ISO/IEC JTC 1 SC7 STATUS AND DIRECTIONS

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CONTENTS

SC7 TERMS OF REFERENCE

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

SC7 VISION

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

CUSTOMERS/USERS

- Service Providers/Manufacturers or Consumers of:
  - Embedded Product Engineering (Aerospace, Telecommunication, etc…)
  - Management Information Systems
- Academic/teaching

SC7 PURPOSE

Provide quality software engineering standards meeting user needs in broad markets.

Manage the set of standards effectively through documented framework.

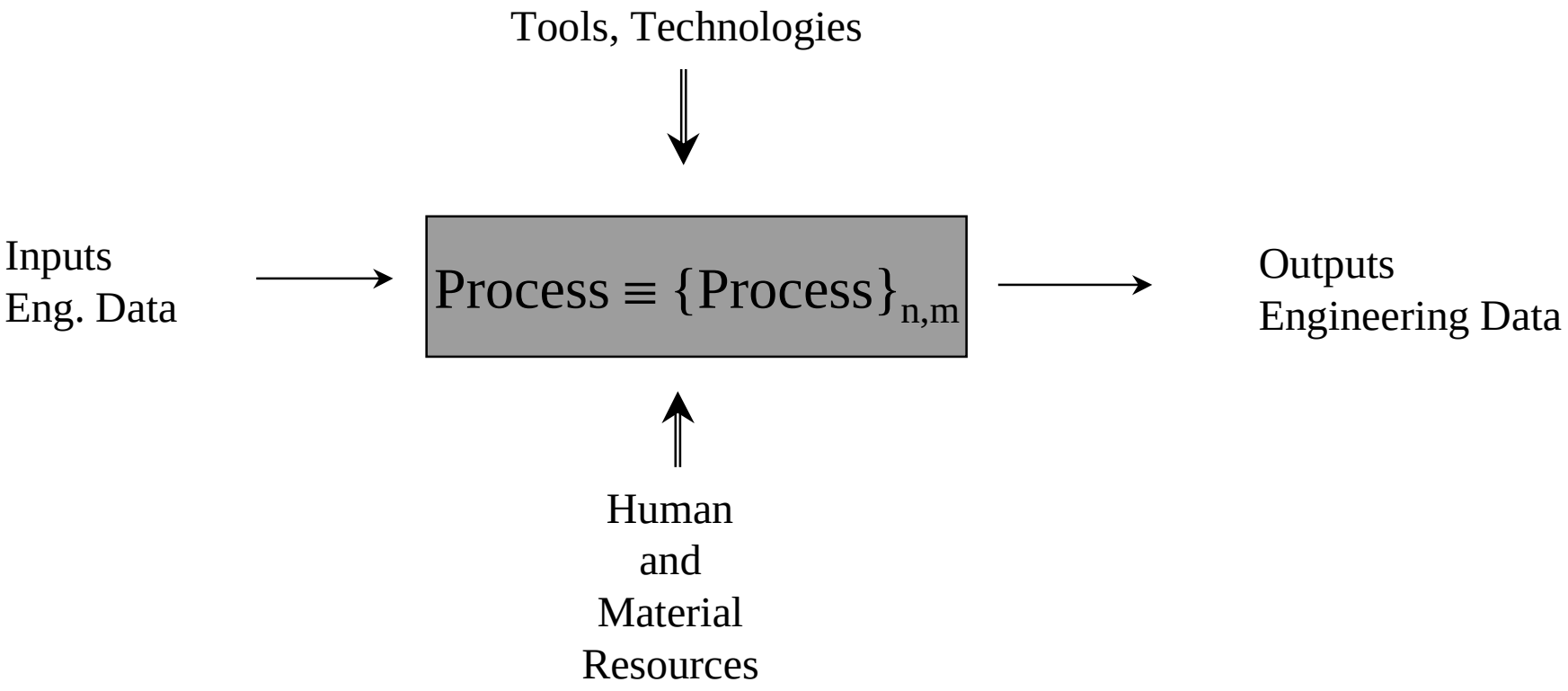
Promote the use of standards by providing supporting materials.

