ISO/IEC JTC 1 N7217

ISO/IEC JTC 1
Information Technology

Document Type: Business Plan

Document Title: SC 7 Business Plan

Document Source: SC 7 Chairman

Project Number:

Document Status: This document is circulated for review and consideration at the November 2003 JTC 1 Plenary meeting in Singapore.

Action ID: ACT

Due Date:

Distribution:

Medium:

Disk Serial No:

No. of Pages: 25
Document Type: Management Report And Business Plan

Title: ISO/IEC JTC 1/SC7 Management Report And Business Plan for the JTC 1 Plenary, Singapore, 2003-11-17 to 21

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 Montréal 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.

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MANAGEMENT REPORT AND BUSINESS PLAN FOR

ISO / IEC JTC 1/SC7

SOFTWARE ENGINEERING

PERIOD COVERED: January 2003 - December 2003

SUBMITTED BY: François Coallier, Chairman
               Witold Suryń, Secretariat
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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 2003-10-14, there were 28 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 2003-10-14:

- ISO/IEC 15475-2:2002 Information technology -- CDIF transfer format -- Part 2: Syntax SYNTAX.1
- ISO/IEC 15475-3:2002 Information technology -- CDIF transfer format -- Part 3: Encoding ENCODING.1
- ISO/IEC 19500-2:2003 Information technology -- Open Distributed Processing -- Part 2: General Inter-ORB Protocol (GIOP)/Internet Inter-ORB Protocol (IIOP)
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.

By regard to IEC/TC 56, the following was in resolution 675 from the Busan Plenary:

JTC1/SC7 instructs its Secretariat to

a) Contact TC56 to formalize the transfer of IEC/TC56 Project 61720 to JTC1/SC7/WG9. Transfer of IEC/TC56 Project 61720: Guide to techniques and tools for achieving confidence in software. This will be circulated as a NWI ballot to JTC1/SC7.

..................

JTC 1/SC7 mandate further its WG9 to negotiate with IEC TC56 a coordinated program of work, and submit it to SC 7 for approval through letter ballot before the next Plenary.

..................
The transfer of IEC/TC56 Project 61720 to JTC1/SC7/WG9 was completed in August 2002.

External

SC7 has 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
As a direct result of the use of computerized devices, the world is now very dependent on software systems. Products based on the information and communication technologies (ICT) are now ubiquitous in industrialized societies, whether for commercial, industrial or domestic applications. ICT-based products are software systems, and it is the software that makes these products work.

The range of ICT applications is wide and continually expanding, from cardiac pace-makers and traffic control systems to business and entertainment systems. The interests of consumer using these applications must be protected, and risks of all kinds which may arise from the failure of such software systems must be minimized. Never has it been more important for software and system engineers to deliver reliable and safe systems to business, to industry and to society at large.

The ability to design and implement ICT systems and products has greatly improved in the last ten years. A recognized core body of knowledge in software engineering now exists, a sign that software engineering it is now maturing into a recognized profession.

Challenges still abound because of the pressure to build more complex applications and products in an ever-shorter time-frame (a Web Year is 3 months).

Looking forward, the challenge of developing increasingly complex information systems increasingly quickly will remain. In addition, many of these software-intensive systems will also perform more and more critical tasks in our society. All this will not only drive the formalization of the software and system engineering discipline, but also the market for re-usable components.

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.

Market Inputs

In the last few years, many new work items that were initiated in SC7 came with the backing and support of professional and commercial organizations or communities, many of whom became formal C or A liaison afterward. The program of work of our WG 4 (IEEE Computer Society), 7 (INCOSE), 10 (ESI, ), 19 (OMG), 12 (IFPUG, NESMA, UKSMA), and 20 (IEEE Computer Society) essentially reflect this.

Other strategy previously used for customer inputs are:

• TR 15504-1/9 Software Product Assessment
  • Extensive trials of draft standards
• Workshops on special topics in ISO/IEC P15288 System Life Cycle Processes:
  • Safety (Canada)
  • Security (Germany)
  • Human Factors (UK)

Market requirements for software and system engineering standards are also informally assessed through the active participation of SC7 members to professional events such as the International Symposium and Forum on Software Engineering Standards (ISESS). One IESS was held just before the SC7 Plenary in the same location and another has been held just before the SC7 Curitiba plenary in May of 1999.

