7 (see <http://www.jtc1-sc7.org/>).

These are handled by 12 active working groups (See annex A)

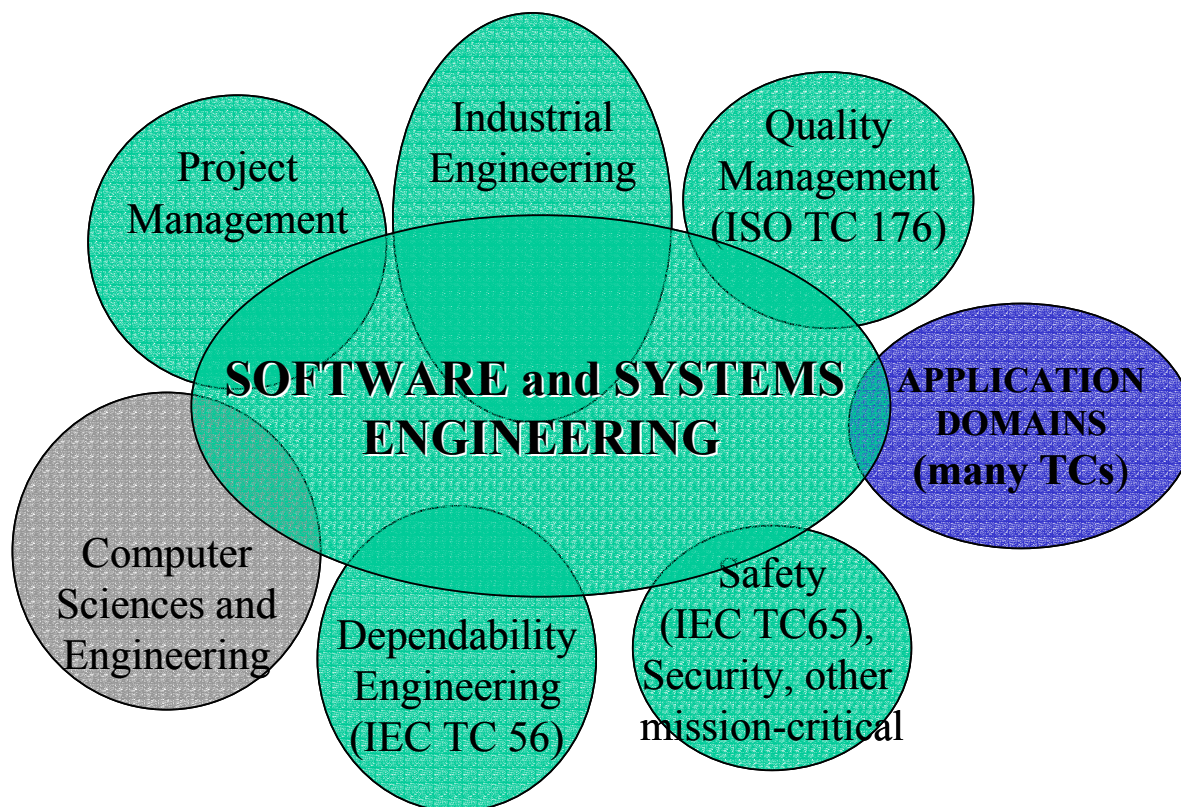
The following standards have been published between the last JTC 1 Plenary and 2004-09-27:

- ISO/IEC TR 9126-4:2004: Software Engineering - Product quality - Part 4: Quality In Use Metrics
- ISO/IEC TR 14143-5:2004: Information technology -- Software measurement -- Functional size measurement -- Part 5: Determination of functional domains for use with functional size measurement
- ISO/IEC 90003:2004 – Software engineering -- Guidelines for the application of ISO 9001:2000 to computer software
- ISO/IEC 15504-2 - Software engineering -- Process assessment -- Part 2: Performing an assessment
- ISO/IEC 15504-3- Information technology -- Process assessment -- Part 3: Guidance on performing an assessment
- ISO/IEC 18019 - Software and system engineering -- Guidelines for the design and preparation of user documentation for application software

1.3 COOPERATION AND COMPETITION

Internal

JTC 1 has recognized that its SC7 is a “process focused” SC. The diagram that follows illustrate how SC7 scope interact with other SC’s and disciplines:



All those overlaps have the potential to generate liaison challenges.

