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SC7 Chairman Presentation

to the

ISO/IEC JTC 1

PLENARY

Singapore, 2003-11-17

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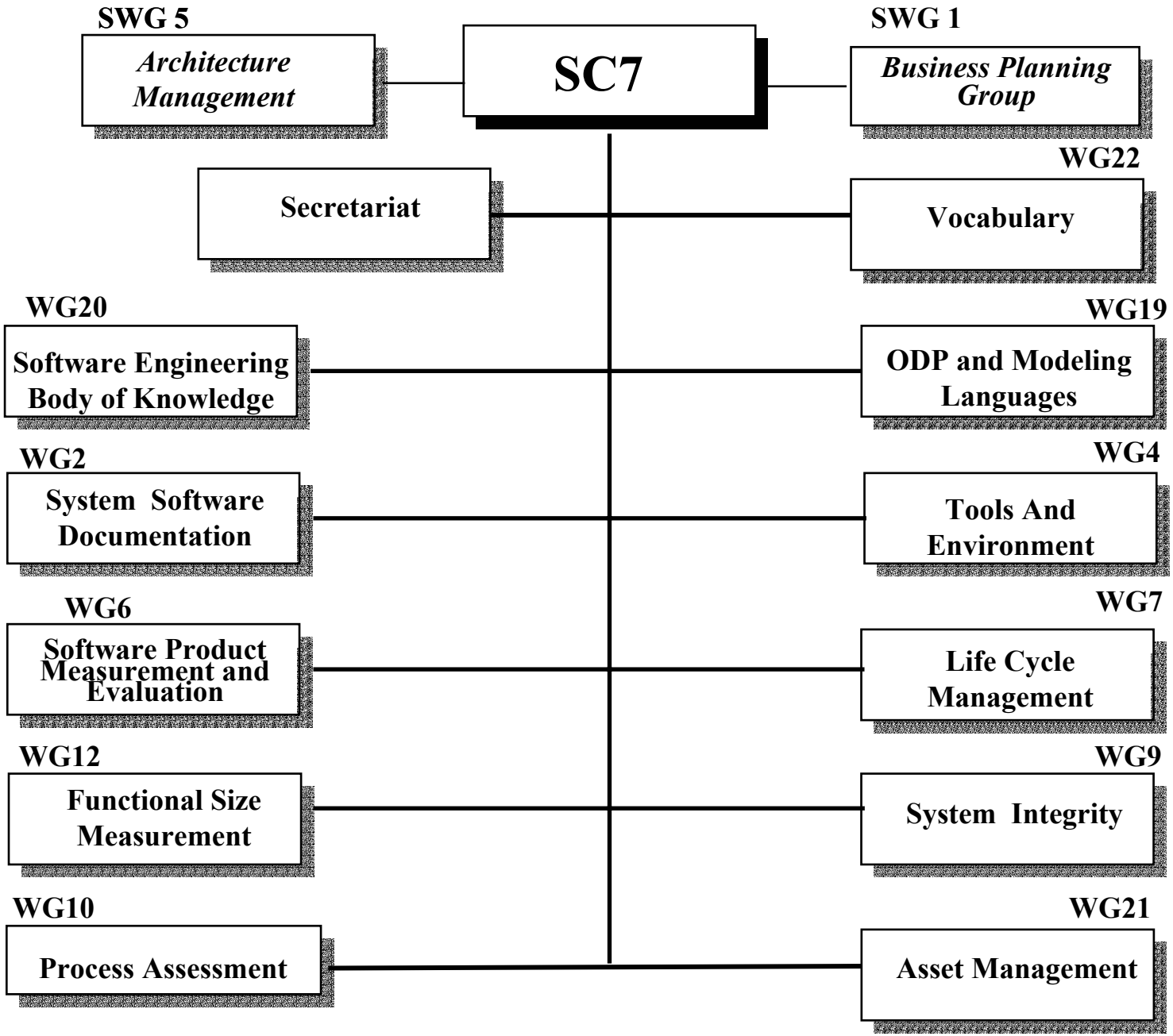
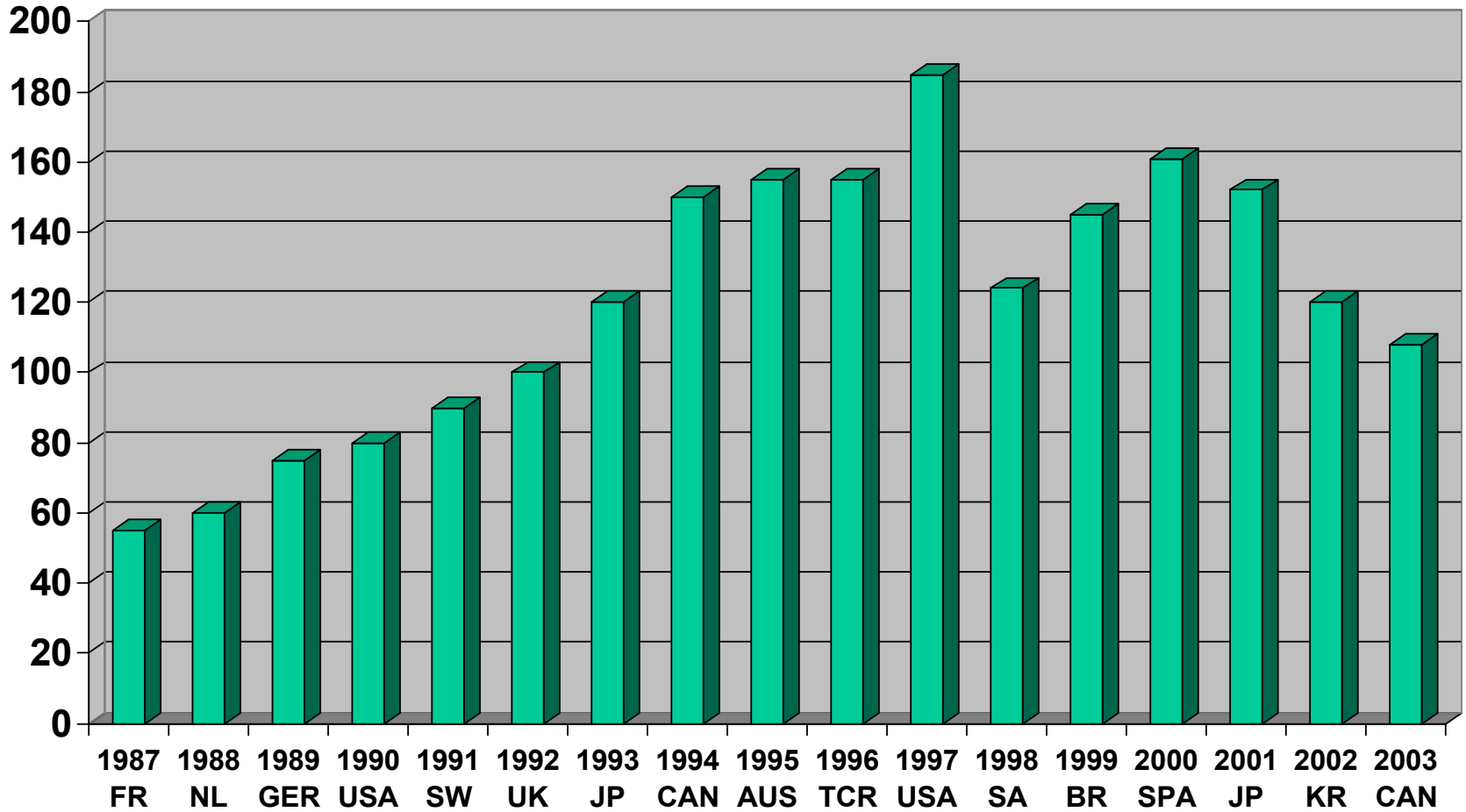
SC7 TERMS OF REFERENCE