One element of standard market relevance could be the measurement of internet URL’s citing of SC7 standards. The table next page summarizes the finding of an t Internet survey done at the end of 2001 by a SC7 BPG member (Dr. Hans Daniel):We can see from this data that:

• ISO 9000-3 (now 90003) has the largest number of citations.
• 15288 who was not a standard at the time of the survey, is already drawing citations.
• The SC7 core products with the largest number of citations work are: 12207, 15504, and 9126.
• There is growing interest is devoted to 15504, 14143, 9126, 14598
<table>
<thead>
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<th>Doc-Nr.</th>
<th>Title / Date-</th>
<th>Google</th>
<th>Altavista</th>
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<tr>
<td>ISO 5806</td>
<td>Specification of single-hit decision tables</td>
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<td>ISO 5807</td>
<td>Documentation symbols and conventions</td>
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<td>ISO 6592</td>
<td>Guidelines for the documentation of computer-based application systems</td>
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<td>24</td>
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<tr>
<td>ISO 8790</td>
<td>Computer system configuration diagram symbols and conventions</td>
<td>28</td>
<td>12</td>
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<tr>
<td>ISO 9000-3</td>
<td>Guidelines for the application of ISO 9001 to the design, development, supply, installation and maintenance of computer software</td>
<td>5690</td>
<td>3019</td>
</tr>
<tr>
<td>ISO/IEC 9126</td>
<td>Quality characteristics and guidelines for their use</td>
<td>1330</td>
<td>499</td>
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<td>ISO 9127</td>
<td>User documentation and cover information for consumer software packages</td>
<td>102</td>
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<td>ISO/IEC 12119</td>
<td>Software packages -- Quality requirements and testing</td>
<td>498</td>
<td>271</td>
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<td>ISO/IEC 12207</td>
<td>Software life cycle processes</td>
<td>2870</td>
<td>1024</td>
</tr>
<tr>
<td>ISO/IEC 14102</td>
<td>Guideline for the evaluation and selection of CASE tools</td>
<td>115</td>
<td>59</td>
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<td>ISO/IEC 14143</td>
<td>Functional size measurement</td>
<td>245</td>
<td>75</td>
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<tr>
<td>ISO/IEC 14568</td>
<td>DXL: Diagram eXchange Language for tree-structured charts</td>
<td>19</td>
<td>4</td>
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<tr>
<td>ISO/IEC 14598</td>
<td>Software product evaluation</td>
<td>439</td>
<td>114</td>
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<tr>
<td>ISO/IEC 14756</td>
<td>Measurement and rating of performance of computer-based software systems</td>
<td>40</td>
<td>6</td>
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<tr>
<td>ISO/IEC 15288</td>
<td>System Life Cycle Processes</td>
<td>242</td>
<td>76</td>
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<tr>
<td>ISO/IEC 15504</td>
<td>Software Process Assessment</td>
<td>1210</td>
<td>615</td>
</tr>
<tr>
<td>SWEBOK</td>
<td>Software Engineering Body of Knowledge</td>
<td>849</td>
<td>196</td>
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2.2 **ACHIEVEMENTS**

See sections 1.2 and 3.2

2.3 **RESOURCES**

SC7 recognize that resources are an important factor for the successful 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:

- DTR 9126-4: Software Engineering - Product quality - Part 4: Quality In Use Metrics
- 15476: Software Engineering - CDIF Semantic Metamodel - Parts 3, 4, 5
- PRF TR 9126-2: Software Engineering Software Product Quality - Part 2: External Quality
- DTR 14143-5: Definition of Functional Size Measurement - Part 5: Determination of Functional Domains for use with Functional Size
- DIS 19501-1 – UML PAS
- DTR 19759 – SWEBOK
- FDIS 90003 – Guidelines for the app. of 9001:2000 to SW
- DIS 20926 IFPUG PAS
- DIS 24570 NESMA PAS
- ISO/IEC FCD 18019 Software and system engineering -- Guidelines for the design and preparation of user documentation for application software
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) is currently being 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 is 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.
**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:

- Software and Systems Quality Framework (SSQF) (Resolution 613)
- ISO/IEC DIS 16085 Information technology -- Software life cycle processes -- Risk management (fast track) (WG9)
- Revision of ISO/IEC 15026 - System and Software Integrity Levels (WG9)
- Standard on Petri Net Techniques (WG19)
- Guideline on the use of Unified Modeling Language (UML) for ODP viewpoint specifications (Resolution 663 – WG19)

The following NWI are presently been considered:

- Revision of 12207 and 15288 for harmonization (Resolution 629 and 665)
- Software measurement - Functional size measurement - Guide for use of 14143 series (functional size measurement) and related international Standards (Resolution 662)
- Information Technology – Requirements Engineering Tool (Study group – resolution 664)
- SC7 Consolidated Terminology and Vocabulary (resolution 674)
- 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)

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:

<table>
<thead>
<tr>
<th>WG</th>
<th>SCOPE</th>
<th>CONVENER</th>
<th>WEB SITE</th>
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<tbody>
<tr>
<td>2</td>
<td>Development of standards for the documentation of software systems.</td>
<td>Ken Johnson - UK (2000 - N2335)</td>
<td>YES</td>
</tr>
<tr>
<td>4</td>
<td>Development of standards and technical reports for tools and Computer Aided Software/System Engineering (CASE) environments</td>
<td>D. Lee - Korea (1999 - N2178)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Development of standards and technical reports for software products evaluation and metrics for software products &amp; processes.</td>
<td>Motoei Azuma - Japan (2000 - N2335)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Development of standards and technical reports on Life Cycle Management.</td>
<td>Doug Thiele - Australia (2002 - N2xxx)</td>
<td>YES</td>
</tr>
<tr>
<td>9</td>
<td>Preparation of standards, technical reports, and guidance documents related to systems integrity 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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>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.</td>
<td>Alec Dorling - UK (2000 - N2335)</td>
<td>YES</td>
</tr>
<tr>
<td>12</td>
<td>To establish a set of practical standards for functional size measurement. Functional size measurement is a general term for methods of sizing software from an external viewpoint and encompasses methods such as Function Point Analysis.</td>
<td>Pam Morris - Australia (2000 - N2335)</td>
<td></td>
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<tr>
<td>19</td>
<td>Includes modelling languages, metadata, ODP framework and ODP components 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).</td>
<td>Bryan Wood - UK</td>
<td>YES</td>
</tr>
<tr>
<td>20</td>
<td>Standardization of the Software Engineering Body of Knowledge</td>
<td>Juan Garbajosa - Spain</td>
<td>SWEBOK</td>
</tr>
<tr>
<td>21</td>
<td>Software Asset Management Process standards development.</td>
<td>L. Piper - Sweden</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Software and Systems Engineering Consolidated Vocabulary.</td>
<td>Perry DeWeese - USA</td>
<td></td>
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Two Special Working Groups (SWG) have been created to handle Business Planning and Architecture:

<table>
<thead>
<tr>
<th>SWG1</th>
<th>Business Planning Group (Resolution 683)</th>
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<tr>
<td><strong>Convener</strong></td>
<td>François Coallier - SC7 Chairman</td>
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</table>
| **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 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) |

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<tr>
<th>SWG5</th>
<th>Architecture Management (Resolution 684)</th>
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</table>
| **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:** | • Anatol Kark (Canada)  
• Jean-Philippe Lerat (France)  
• Andy Coster (UK)  
• Shigenobu Katoh (Japan)  
• Perry De Weese (USA)  
• Bud Lawson (Sweden)  
• Terry Rout (Australia)  
• James Moore (IEEE-CS) |
The following Study Groups are currently active:

<table>
<thead>
<tr>
<th>Study group on the content of system and software life cycle process information products (documentation)</th>
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<td><strong>Chair</strong></td>
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<td><strong>Terms of Reference:</strong></td>
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<tr>
<td>Study Group on System Life Cycle Process Assessment Model</td>
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<tr>
<td><strong>Chair</strong></td>
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</table>
| **Terms of Reference:** | The terms of reference of this study group shall be to:  
  - 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.  
  The Study Group shall take into consideration:  
  - 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.  
  This study group will be chaired by Annette Reilly (US) and will submit a report to SC7 by 2004-02-15.  
  The study group meetings will be co-located with WG7 and WG10. |
| **Members:** | 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) |
## Study Group on the revision of ITU-T Rec. X.901-4|ISO/IEC 10746 Reference Model of Open Distributed Processing

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<tr>
<th>Chair</th>
<th>Mr. Bryan Wood (UK)</th>
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**Terms of Reference:**
The terms of reference of this study group shall be to:


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.

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.

**Members:**
- 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.
| **Terms of Reference:** | The terms of reference of this study group shall be to:  
- establish whether IS 14143-1:1998 needs to be changed  
- establish justifications for any recommendations  
- define limitations to control the impact of potential changes on existing documents and data  
- establish the process by which any change will be conducted.  

This study group will submit a report by 2004-02-29 to SC7.  
Depending on the recommendation of the Study Group, a draft NWI proposal (with accompanying Requirements Document) may be submitted to the SC7 Secretariat by 2004-03-15 for consideration at the Brisbane SC7 plenary. |
| **Members:** | - Martin D'Souza (Australia),  
- Serge Oligny (Canada),  
- Jean-Marc Desharnais (Canada),  
- Pekka Forselius (Finland),  
- Eberhard Rudolph (Germany),  
- Suraya Adam (South Africa)  
- Debbie Dickson (South Africa),  
- Insoo Hwang (Korea),  
- Kyung-Moon Jin (Korea),  
- Shigeru Nishiyama (Japan)  
- Mitsuhiro Takahashi (Japan),  
- Peter Fagg (UK),  
- Marie O'Neill (Ireland),  
- Frank Mazzucco (USA),  
- Carol Dekkers (IFPUG). |