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 program of work overlap issues with ISO/TC 176 have been resolved through liaison and the transfer of the responsibility for the maintenance of ISO 9000-3 to JTC 1/SC7.

External

SC7 has A liaisons with:

- QuEST Forum
- ITU-T
- INCOSE
- OMG
- IEEE Computer Society

Documents from the IEEE Computer Society, the OMG and the ITU-T are currently 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.
- Current joint projects:
 - SWEBOK
 - Risk Management
 - Systems Engineering
 - Vocabulary

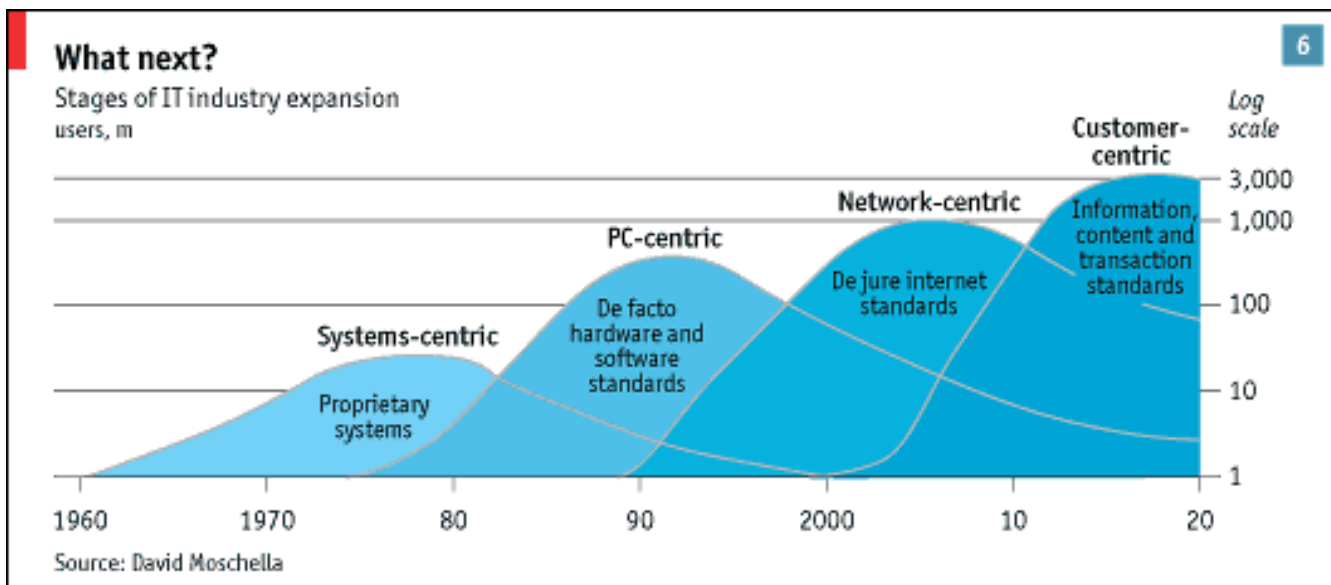
2.0 PERIOD REVIEW

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 a small elite of researchers to a mass market phenomena. 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 machine to machine (M2M) communications and 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.
 - Software is more than classical (procedural or OO) high level language programs.
 - In some cases, the difference between software and data is blurring.
- Markets
 - A lot of software is brought, as a product or a service – not developed
 - Open source software is taking hold in many markets
 - 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 and maintenance services
- 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 and Systems Houses

Those who supply the software and system 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, encouraging fair competition, allowing re-use of existing software and generally reduce risks and uncertainty.

ODP and associated standards provide enterprise architects and system developer's 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 which is embedded within systems that are themselves embedded in a product. It might be a consumer product such as a cell phone or a car, 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.

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.

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.

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.