Provide leadership in software engineering standardization through a framework that minimizes the inconsistencies between major software related standards including those developed by other standard producing organizations.

Customer Inputs Examples

- 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)
- Revision of ISO/IEC 12207 Software Life Cycle Processes
  - User Survey (planned)

FUNCTIONAL FRAMEWORK



SC7 WORK PROGRAM

SOFTWARE ENGINEERING:

- **PROCESS DESCRIPTION AND SPECIFICATIONS** →
- **TECHNOLOGIES** →
- **TOOLS** : IS 14102, TR 14471, P15940 (2002)
- **ENGINEERING DATA:**
  - DOCUMENTATION: IS 6592
  - REPRESENTATION: IS 5806, 5807, 6593, 8631, 11411
  - DATA INTERCHANGE:

    IS 14568, P15474-1/3 (IIQ1999), P15475-1/3 (IIQ1999), P15476-1/8 (IIQ1999 for parts 1,2,4,5; 2001), P15477 (2001), P15478(2001)
- **GENERIC PRODUCT REQUIREMENTS**
  - SOFTWARE PACKAGES: IS 9127, IS 12119

SC7 WORK PROGRAM

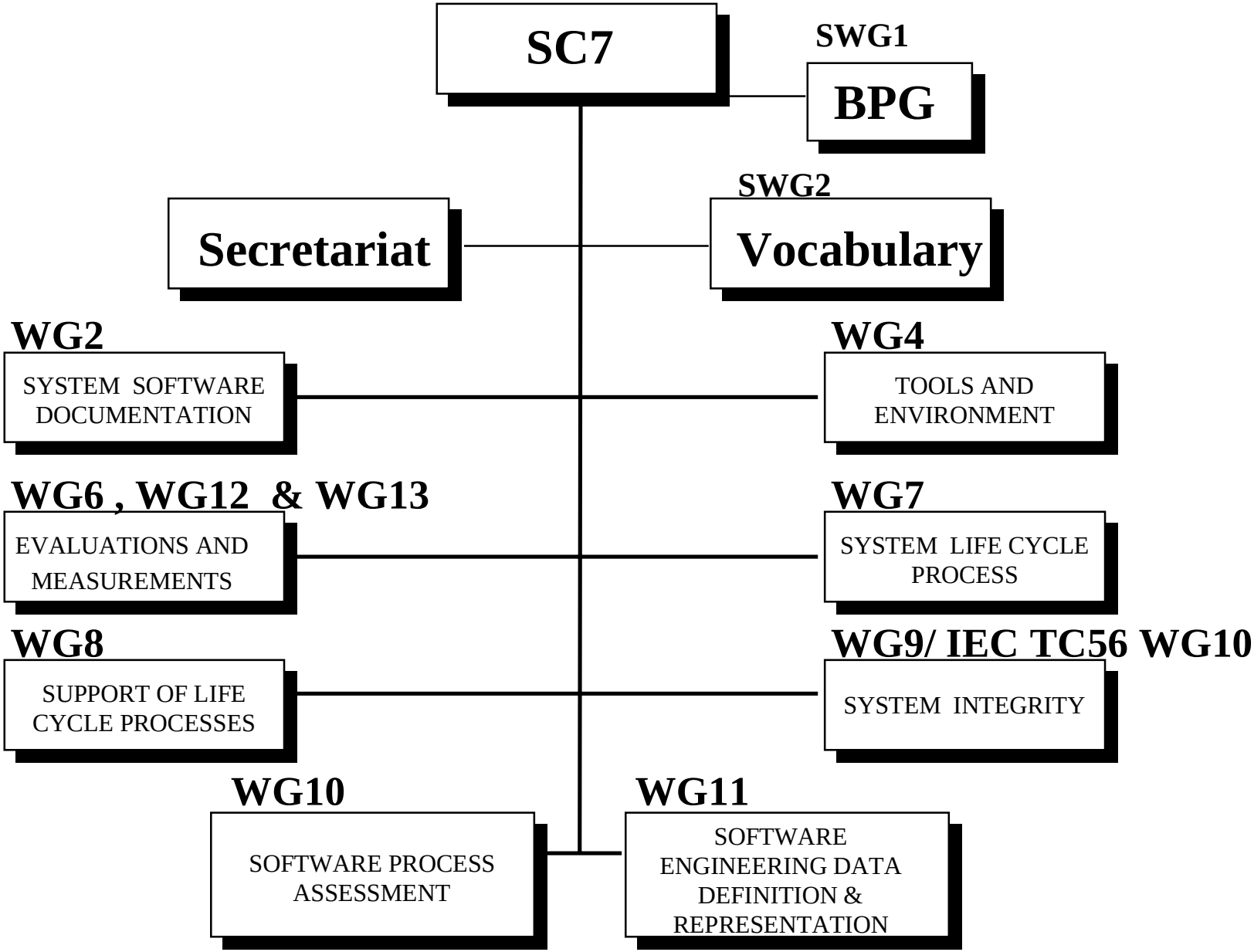
