

Business Plan and Convener's Report
ISO/IEC JTC1/SC22/WG14 (The Programming Language C)

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1. MANAGEMENT SUMMARY

1.1. JTC1/SC22/WG14 STATEMENT OF SCOPE

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

1.2. PROJECT REPORT

1.2.1. COMPLETED PROJECTS

JTC1.22.20.01 – Programming Language C (Revision of ISO/IEC 9899:1990), this project was delivered by the publishing of ISO/IEC 9899:1999.

JTC1 NP 18037, Extensions for the programming language C to support embedded processors. This is a Technical Report type II.

JTC1 NP 19769, Specification for Additional Character Data Types to the Programming Language C. This is a Technical Report type II.

1.2.2. PROJECTS UNDERWAY

JTC1 NP 24731, Specification for Secure C Library Functions. This is a Technical Report type II.

JTC1 NP 24732, Extensions for the programming language C to support decimal floating point arithmetic. This is a Technical Report type II.

1.2.3. CANCELLED PROJECTS

None over this period.

1.2.4. COOPERATION and COMPETITION

Where appropriate, WG14 has established active liaisons with other SC22 working groups. There is no apparent direct competition with any other current SC22 working group.

2. PERIOD REVIEW

2.1. MARKET REQUIREMENTS

WG14 feels that it is responding to user community pressure and to implementers concerns by revising the ISO/IEC 9899:1995 standard on schedule. WG14 believes this new ISO/IEC 9899:1999 answers many concerns and keeps the International Standard for the C programming language current with today's programming trends and market. The evolution of Object Oriented programming, numerical extensions that were proposed by J11.1, internationalization, advancements in character set standardization, cross-language standards and cross-language bindings all were considered in the newly revised standard. These issues were also taken into consideration with the projects JTC1 NP 18037 and JTC1 NP 19769, both are soon to published type II Technical Reports. WG14 is responding to the security issues of the C programming language with the new project JTC1 NP 24731. Many of these issues were considered during the technical discussions for the original ISO C Standard ISO/IEC 9899:1999. Please, see document ISO/IEC JCT 1/SC22 N2265 "Charter for the Revision of the C Standard" for more details.

2.2. ACHIEVEMENTS

WG14 has worked on Defect Reports, keeping the Defect Report Log current for the 9899:1999 Standard, submitting a Technical Corrigendum II for ballot, see SC22 N3744. Good progress has been made on TR 19769 "Specification for Additional Character Data Types to the Programming Language C" with the Committee submitting the final version for publication. WG14 has made very good progress on the TR 18037 "Extensions for the programming language C to support embedded processors", submitting the final version for publication. WG14 has also submitted two new work item requests, one for specifying a secure C library and the other to specify the addition of decimal floating-point both have been approved. See SC22 N3704 and SC22 N3720.

2.3. RESOURCES

WG14 meets two times per year in co-located technical sessions with the US committee NCITS J11. Over the past year, WG14 has timed its technical sessions to coincide with WG21, allowing those technical experts that would like to attend both technical sessions the opportunity to do so. (The WG14 Convener would like to thank the WG21 Convener for the extended effort it takes to coordinate common meeting locations and liaison between the two working groups.) Twelve countries participate by attending these meetings or by being involved in the technical discussions that take place over the reflector. The countries are: Australia, Canada, Denmark, France, Germany, Ireland, Japan, Netherlands, Norway, Sweden, UK, and the USA.

WG14 has been monitoring the cross-language standards activities, and are using the ISO/IEC JTC 1/WG20 guidelines on extended characters. WG14 has also keeps apprised of the requirements of the LIA-1, 2 standards.

WG14 liaison appointments are:

| Group | Name | Person assigned |
|-------|--------------------------------|-------------------------------------|
| WG11 | Language Independent Datatypes | Willem Wakker |
| WG15 | Posix | Keld Simonsen ¹ |
| WG20 | Internationalization | Keld Simonsen |
| WG21 | C++ | Group liaison assigned ² |

3. FOCUS NEXT WORK PERIOD

WG14 will focus on the new work item JTC1 NP 24731, a type II technical report; see ISO/IEC SC22 N3704, and work item JTC1 NP 24732, see SC22 N3720. The Committee discussed several other possible new work items, there seems to be interest to start work on a Technical Report Type II for additional special math functions. The other items identified are:

1. Conformance
2. Sequence Points
3. Time

3.1. DELIVERABLES

None.