2.2 ACHIEVEMENTS

See sections 1.2 and 3.2

2.3 RESOURCES

SC7 recognize that resources are an important factor 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.

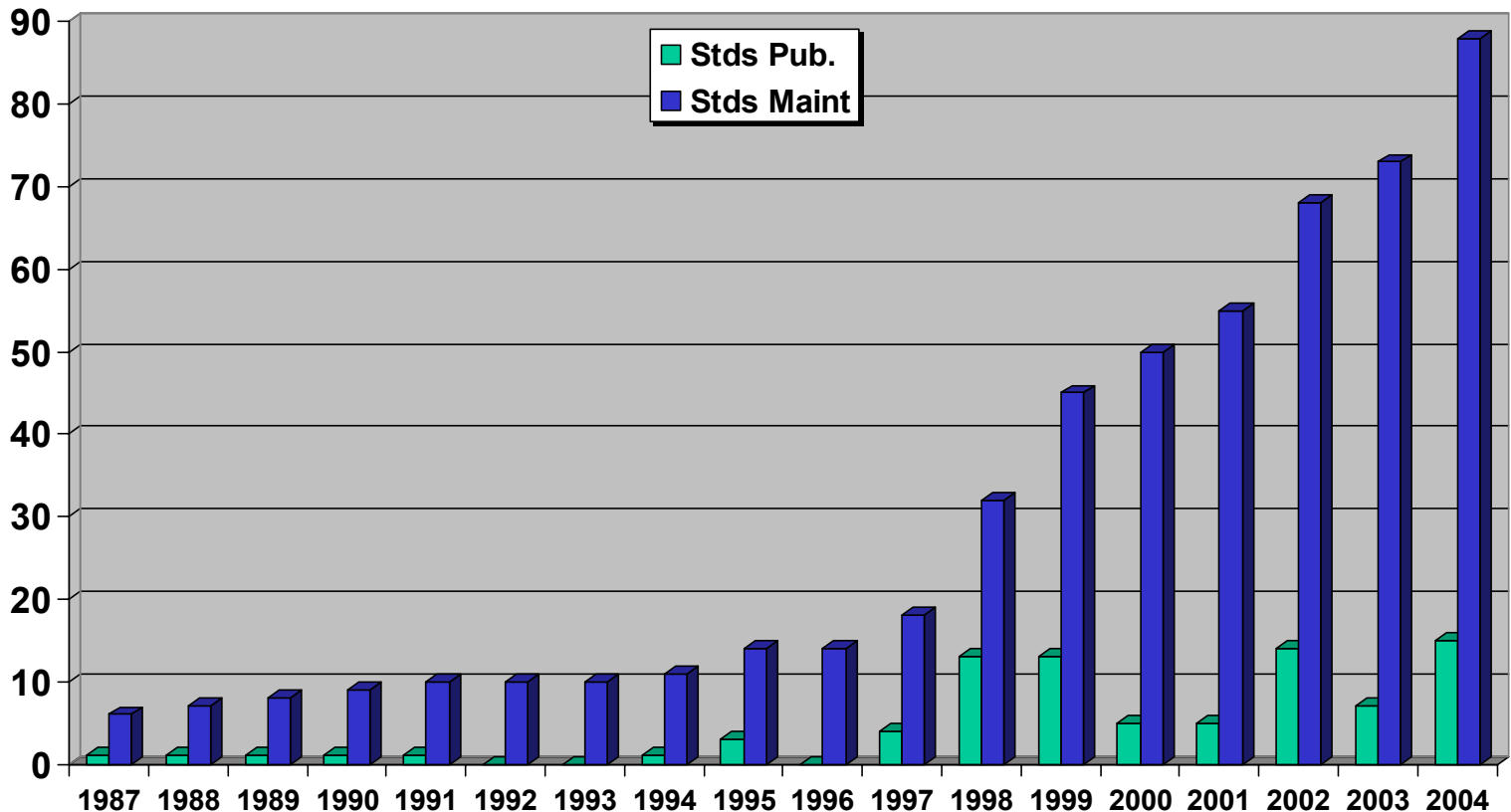
3.0 FOCUS NEXT WORK PERIOD

DELIVERABLES:

The following projects are near completion:

- 15476: Software Engineering - CDIF Semantic Metamodel - Parts 3,4,5
- FDIS15909: Software Engineering - High-level Petri Nets - Concepts, Definitions and Graphical Notation
- DIS 19501-1 – UML PAS
- DTR 19759 – SWEBOK
- DIS 24570 NESMA PAS
- ISO/IEC FCD 9127 Software engineering -- User documentation and cover information for consumer software packages
- ISO/IEC DTR 9294 Information technology -- Guidelines for the management of software documentation
- ISO/IEC FDIS 15504-4 Software Engineering -- Process Assessment -- Part 4: Guidance on use for Process Improvement and Process Capability Determination
- ISO/IEC FCD 15909-1 Software and systems engineering -- High-level Petri Nets -- Part 1: Concepts, Definitions and Graphical Notation
- ISO/IEC FCD 15940 Information Technology -- Software Engineering -- Environment Services

Standard production by SC7 is presently looking as follows:



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 6 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 Alain Faisandier (France)
- Mr Doug Thiele (Australia)
- Mr Michael Gayle (USA)
- Mr Jean Bérubé (Canada)
- Dr. Y. Yamamoto (Japan)
- Dr. Dan Lee (Korea)
- Prof. Alastair Walker (South Africa)

Since the 1997, Walnut Creek Plenary, SC7 will has a one day management workshops prior to all Plenaries. This was carried out at the last Plenary in Montréal.

Full day business planning activities are now held 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 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

SC7 current products set strengths and opportunities can be summarised in the following table:

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none">• Life-Cycle Processes• Product Metrics• Process Metrics• Formalisms• Software Engineering Body of Knowledge• Tools environment	<ul style="list-style-type: none">• 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 annex A.

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:

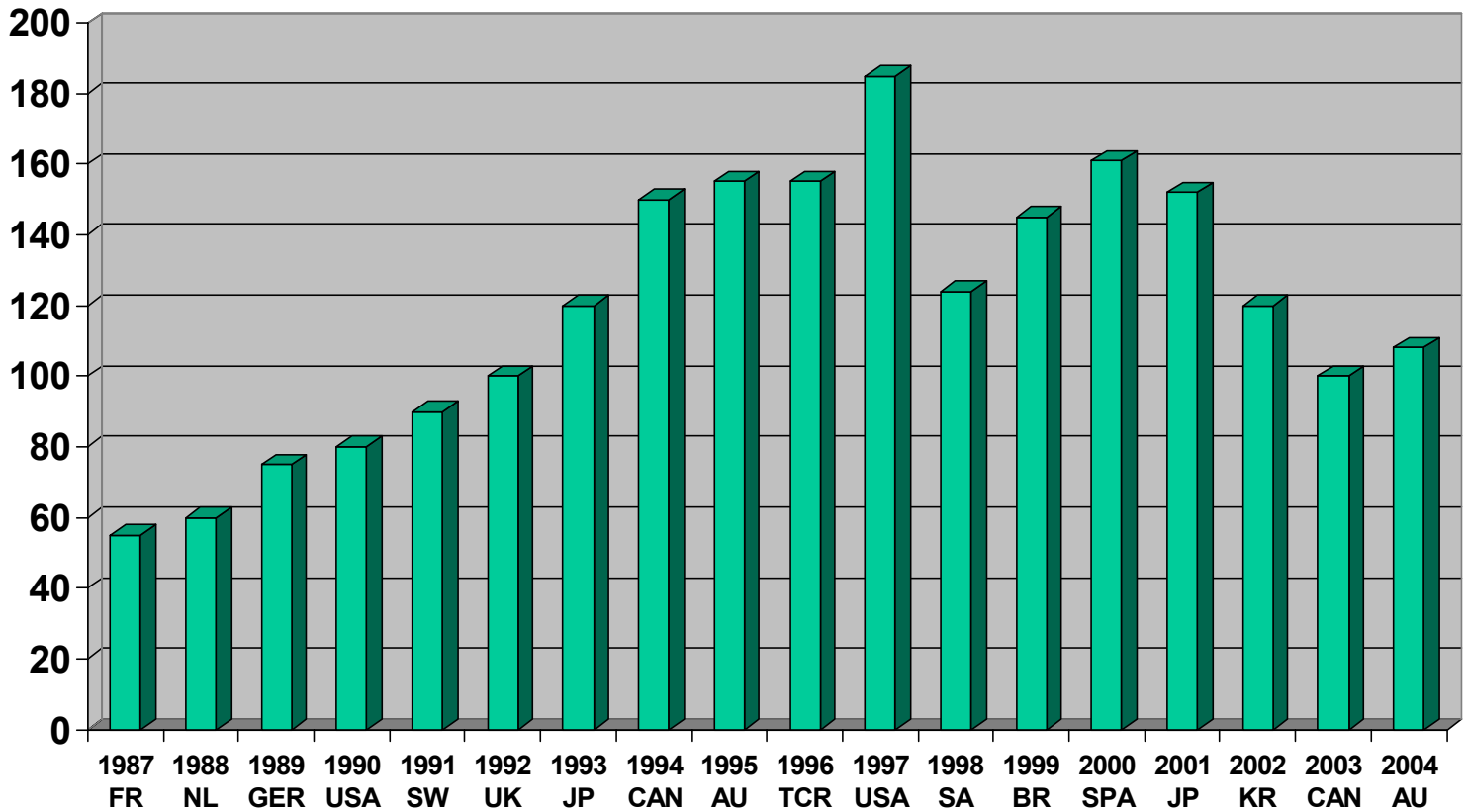
- SWG1 on business planning
- SWG5 on architecture management

