WG21/N1157
J16/98-0014

Business Plan and Convener's Report
ISO/IEC JTC1/SC22/WG21 (C++)

PERIOD COVERED:
June 1997 - May 1998

SUBMITTED BY:
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1. MANAGEMENT SUMMARY

1.1 JTC1/SC22/WG21 STATEMENT OF SCOPE

Development of ISO/IEC Standards related to the programming language C++.

1.2 PROJECTS UNDERWAY

JTC1.22.32 - Programming Language C++

The final text of FDIS 14882 was prepared by Project Editor Andrew Koenig in December 1997. Ballotting of the FDIS began on 1998-04-23 and terminates on 1998-06-23.

2.0 PERIOD REVIEW

2.1 MARKET REQUIREMENTS

WG21 believes that well in excess of one million people are programming in C++, and that this marketplace is very eager for the ISO C++ Standard to be completed.

2.2 ACHIEVEMENTS

The C++ CD was ballotted between May 28 and September 28, 1995 (CD 14882, SC22/N1824). Ballot responses included a large number of substantive comments. WG21 spent three meetings (November 1995, March 1996, and July 1996) resolving the comments, and prepared a new working draft for a second CD ballot shortly afer the November meeting.

The second C++ CD was ballotted between Jan 24 and Jun 9 1997 (CD 14882, SC11/N2356). Ballot responses were successfully addressed at the July 13-18 1997 London meeting and the November 9-14 meeting in Morristown, New Jersey. Written communications were received by the Convener indicating that the delegations from the national bodies which had previously voted No were now satisfied with the eventual decisions from those meetings.

2.3 RESOURCES

The Working Group had its first meeting 18-19 June 1991, and has now met 18 times -- three times per year -- in co-located technical sessions with US committee J16. Twelve countries have been represented at the meetings: Australia, Canada, Denmark, France, Germany, Ireland, Japan, Netherlands, New Zealand, Sweden, UK, and the USA.

The Working Group has been monitoring cross-language standards activities. We are using the WG20 guidelines on extended characters. We have also tried to remain as close to the requirements of the LIA-1 standard as possible, but have not produced an explicit binding document.

WG21 has several liaison appointments:

Group	Subject	Liaison
WG11	Language Independent Datatypes	Keld Simonsen
WG14	C	Tom Plum
WG15	POSIX	Nobuo Saito
WG20	Internationalization	Keld Simonsen
SC24/WG6	Multimedia presentation and interchange	Karl Soop

3.0 FOCUS NEXT WORK PERIOD

The complete list of former and current target dates is shown below. (Some target dates have been revised to agree with the SC22 Secretariat's records, to create a more consistent historical record.)

Original date	New date	Event
9/90	(completed)	USA requested to submit C++ New Work Item Proposal
4/91	(completed)	Approved C++ NP
6/91	(completed)	First meeting of WG21
12/93	(completed)	Circulate informal draft within SC22
7/94	(completed)	Vote to register WD as CD; Mtg #10.
9/94	(completed)	Complete editorial corrections; provide WD to SC22.
10/94	(completed)	Begin CD registration ballot.
3/95	(completed)	Complete CD registration ballot resolutions; Mtg #12.
5/95	(completed)	Begin CD ballot.
3/96	(completed)	Complete CD ballot resolution; Mtgs #14-17
5/96	(completed)	Begin second CD ballot
12/96	11/97 (completed)	Complete second CD ballot resolution; Mtg #19, 20
5/97	12/97 (ballot began 4/98)	Begin FDIS ballot
1/98	3/98 (ballot closes 6/98)	FDIS ballot results. Send IS to ITTF (with final report).

3.1 DELIVERABLES

As detailed in the schedule, we anticipate FDIS 14882 to be approved during third quarter 1998.

3.2 STRATEGIES

The schedule required that WG21 complete the editing and review of DIS 14882 during the 5-day November 1997 meeting in Morristown, New Jersey. This was accomplished, and WG21 had previously accomplished the same process at the 5-day November 1996 meeting in Kona Hawaii.

3.2.1 RISKS

None foreseen at this point.

3.2.2 OPPORTUNITIES

The electronic distribution processes (email, ftp, and WWW) may allow more efficient post-approval activities (Defect Reports, etc).

3.3 WORK PROGRAM PRIORITIES

Successful balloting of FDIS 14882 is our priority during 1998. Also, at its March 1998 meeting in Sophia Antipolis, France, WG21 initiated discussion of its Defect Report procedures.

4. OTHER ITEMS

This section lists other items that are not part of the "Business Plan" but are appropriate for Convener's Report.

4.1 POSSIBLE ACTION REQUESTS AT FORTHCOMING PLENARY

[none as of now]

4.2 APPOINTMENT OF NEW CONVENER

At the SC22 Plenary in London, September 1996, Thomas Plum (USA) was appointed as convener of WG21. He follows Sam Harbison (USA) who had served as convener since the 1994 SC22 Plenary.

4.3 PROJECT EDITOR

The following individuals have been appointed project editors and backup project editors, respectively:

JTC1.22.32 - Programming Language C++
Andrew Koenig (Project Editor), Thomas Plum (backup)

4.4 ELECTRONIC DOCUMENT DISTRIBUTION

WG21 has conducted much of its detailed technical discussion using email reflectors provided by courtesy of AT&T and Andrew Koenig (Project Editor of WG21).

In addition to the e-mail reflectors, WG21 has had its own ftp and Web sites provided by courtesy of Warwick University and Steve Rumsby. These sites are in the process of being transferred to Keld Simonsen's facilities in Denmark, with further support from facilities provided by Brendan Kehoe (Cygnus Support) in the USA.

4.5 RECENT MEETINGS

No.	Date	Location	Standards Body & Corporate Sponsor
16	Jul 7-12, 1996	Stockholm, Sweden	ITS Ellemtel
17	Nov 10-15, 1996	Hawaii, USA	ANSI Plum Hall, Inc.
18	Mar 9-14, 1997	Nashua, NH, USA	ANSI Digital Equip. Corp.
19	Jul 13-18, 1997	London, UK	BSI Programming Research
20	Nov 9-14, 1997	New Jersey, USA	ANSI AT&T
21	Mar 8-13, 1998	Sophia Antipolis, FR	AFNOR Ilog

4.6 FUTURE MEETINGS

No.	Date	Location	Standards Body & Corporate Sponsor
22	Oct 7-9, 1998	San Jose, CA, USA	ANSI, Silicon Graphics
23	Apr 11-16, 1999	Dublin Ireland	Irish standards, Iona