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


SWG 5
Architecture Management
SC7
SWG 1
Business Planning Group
Secretariat
WG22
Vocabulary
WG20
Software Engineering Body of Knowledge
WG19
ODP and Modeling Languages
WG2
System Software Documentation
WG4
Tools And Environment
WG6
Software Product Measurement and Evaluation
WG7
Life Cycle Management
WG12
Functional Size Measurement
WG9
System Integrity
WG10
Process Assessment
WG21
Asset Management

Plenary Attendance



STANDARDS PUBLISHED 2002

- ISO/IEC 14143-2:2002 Information technology -- Software measurement -- Functional size measurement -- Part 2: Conformity evaluation of software size measurement methods to ISO/IEC 14143-1:1998
- ISO/IEC TR 14143-4:2002 Information technology -- Software measurement -- Functional size measurement -- Part 4: Reference model
- ISO/IEC 15288:2002 Systems engineering -- System life cycle processes
- ISO/IEC 15414:2002 Information technology -- Open distributed processing -- Reference model -- Enterprise language
- ISO/IEC 15474-1:2002 Information technology -- CDIF framework -- Part 1: Overview
- ISO/IEC 15474-2:2002 Information technology -- CDIF framework -- Part 2: Modelling and extensibility
- ISO/IEC 15475-1:2002 Information technology -- CDIF transfer format -- Part 1: General rules for syntaxes and encodings
- 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 15476-1:2002 Information technology -- CDIF semantic metamodel -- Part 1: Foundation
- ISO/IEC 15476-2:2002 Information technology -- CDIF semantic metamodel -- Part 2: Common
- ISO/IEC 15939:2002 Software engineering -- Software measurement process
- ISO/IEC 20968:2002 Software engineering -- Mk II Function Point Analysis -- Counting Practices Manual

STANDARDS PUBLISHED IN 2003 (up to now)

- ISO/IEC TR 9126-2:2003 Software engineering -- Product quality -- Part 2: External metrics
- ISO/IEC TR 9126-3:2003 Software engineering -- Product quality -- Part 3: Internal metrics
- ISO/IEC TR 14143-3:2003 Information technology -- Software measurement -- Functional size measurement -- Part 3: Verification of functional size measurement methods
- ISO/IEC 15504-2:2003 Software engineering -- Process assessment -- Part 2: Performing an assessment
- ISO/IEC 19500-2:2003 Information technology -- Open Distributed Processing -- Part 2: General Inter-ORB Protocol (GIOP)/Internet Inter-ORB Protocol (IIOP)
- ISO/IEC TR 19760:2003Systems engineering -- A guide for the application of ISO/IEC 15288 (System life cycle processes)
- ISO/IEC 19761:2003 Software engineering -- COSMIC-FFP -- A functional size measurement method

Projects near completion

- DTR 9126-4: Software Engineering - Product quality - Part 4: Quality In Use Metrics
- 15909: Software Engineering - High-level Petri Nets - Concepts, Definitions and Graphical Notation
- 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 24570 NESMA PAS
- ISO/IEC FCD 15504-3 Information technology -- Process assessment -- Part 3: Guidance on performing an assessment
- ISO/IEC FCD 15504-4 Software Engineering -- Process Assessment -- Part 4: Guidance on use for Process Improvement and Process Capability Determination
- ISO/IEC FCD 18019 Software and system engineering -- Guidelines for the design and preparation of user documentation for application software

Approved New Projects (since 2002 SC7 plenary)

- 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)
- 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)
- SC7 Consolidated Terminology and Vocabulary (resolution 674)
- Revision and fast track of IEEE 1220 (Resolution 676)
- Revision of ISO/IEC 14764:1999 Information technology -- Software maintenance

New Projects (under considerations)

- Transfer of IEC/TC56 Project 61720: Guide to techniques and tools for achieving confidence in software (Resolution 675)
- Information Technology – Requirements Engineering Tool (Study group – resolution 664)
- 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)
- Fast Track of IEEE Std 2001-2002, IEEE Recommended Practice for the Internet - Web Site Engineering, Web Site Management and Web Site Life Cycle (Resolution 722).

