

ISO/IEC JTC 1  
Information technology  
Secretariat: ANSI (USA)

**Document type:** Business Plan

**Title:** SC 22 Business Plan - September 2012

**Status:** This document is circulated to JTC 1 National Bodies for review and consideration at the November 2012 JTC 1 Plenary meeting in Jeju.

**Date of document:** 2012-10-02

**Source:** SC 22 Secretariat

**Expected action:** ACT

**Email of secretary:** [lrajchel@ansi.org](mailto:lrajchel@ansi.org)

**Committee URL:** <http://isotc.iso.org/livelink/livelink/open/jtc1>

**ISO/IEC JTC 1/SC 22**  
**Programming languages, their environments and system software interfaces**  
**Secretariat: ANSI (USA)**

**Document type:** Business Plan

**Title:** JTC 1/SC 22 Business Plan - September 2012

**Status:** For information. This document will be submitted to the JTC 1 Secretariat for discussion at the JTC 1 Plenary in November 2012.

**Date of document:** 2012-10-02

**Source:** SC 22 Chairman

**Expected action:** INFO

**Email of secretary:** [mpeacock@ansi.org](mailto:mpeacock@ansi.org)

**Committee URL:** <http://isotc.iso.org/livelink/livelink/open/jtc1sc22>

SC 22 Document N xxxx

# **Business Plan for ISO/IEC JTC 1/SC 22**

For the Period 2011-10 to 2012-09

Produced and Submitted by

Rex Jaeschke, Chair  
([rex@RexJaeschke.com](mailto:rex@RexJaeschke.com))

2011-10-01



# Table of Contents

<b>1. Management Summary</b>	<b>1</b>
1.1 Chairman’s Remarks	1
1.2 Statement of Scope	1
1.3 Project Report	1
1.4 Cooperation and Competition	1
<b>2. Period Review</b>	<b>3</b>
2.1 Market Requirements	3
2.2 Achievements	3
2.3 Resources	3
2.4 Environmental Issues	3
2.5 Participation Metrics	3
<b>3. Focus Next Work Period</b>	<b>4</b>
3.1 Deliverables	4
3.2 Strategies	4
3.2.1 Risks	4
3.2.2 Opportunities	4
3.3 Work Program Priorities	4
3.3.1 Archival Policy	4
<b>4. Issues or Needs</b>	<b>5</b>
4.1 Concerns about Committee Draft (CD) Stage Elimination	5
4.2 Concerns about Three-Year Limit on Technical Corrigenda	5
4.3 Concerns about Requiring the use of eCommittees by SCs and WGs	5

# 1. Management Summary

## 1.1 Chairman's Remarks

SC 22 continues to operate very well. While some WGs' membership and marketplace relevance are in decline, others are on the increase. All are operating in a manner appropriate to their needs.

WGs continue to monitor and to consider support for new[er] technologies, such as concurrency, multi-core processors, high-performance computing, and object-oriented and other methodologies.

SC 22 currently has 19 "P" Members (CA, CH, CN, DE, DK, ES, FI, FR, GB, GH, IT, JP, KR, KZ, NL, RO, RS, UA, and US) and 24 "O" Members (AR, AT, BE, BG, CU, CZ, EG, GR, HU, ID, IE, IN, IR, IS, KE, KP, MY, NO, PL, SE, SG, SI, TH, and YU).

SC 22 holds its plenary on an annual basis, five to six weeks prior to the JTC 1 plenary. Between plenaries, formal business is carried out via letter ballots, and informal business is carried out via an email list. All committee documents are posted on Live Link. At most, one WG meets in conjunction with the plenary.

At JTC 1's direction, SC 22 provided the ability for participants to attend its 2012 Plenary remotely. A report on this is provided in a separate document.

Mr. Rex Jaeschke (US) continued as chair of SC 22. The Secretariat remains with ANSI (US), which was under the direction of Ms. Marisa Peacock.

## 1.2 Statement of Scope

SC 22 is responsible for the standardization of programming languages (such as COBOL, Fortran, Ada, C, C++, and Prolog) and their environments (such as POSIX). SC 22 also produces common language-independent specifications to facilitate standardized bindings between programming languages and system services, as well as greater interaction between programs written in different languages.

The most recently created WG has a project to document the vulnerabilities of various programming languages.

Program portability between different implementations of the same language is a key goal.

## 1.3 Project Report

Full details of SC 22's operation can be found in the SC 22 Secretary's Report (document SC 22 N 4756).

## 1.4 Cooperation and Competition

SC 22 maintains external liaisons with the following:

- Ecma International (which has Fast-Tracked a number of specifications, including ECMAScript, C#, Common Language Interface, and Eiffel)

## **Business Plan for ISO/IEC JTC 1/SC 22, 2011-10 through 2012-09**

- Linux Foundation (a PAS submitter)

SC 22 maintains internal liaisons with the following:

- ISO TC 37, Terminology and other language and content resources
- JTC 1/SC 2, Coded Character Sets
- JTC 1/SC 7, Software and Systems Engineering
- JTC 1/SC 27, IT Security techniques
- JTC 1 WG on Smart Grid

SC 22 participates in the work of the Austin Joint Working Group, which maintains the portable operating system, POSIX, specification.