See Annex A for further details.

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. Host for future plenary meetings have been identify for the next 3 years. The growing importance of software based product and services in our post-industrial society 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 period:

- FDIS15909: Software Engineering - High-level Petri Nets - Concepts, Definitions and Graphical Notation
- 15476: Software Engineering - CDIF Semantic Metamodel - Parts 3,4,5
- Information Technology – Requirements Engineering Tool (Study group – resolution 664)
- Systems and Software Engineering - Vocabulary
- ISO/IEC 15288 and ISO/IEC 12207 harmonization.
- Information Technology – Software Measurement – Functional size measurement – Part 6: Guide for use of ISO/IEC 14143 series and related international Standards.
- Revision of Software Engineering – Software Life Cycle Processes—Maintenance ISO/IEC 14764
- ISO/IEC 16085 - Software Engineering – Software Life Cycle Processes—Risk Management
- revision of TR14471-1999 Software Engineering - Guidelines for the adoption of CASE tools.
- revision of IS14102-1995 Information Technology - Guideline for the evaluation and selection of CASE Tools

The following new projects were under consideration at the last plenary in Brisbane:

- Transfer of IEC/TC56 Project 61720: Guide to techniques and tools for achieving confidence in software (Resolution 675)
- Revision and fast track of IEEE 1220 (Resolution 676)
- Revision and fast track of EIA 632 (Resolution 676)
- Revision of ISO/IEC 14102 (Resolution 677)
- Revision of ISO/IEC 14143-1:1998 (Resolution 678)
- Maintenance project for the use of ITU-T Rec. X.901-3|ISO/IEC 10746 Parts 1-3, Reference Model for Open Distributed Processing (Resolution 679)
- Fast Track of IEEE Std 2001
- Fast Track of ANSI NCITS 354-2001
- Fast Track of BS 15000

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.