3.2. STRATEGIES

WG14 believes that routine handling will suffice to complete the progress desired.

3.3. RISKS

No problems are anticipated.

3.4. OPPORTUNITIES

None.

3.5. WORK PROGRAM PRIORITIES

WG14 will concentrate on the new work item NP 24731 and work item NP 24732, however WG14 will still respond to Defect Report logged for the current ISO/IEC 9899:1999 Standard.

4. OTHER ITEMS

4.1. POSSIBLE ACTION REQUESTS AT FORTHCOMING PLENARY

None

4.2. WG14 SUPPORTS SC22 N2718

WG14 supports the action requested in ISO/IEC JTC 1/SC22 N2718.

¹ WG15 is no longer active, at the next WG14 meeting this liaison will be reviewed.

² Dinkumware, Glassborow, Intel, Oracle, Plum Hall, Perennial, Sun Microsystems.

4.3. PROJECT EDITORS

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

JTC1.22.20.01 Programming Language C (Revision of ISO/IEC 9899:1990)
Larry Jones (Project Editor), Douglas Walls (Backup Project Editor)

JTC1 NP 18037, Extensions for the programming language C to support embedded processors.
Willem Wakker (Project Editor), John Benito (Backup Project Editor)

JTC1 NP 19769, Specification for Additional Character Data Types to the Programming Language C.
Nobuyoshi Mori (Project Editor), John Benito (Backup Project Editor)

JTC1 NP 24731, Specification for Secure C Library Functions
Randy Meyers (Project Editor), P. J. Plauger (Backup Project Editor)

JTCE NP 24732, Extensions for the programming language C to support decimal floating point arithmetic
P. J. Plauger (Project Editor), John Benito (Backup Project Editor)

4.4. ELECTRONIC DOCUMENT DISTRIBUTION

WG14 has conducted much of its detailed technical discussion using email reflector provided by the Danish UNIX Users Group and Keld Simonsen.

WG14 also has an ftp and Web site provided by courtesy of the Danish UNIX Users Group and Keld Simonsen.

WG14 is now providing all the appropriate committee documents on the Committee Web site, eliminating the need for paper mailings.

4.5. RECENT MEETINGS

| | | | |
|-------|--------------|--------------------------------|------------------------|
| 05-09 | Feb 1996 | Irvine, CA USA | ANSI |
| 24-28 | Jun 1996 | Amsterdam, NL | NEN |
| 21-15 | Oct 1996 | Toronto, Canada | SCC, IBM |
| 23-27 | Jun 1997 | London, UK | BSI, Plum Hall Europe |
| 20-24 | Oct 1997 | Menlo Park, CA USA | ANSI, Sun Microsystems |
| 02-06 | Feb 1998 | Frisco, CO USA | ANSI Keaton Consulting |
| 23-27 | Jun 1998 | Copenhagen, Denmark | Danish Standards |
| 05-09 | Oct 1998 | Santa Cruz, CA USA | ANSI, SGI/Cray |
| 01-05 | Feb 1999 | Portland, OR USA | ANSI, Intel Corp. |
| 21-24 | Jun 1999 | London, UK | BSI |
| 18-23 | Oct 1999 | Kona, HI USA | ANSI, Plum Hall |
| 10-14 | Apr 2000 | Tokyo, Japan | ITSCJ, NEC |
| 16-20 | Oct 2000 | Toronto, Canada | SCC, IBM |
| 23-27 | Apr 2001 | Copenhagen, Denmark | Danish Standards |
| 16-20 | Oct 2001 | Redmond, WA USA | ANSI, Microsoft |
| 15-19 | April 2002 | Curacao, Netherlands Antilles; | NNI, Netherlands |
| 14-20 | Oct 2002 | Santa Cruz, CA USA | ANSI, Dinkumware |
| 31-04 | Mar/Apr 2003 | Oxford, UK | BSI, ACCU |
| 21-24 | Oct 2003 | Kona, HI USA | ANSI, Plum Hall |
| 29-02 | Mar/Apr 2004 | Sydney, Australia | SA, Whitesmiths |

4.6. FUTURE MEETINGS

| | | | | |
|-------|------|------|---------------------|-----------------|
| 25-29 | Oct | 2004 | Redmond, WA USA | ANSI, Microsoft |
| 04-08 | Apr | 2005 | Lillehammer, Norway | NS |
| __-__ | Sept | 2005 | Canada | SCC |
| __-__ | Apr | 2006 | Germany | DIN, SAP |