## 2. Period Review

### 2.1 Market Requirements

The classic programming languages, for which SC 22 is well known, remain popular with major development work going on (or having been completed recently) in COBOL, Fortran, C, C++, and Ada. There is considerable interest in the WG documenting vulnerabilities of various programming languages.

### 2.2 Achievements

In the past year, SC 22 has worked on maintenance as well as producing the following documents:

- a. ISO/IEC 1989:2002 – Programming language COBOL. Moving to FDIS ballot on this revision.
- b. 22.29113 Type 2 Technical Specification on Further Interoperability of Fortran with C; recently completed the DTS Revision
- c. ISO/IEC DIS 8652 Ada, revision progressing nicely under the ISO Living Lab Pilot Project: Simpler, Faster, Better – Process
- d. JTC 1 NP 24772, Guidance to Avoiding Vulnerabilities in Programming Languages through Language Selection. This revision is currently in PDTR ballot.
- e. JTC 1 NP 17960, Code Signing for Source Code; a new draft standard.
- f. The Ruby Fast Track from Japan was published as an ISO/IEC standard.

### 2.3 Resources

The C and C++ language WGs continue to have high participation, both in the number of members and NBs. The same is true for the WG documenting vulnerabilities of various programming languages. Participation in the other active WGs ranges from adequate to good.

### 2.4 Environmental Issues

Not applicable.

### 2.5 Participation Metrics

The SC 22 plenary continues to attract 10–15 delegates from six or seven NBs and one or two liaisons.

Active WGs report a solid attendance from their core members. Participation has improved in some groups due to the use of teleconferencing.

Neither SC 22 nor its WGs have had problems getting the necessary participation in letter ballots.



## 3. Focus Next Work Period

### 3.1 Deliverables

1. WG4 (COBOL)
  - a. Final version of the revision of the COBOL standard ISO/IEC 1989:2002
2. WG9 (Ada)
  - a. Final version of the revision of the Ada standard, ISO/IEC 8652
3. WG14 (C)
  - a. Initial specification for C Secure Coding Rules
4. WG17 (Prolog)
  - a. A DTS on Definite clause grammars
5. WG21 (C++)
  - a. None
6. WG23 (Programming Language Vulnerabilities)
  - a. None

### 3.2 Strategies

As all groups have operated satisfactorily this past year, they plan to keep doing what they are already doing well.

#### 3.2.1 Risks

None

#### 3.2.2 Opportunities

None

### 3.3 Work Program Priorities

Perform maintenance on existing standards and TRs, and, for some WGs, to start or continue work on revisions. Basically, it's "business as usual".

#### 3.3.1 Archival Policy

Each WG is responsible for maintaining an archive of its own documents.

## 4. Issues or Needs

### 4.1 Concerns about Committee Draft (CD) Stage Elimination

#### Resolution 12-05: Potential Committee Draft (CD) Stage Elimination

JTC 1 SC 22 requests that, if the ISO Technical Management Board (TMB) makes the CD stage optional, JTC 1 permit subcommittees to set their own policy on the optionality of the CD stage. JTC 1 SC 22 further requests that it be given the authority to determine the CD ballot option on a project-by-project basis.

### 4.2 Concerns about Three-Year Limit on Technical Corrigenda

#### Resolution 12-06: Technical Corrigenda Three-Year Limit

JTC 1 SC 22 Programming Language standards are large, complex documents that contain hundreds of pages of very formal language. Once a programming language standard is published, it may take commercial vendors a few years to release conforming compilers and library systems. Defects are found in both the implementation phase and in the end-user phase. Because of this, technical corrigenda for a programming language standard may be issued several years after publication of the standard. Preventing an SC from publishing such technical corrigenda would result in such defects remaining in the language for years before the next revision.

Due to the above reasons, JTC 1 SC 22 does not support the 3-year restriction, as it is inappropriate. Many JTC 1 standards must continue to be maintained for the life of the implementation and this can be measured in decades rather than years.

JTC 1 SC 22 thanks JTC 1 SWG on the Directives for identifying this issue, and asks the JTC 1 Plenary and the JTC 1 Chair to pursue this issue with ISO on its behalf, as the retention of such a rule would have lasting harmful effects on programming language standards.

### 4.3 Concerns about Requiring the use of eCommittees by SCs and WGs

#### Resolution 12-17: Objection to Requirement of eCommittee use by SCs and WGs

JTC 1 SC 22 was one of the first JTC 1 SCs to use LiveLink for its document repository. However, few National Bodies have authorized their delegates to JTC 1 SC 22 and all those who participate in briefing those delegates to have direct access to JTC 1 SC 22 documents. If extended to the WGs, the increased diversity of participation from many communities would exacerbate the problem. As such, JTC 1 SC 22 and its WG convenors see this situation as preventing its WGs from also using the eCommittee facility.

## **Business Plan for ISO/IEC JTC 1/SC 22, 2011-10 through 2012-09**

### **Resolution 12-18: Request for Rationale for Requirement of eCommittee use by SCs and WGs**

JTC 1 SC 22's WGs have existed in one form or another for 10-30+ years and the systems that they use currently work well. JTC 1 SC 22 and its WG members do not understand the nature of the problem that would be solved by a requirement to use eCommittee and would greatly appreciate an explanation.