PROCESS DESCRIPTION AND SPECIFICATIONS

- **SYSTEM LIFE CYCLE PROCESSES:** P15228 (IQ2000)
- **SOFWARE LIFE CYCLE PROCESSES:** IS 12207, TR 15271
  - MAINTENANCE: P14764 (IVQ1999)
  - PROTOTYPING: TR14759
  - CONFIGURATION MANAGEMENT: TR 12220
  - PROJECT MANAGEMENT; Pxxxx (IVQ1999)
  - QUALITY ASSURANCE: ISO 9000-3
  - DOCUMENTATION MANAGEMENT: TR 9294
  - USER DOCUMENTATION: DIS 15910 (IIQ1999)

SC7 WORK PROGRAM

TECHNOLOGIES:

- **PROCESS ASSESSMENT**: TR 15504-1/9
- **SOFTWARE PRODUCTS MEASUREMENT AND EVALUATION**
  - PRODUCT ATTRIBUTES: TR 12182
  - PRODUCT MEASUREMENT: P9126-1/3 (IVQ1999)
  - PRODUCT EVALUATION METHODS: P14598-1/6 (IVQ1999)
  - FUNCTIONAL SIZE MEASUREMENT: P14143-1/5 (2/5: IIIQ 2000)
  - SOFTWARE SYSTEM INTEGRITY LEVELS: P15026 (IIIQ1998)
  - SOFTWARE SYSTEM DEPENDABILITY:
    - IEC 1704, 1713, 1714, 1719, 1720, 300-3, IEC P61720 (2001)
  - SOFTWARE SYSTEM PERFORMANCE: P14756 (IQ1999)
- **SOFTWARE MEASUREMENT METHODS**: P15939 (2002)