Actives SC7 Study Groups

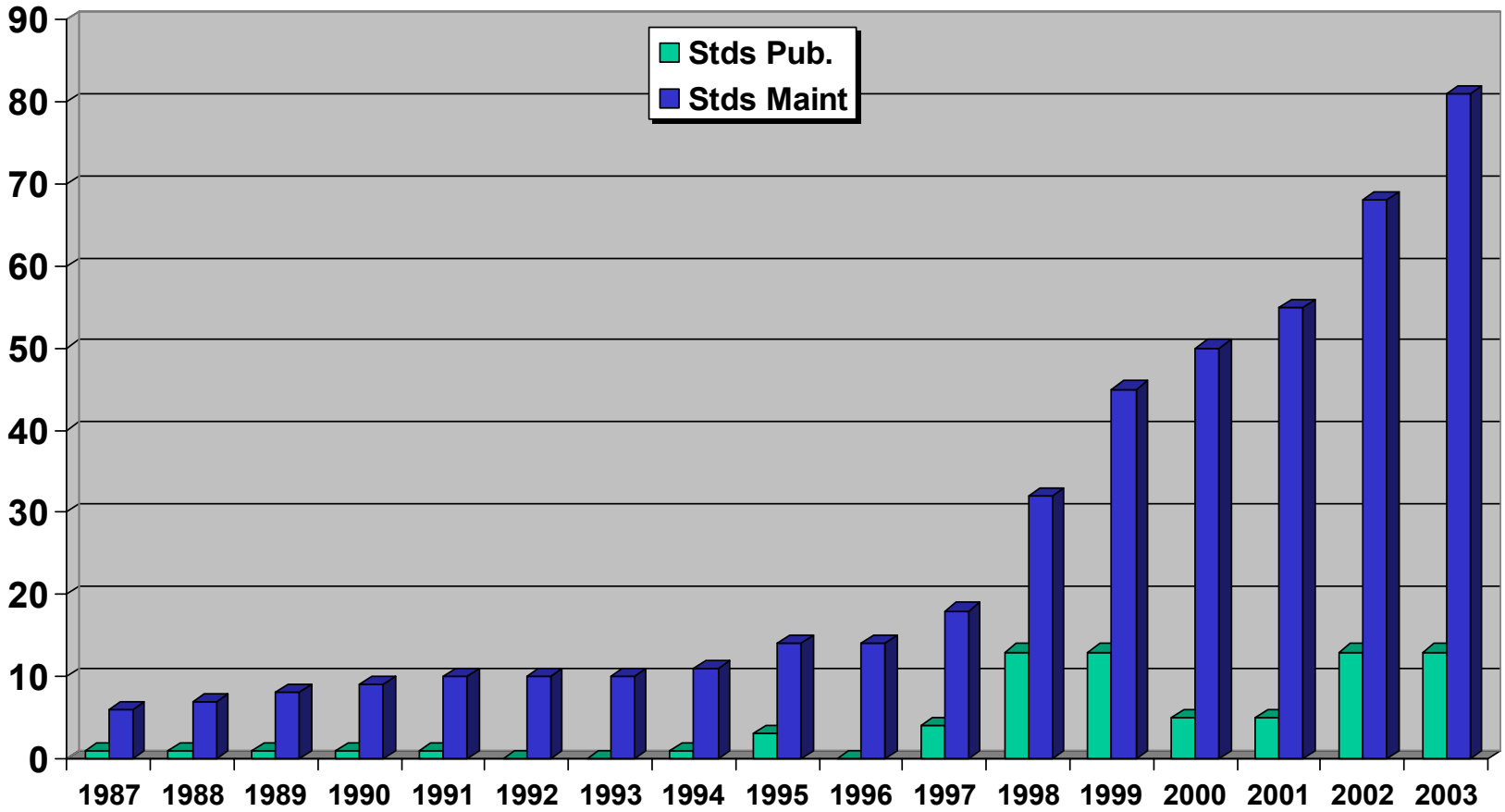
- Study Group on Systems Quality Management
- Study Group on user documentation Standards
- Study Group to review IS 14143-1:1998 Information Technology – Software Measurement - Functional size measurement – Definition of Concepts
- Study Group on the revision of ITU-T Rec. X.901-4|ISO/IEC 10746 Reference Model of Open Distributed Processing
- Study Group on System Life Cycle Process Assessment Model
- Study group on the content of system and software life cycle process information products (documentation)