ANNEX A: SC7 ORGANIZATION

The following WG are presently active:

WG	SCOPE	CONVENER	WEB SITE
2	<i>Development of standards for the <u>documentation of software systems</u>.</i>	Richard Hodgkinson UK (2004 - N3062)	YES
4	<i>Development of standards and technical reports for <u>tools and Computer Aided Software/System Engineering (CASE) environments</u></i>	D. Lee - Korea (1999 - N2178)	
6	<i>Development of standards and technical reports for <u>software products evaluation</u> and <u>metrics</u> for software products & processes.</i>	Motoei Azuma - Japan (2000 - N2335)	
7	<i>Development of standards and technical reports on <u>Life Cycle Management</u>.</i>	Doug Thiele - Australia (2002 - N2xxx)	YES
9	<i>Preparation of standards, technical reports, and guidance documents related to <u>systems integrity</u> at the system and system interface level. In this context, system integrity is defined as ensuring the containment of risk or confining the risk exposure.</i>	Paul Croll - US (2004 - N)	
10	<i>Development of standards and guidelines covering methods, practices and application of <u>process assessment</u> in software product procurement, development, delivery, operation, evolution and related service support.</i>	Alec Dorling - UK (2000 - N2335)	YES
12	<i>To establish a set of practical standards for <u>functional size measurement</u>. Functional size measurement is a general term for methods of sizing software from an external viewpoint and encompasses methods such as Function Point Analysis.</i>	Marie O'Neill - Ireland (2004 - N3062)	
19	<i>Includes <u>modelling languages, metadata, ODP framework and ODP components</u> related standards and project, as well as provide the focal point to facilitate collaborative work with OMG and ITU-T, and other organizations if required (IEEE).</i>	Bryan Wood - UK	YES
20	<i>Standardization of the <u>Software Engineering Body of Knowledge</u></i>	Juan Garbajosa - Spain	SWEBOK
21	<i><u>Software Asset Management Process</u> standards development.</i>	Roger Wittlock - Sweden (2004 - N3062)	YES
22	<i>Software and Systems Engineering Consolidated Vocabulary.</i>	David Kitson - USA (2004 - N3062)	

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

SWG1	<i>Business Planning Group (Resolution 683)</i>
Convener	<i>François Coallier - SC7 Chairman</i>
Scope:	<ol style="list-style-type: none"> 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:	<ul style="list-style-type: none"> • Mr Alain Faisandier (France) • Mr Doug Thiele (Australia) • Mr Michael Gayle (USA) • Mr Jean Bérubé (Canada) • Dr. Y. Yamamoto (Japan) • Dr. Dan Lee (Korea) • Prof. Alastair Walker (South Africa) • Mr. Risto Nevalainen (Finland)

SWG5	<i>Architecture Management (Resolution 684)</i>
Chairman Convener	<i>François Coallier - SC7 Chairman Cheryl Jones - USA</i>
Scope:	<ol style="list-style-type: none"> 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:	<ul style="list-style-type: none"> • Anatol Kark (Canada) • Jean-Philippe Lerat (France) • Shigenobu Kato (Japan)

	<ul style="list-style-type: none"> • David Kitson (USA) • Bud Lawson (Sweden) • Terry Rout (Australia) • James Moore (IEEE-CS)
--	--

The following Study Groups are currently active:

Study Group on User Documentation Standards.	
Chair	Professor Yamamoto (Japan)
Terms of Reference:	<p>The terms of reference for the group are to show the relationships between the existing and potential International Standards on software user documentation. The structure would be related to a potential new business plan for WG2 and will take into account liaison with the IEEE Computer Society.</p> <p>The group will submit its report by 2005-02-15.</p> <p>Professor Yamamoto (Japan) shall lead the group.</p> <p>The study group will meet electronically.</p>
Members:	<ul style="list-style-type: none"> • Richard Hodgkinson (UK), • Annette Reilly (USA), • Tom Kurihara (USA), • Phil Cohen (Australia), • Annette Calkin (Germany), • Alastair Walker (South Africa), • Professor Sooyong Park (Korea), • James Moore (IEEE)