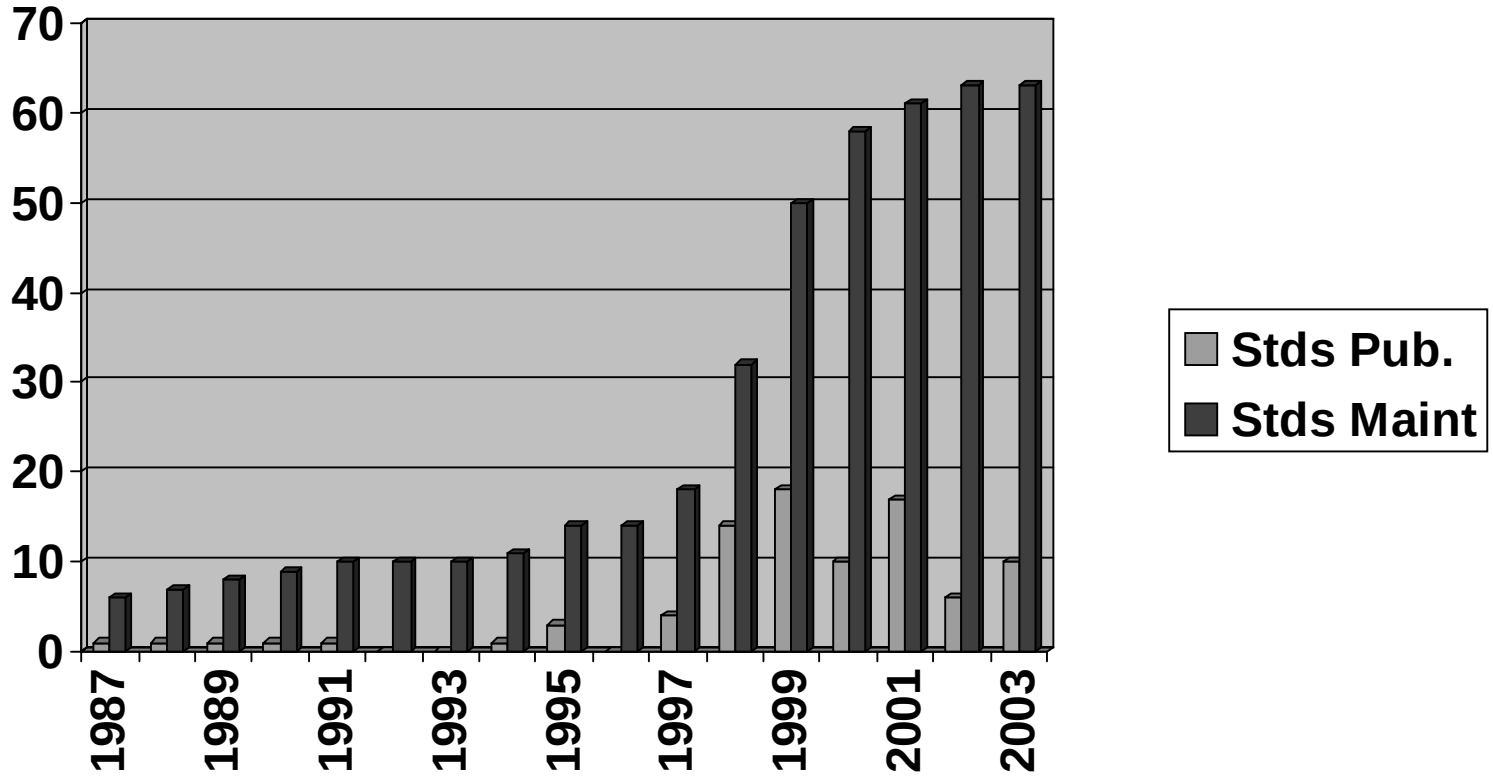

SC7
SWG1
BPG
SWG2
Secretariat
Vocabulary
WG2
SYSTEM SOFTWARE DOCUMENTATION
WG4
TOOLS AND ENVIRONMENT
WG6 , WG12 & WG13
EVALUATIONS AND MEASUREMENTS
WG7
SYSTEM LIFE CYCLE PROCESS
WG8
SUPPORT OF LIFE CYCLE PROCESSES
WG9/ IEC TC56 WG10
SYSTEM INTEGRITY
WG10
SOFTWARE PROCESS ASSESSMENT
WG11
SOFTWARE ENGINEERING DATA DEFINITION & REPRESENTATION