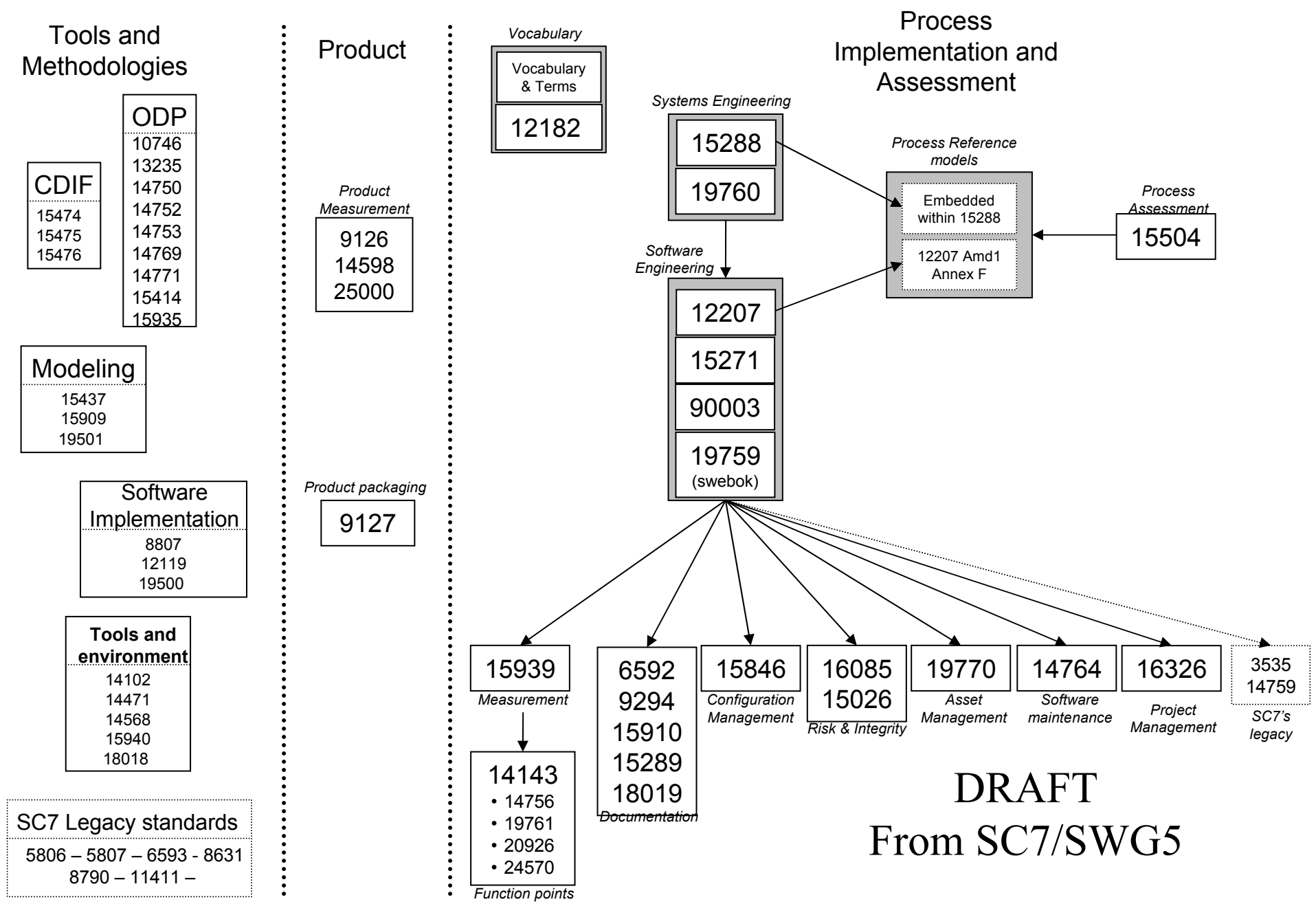
Standards that will come in Maintenance – with no planned activities yet