Study Group on System Life Cycle Process Assessment Model
--

Chair	Stuart Arnold (UK)
Terms of Reference:	<p>The terms of reference of this study group shall be to:</p> <ul style="list-style-type: none"> • Make recommendations regarding a project to create an International Standard that defines a System Life Cycle Process Assessment Model for use in ISO/IEC 15504-compliant assessments. <p>The Study Group shall take into consideration:</p> <ul style="list-style-type: none"> • The software and systems life-cycle harmonization work currently done by WG7 • The UK contribution on Software and Systems Quality Framework (SC7N2845) • The existing 15504 standards and working documents • ISO PAS 18152 - assessment of human-system issues during the life cycle of a system. <p>This study group will be chaired by Stuart Arnold (UK) and will submit a report to SC7 by 2004-02-15.</p> <p>The study group meetings will be co-located with WG7 and WG10.</p>
Members:	<ul style="list-style-type: none"> • Alec Dorling (UK), • Jean-Philippe Lerat (France), • Harold Lawson (Sweden), • Kiyoshi Ogawa (Japan), • Marcelo S.P.Pessoa (Brazil), • Garry Roedler (US), • Matthew Young (Australia), • Alastair Walker (South Africa)

Chair	Mr. Bryan Wood (UK)
Terms of Reference:	<p>The terms of reference of this study group shall be to:</p> <ul style="list-style-type: none"> • Gather requirements for the revision of ITU-T Rec. X.901-4 ISO/IEC 10746 Reference Model of Open Distributed Processing. <p>The study will last two years. An interim report will be given at the Brisbane 2004 plenary and a recommendation to initiate a project or not on that topic at the following plenary.</p> <p>The Study Group will liaise with ITU-T SG17 and OMG. It is understood that the study group will need to be re-created at the Brisbane Plenary.</p>
Members:	<ul style="list-style-type: none"> • Mr. Jean Bérubé Canada/SC32 • Mr. Tom Rutt US • Mr. Akira Tanaka Japan • Mr. Jonathan Billington Australia • Mr. Antonio Vallecillo Spain • Mr. Arve Meisingset Norway/ITU-T • Mr. Sandy Tyndale-Biscoe U.K.

Study Group on Non-Developed Components.	
Chair	Cheryl Jones (USA)
Terms of Reference:	<p>The terms of reference of this study group shall be to Investigate the possibility of additional standards or guidance in the area of Non-Developed Code, including COTS and Open Source Software (OSS).</p> <p>The study group shall coordinate with WG21, Asset Management. At a minimum, the study group should consider a technical report providing some guidance.</p> <p>The Study Group shall take into consideration:</p> <ul style="list-style-type: none"> • COTS, open source software (OSS), and reuse, with issues related to interoperability, evolution, how non-developed code was developed,

	<p>integration, liability, obsolescence</p> <ul style="list-style-type: none"> • The current standard 12119 on COTS product, along with IEEE standards regarding reuse. • IEEE Std 1571, Software Reuse Processes <p>This study group will be chaired by Cheryl Jones (USA) and will submit a report by 2005-04-15. The IEEE-CS is requested to contribute IEEE Std 1571 for study purposes.</p> <p>The study group meetings will be co-located with WG7.</p>
Members:	<ul style="list-style-type: none"> • ,Susan Burgess (USA) • Gilbert Le Gall (France) • Jonathan Earthy (UK) • Antonia Jeanrenaud (Italy)

Study Group on Architectures	
Chair	Cheryl Jones (USA)
Terms of Reference:	<p>JTC 1/SC7 instructs its Secretariat to establish a study group to:</p> <ul style="list-style-type: none"> • Investigate the possibility of additional standards or guidance in the area of Architectures. • Assess how SC7 standards address architecture and architecture management issues and come with recommendations. <p>The Study Group shall take into consideration:</p> <ul style="list-style-type: none"> • IEEE Std 1471 - IEEE Recommended Practice for Architectural Description of Software Intensive Systems • The ODP standards • Other relevant ISO standards <p>The study group shall make recommendations on changes to existing standards/guidance and/or the creation of new standards or TR.</p> <p>IEEE-CS is requested to contribute IEEE 1471 standard for study purposes.</p> <p>This study group will be chaired by Cheryl Jones and will submit a report by</p>

	<p>2005-04-15.</p> <p>The study group meetings will be co-located with WG7.</p>
Members:	<ul style="list-style-type: none"> • Bud Lawson (Sweden) • Stuart Arnold (UK) • Motoei Azuma (Japan)