SC7 History

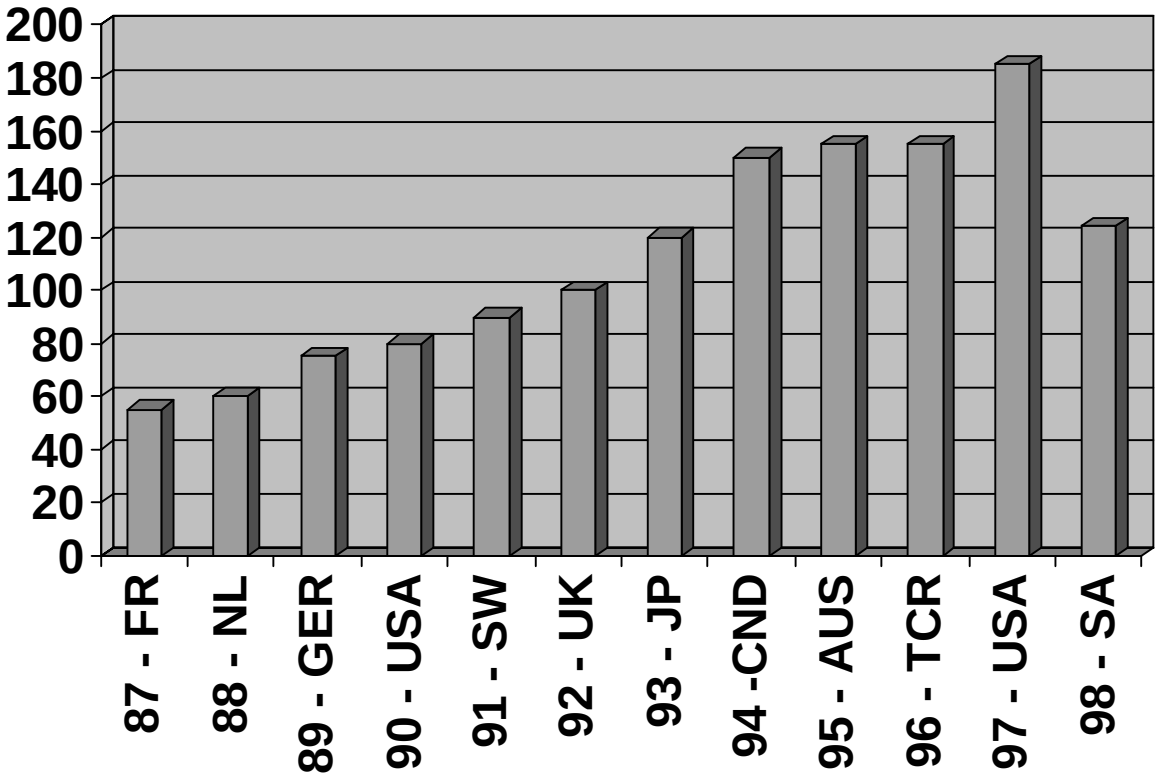
- **1987 - Formation of JTC1/ SC7**
- **1990 - First Business Plan published**
- **1991 - Name changed to Software Engineering**
- **1993 - Publication of ISO/IEC 9126**
- **1994 - The concept of product plan was proposed to SC7**
- **1995 - Publication of ISO/IEC 12207**
- **1996 - Publication of the first edition of the SC7 Product Plan**
- **1997:**
  - **Terms of references broadened to Software Systems**
  - **First Business Planning Workshop**
  - **Vocabulary and BPG SWG established**

SC7 Production (est.)

(No new NWI assumed - exclude dependability)