- 8807:1989 – LOTOS
- 11411:1995 Representation ..state transition
- TR 12182:1998 – Categorisation of Software
- 13235-1 to 3:1998-x ODP Trading Function
- 14568:1997 – DXL
- ISO/IEC TR 15846:1998 Information technology -- Software life cycle processes -- Configuration Management
- ISO/IEC TR 14759:1999 Software engineering -- Mock up and prototype -- A categorization of software mock up and prototype models and their use
- ISO/IEC 14756:1999 Information technology -- Measurement and rating of performance of computer-based software systems

SC7 Production (est.)

(No new NWI assumed - exclude dependability, include PAS)




Tools and Methodologies
ODP
10746
13235
14750
14752
14753
14769
14771
15414
15935
CDIF
15474
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15476
Modeling
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90003
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(swebok)
15939
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• 19761
• 20926
• 24570
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6592
9294
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15289
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16085
15026
Risk & Integrity
19770
Asset Management
14764
Software maintenance
16326
Project Management
3535
14759
SC7's legacy
DRAFT
From SC7/SWG5

SC7 Direction Statement

Needed to be updated to:

- Reflect new directions in Systems Engineering and Enterprise Architecture
- Reflect the evolution of our disciplines and its impact on the global economy and societies
- Document the tactics used in the last five years
- Document and formalise the partnering strategy that evolved in the last four years

Key Success Factors

SC7 recognize that it will be successful in its mission if:

- Its standards are widely recognized by the software and system engineering professions
- Its standards are widely used by its intended users
- Its standards collection adequately covers the scope of its terms of reference
- Its standards are delivered to the market in a timely fashion
- Its standards collection is maintained up-to-date with the developments in the areas of software and system engineering, as well as with developments in ICT and other relevant disciplines in engineering and science.

SC 7's Major Strategies for the Period 2003-2008

- **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.

SC 7's Major Strategies for the Period 2003-2008

- **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 Major Implementation Activities for the Period 2003-2008

- **A1** – Operationalize a Business Planning function by putting in place a SWG on Business Planning
- **A2** – Operationalize architecture planning and management function by putting in place a SWG on Architecture Management
- **A3** – Negotiate cooperation agreements with key partners.

SC7 Major Implementation Activities for the Period 2003-2008

- **A4** – Initiate study groups to explore new areas or assess market coverage
- **A5** – Use all the tools available to reduce the time to market of standards development and adoption projects.
- **A6** – Initiate Study Groups to address harmonization and consistency issues
- **A7** – Redesign the SC7 Web site to make it a marketing tool

Marketing

- SC7 seminars, October 2002, Johannesburg and Cape Town, South Africa
- François Coallier, *International Standardization in Software and Systems Engineering,* Crosstalk – The journal of Defense Software Engineering, February 2003
- François Coallier, *A Web year is three months, International standardization in systems and software engineering,* ISO Bulletin, May 2003
- Carol A. Dekkers, *Measuring the "logical" or "functional" size of software products and software application,* ISO Bulletin, May 2003
- Stuart Arnold – Article on *ISO/IEC 15288* in ISO Management Systems,
- Seminar on the *convergence of software and systems engineering* organized by the Montréal SPIN, 2003-05-08,09
- Presentations by SC7 Chair and members at the SIMPROS conference, Recife, Brazil, 2003-11-03
- Seminar on SC7 standards, Tokyo, Japan, 2003-12-02
- Joint ESA - 3rd International *SPICE* Conference on Process Assessment and Improvement, 17-21 March 2003 ESTEC, Noordwijk, The Netherlands