Study Group on Revision of ANSI NCITS 354-2001.	
Chair	<i>Ms. Mary Theofanos (USA)</i>
Terms of Reference:	<p>JTC1/SC7 instructs its Secretariat to establish a study group to investigate the possibility of enlarging the scope of ANSI NCITS 354-2001, American National Standards for Information Technology - Common Industry Format for Usability Test Report.</p> <p>The terms of reference of this Study Group is to:</p> <ul style="list-style-type: none"> • study to enlarge the scope as for Common Industry Format for Quality Test Report, • review ANSI NCITS 354-2001, American National Standards for Information Technology - Common Industry Format for Usability Test Report from the view of harmonization with ISO/IEC 25000 (SQuaRE) series documents. <p>Additional members can be added until 2004-06-30. Nominations must be sent to the SC7 secretariat.</p> <p>This study group will be chaired by Ms. Mary Theofanos and will submit a report by 2005-02-15.</p>
Members:	<ul style="list-style-type: none"> • ,Nigel Bevan (UK)

Study Group on Certification.	
Chair	<i>Steve Seidman (IEEE Computer Society)</i>
Terms of	JTC1/SC7 instructs its Secretariat to establish a Study Group to consider the

<p>Reference:</p>	<p>subject of standards and/or technical reports for professional certifications of software engineers. In performing its work, the study group is authorized to request the IEEE Computer Society to contribute study materials related to its Certified Software Development Professional (CSDP) certification.</p> <p>The terms of reference of this Study Group are to consider:</p> <ul style="list-style-type: none"> • A “task analysis”, referenced to ISO/IEC 12207, describing the work activities that software engineers should be qualified to perform. • A “test specification”, referenced to ISO/IEC TR 19759, describing the knowledge that software engineers should master. • Harmonization with any existing ISO standards concerning personnel certification. • Coordinated development with the IEEE Computer Society under the terms of SC7 N2860. • Provisions enabling nations to write culturally appropriate examinations and operate culturally appropriate certification programs. • Provisions providing for “portability” of certifications across national boundaries and mechanisms for mutual recognition. • Provisions respecting the status of individuals recognized by governments as “software engineers” or the equivalent. • The criteria and operation of existing schemes in various nations. <p>This study group will be chaired by Steve Seidman of the IEEE Computer Society. It is requested to present its final report at the 2005 plenary meeting of SC7 and to present an interim report to the meeting of WG20 circa October 2004.</p> <p>The group will submit its report by 2005-02-15.</p> <p>Note: It has been asked if there is a precedent for ISO standards related to personnel certification. A search of the database at www.iso.ch reveals the following:</p> <p>ISO/DIS 9712.2, Non-destructive testing -- Qualification and certification of personnel ISO/FDIS 18436-1, Condition monitoring and diagnostics of machines -- Requirements for training and certification of personnel -- Part 1: Requirements for certifying bodies and the certification process ISO/CD TR 19122, Geographic information / Geomatics -- Qualification and certification of personnel</p>
<p>Members:</p>	<ul style="list-style-type: none"> • ,Ian Hirst (Australia), • TBD (France), • TBD (Russia),

	<ul style="list-style-type: none"> • Jonathan Earthy (UK), • TBD (Japan) • Juan Garbajosa (Spain), • Claude Laporte (Canada)
--	--

Study group on Software Assurance Requirements.	
Chair	James Moore (IEEE-CS)
Terms of Reference:	<p>JTC1/SC7 instructs its Secretariat to establish a Study Group to determine the derived system and software assurance requirements from ISO/IEC 15288, ISO/IEC 12207, and ISO/IEC 15026, and to recommend requirements for the development, modification, adoption, or reference of supporting standards.</p> <p>The Study Group shall be chaired by Mr. James Moore (IEEE-CS)</p> <p>Additional members can be added until 2004-09-15. Nominations must be sent to the SC7 secretariat.</p> <p>The group will submit its report by 2005-02-15.</p>
Members:	<ul style="list-style-type: none"> • Alec Dorling (UK), • Trevor King (UK), • Paul Croll (USA),