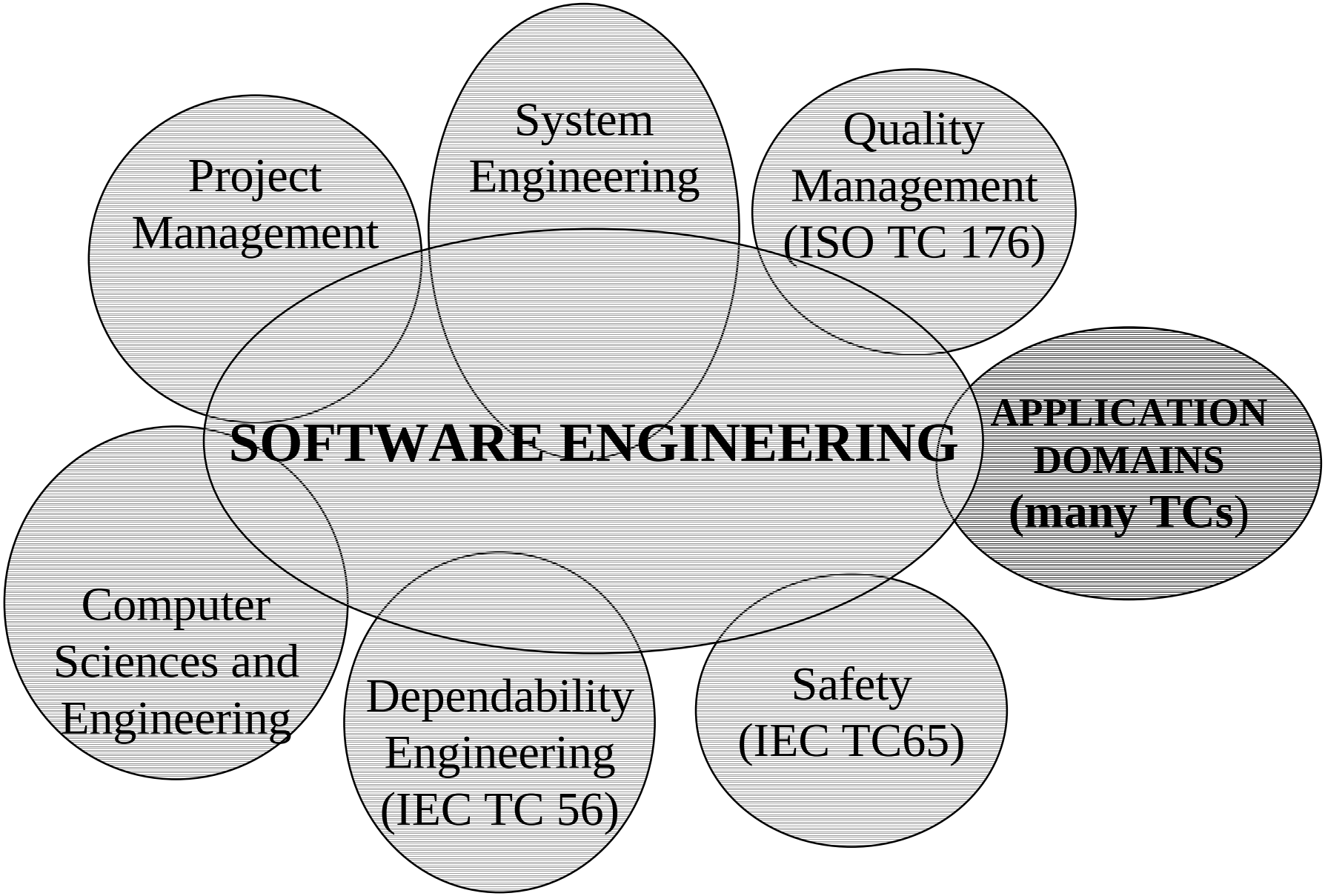
Plenary Attendance



Challenges

Moving from a development to a primarily maintenance mode:

- Maintaining / improving stds architecture
- Maintaining / improving vocabulary cohesiveness and consistency
- Managing effectively additions or consolidation of product line.


Project Management
System Engineering
Quality Management (ISO TC 176)
SOFTWARE ENGINEERING
APPLICATION DOMAINS (many TCs)
Computer Sciences and Engineering
Dependability Engineering (IEC TC 56)
Safety (IEC TC65)

External Liaisons (C)

- NATO (WG7)
- IEEE CS (WG4)
- CDIF (WG11)
- OMG (WG11)
- IFPUG (WG12)
- IEFUG (WG12)
- ESI (WG10)

Plan for next period

- Execute publication plans
- Finalize standard framework
- Initiate standard architectural analysis
- Continue with vocabulary work
- Initiate 12207 user survey
- Contribute to IEEE 1999 Software Engineering Standards Symposium (To be held before the next Plenary)