Business Plan and Convener's Report
ISO/IEC JTC 1/SC 22/WG 14 (The Programming Language C)

Document:
 ISO/IEC JTC 1/SC 22/WG 14 N1390

Date:
 2009-06-11

PERIOD COVERED:
 July 2008 – July 2009

SUBMTTED BY:
 Convener, ISO/IEC JTC 1/SC 22/WG 14
 John Benito
 Blue Pilot
 P.O. Box 2998
 Santa Cruz, CA 95063-2998
 USA

 Phone: +1 (831) 427-0528
 Email: John Benito

1. MANAGEMENT SUMMARY

1.1. JTC 1/SC 22/WG 14 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

JTC 1.22.20.01 – Programming Language C (Revision of ISO/IEC 9899:1990), this project was delivered by the publishing of ISO/IEC 9899:1999.

JTC 1 NP 18037, Extensions for the programming language C to support embedded processors.   This is a Technical Report type II.

JTC 1 NP 19769, Specification for Additional Character Data Types to the Programming Language C. This is a Technical Report type II.

JTC 1 NP 24731, Extensions to the C Library, ⎯ Part I: Bounds-checking interfaces. This is a Technical Report type II.

JTC 1 NP 24732, Extensions for the programming language C to support decimal floating point arithmetic. This is a Technical Report type II.

JTC 1 NP 24747, Extensions for the C Standard Library to Support Mathematical Special Functions. This is an International standard.

1.2.2. PROJECTS UNDERWAY

JTC 1 NP 24731, Extensions to the C Library – Part 2: Dynamic Allocation Functions. This is a Technical Report type II.

1.2.3. CANCELLED PROJECTS

None over this period.

1.2.4. COOPERATION and COMPETITION

Where appropriate, WG 14 has established active liaisons with other SC 22 working groups. There has been some dialog with the MISRA C working group to setup a category C liaison. There is no apparent direct competition with any other current SC 22 working group.

2. PERIOD REVIEW

2.1. MARKET REQUIREMENTS

WG 14 feels that it responded to user community pressure and to implementers concerns when the ISO/IEC 9899:1995 standard was updated on schedule. WG 14 believes that the ISO/IEC 9899:1999 standard answered many concerns and kept the International Standard for the C programming language current; however with today's programming trends and market WG 14 believes it is time to once again revise the C standard. See WG 14 N1250.

WG14 believes the newly published TR 18037, TR 19769, TR 24731 Part I, TR 24732, IS 24747, and the ongoing work on TR 24731 Part II address important issues that benefit the entire C community.

2.2. ACHIEVEMENTS

- WG 14 has worked on Defect Reports; keeping the Defect Report Log current for the 9899:1999 Standard. There are no `open` defect reports in the WG 14 defect report log.
- WG14 has worked on all the Defect Reports filed for TR 18037; the Defect Report Log for TR 18037 is current.
- An updated version of TR 18037 has been published; see SC 22 N4279.
- The TR 24731 Part I has been published.
- The TR 24732 has been published.
- The IS 24747 has been published.
- The text for PDTR 24731 Part II is very close to publication; see SC 22 N4176, and SC 22 N4408.

2.3. RESOURCES

WG 14 meets two times per year in co-located technical sessions with the US Task Group INCITS PL22.11. Over the past several years, WG 14 has timed its technical sessions to coincide with WG 21, allowing those technical experts that would like to attend both technical sessions the opportunity to do so without extra travel. The WG 14 Convener would like to thank the WG 21 Convener for the extended effort it takes to coordinate common meeting locations and liaison between the two working groups. Thirteen 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, Russia, Sweden, UK, and the USA.

WG14 has been monitoring the cross-language standards activities, and are using the ISO/IEC JTC 1/WG 20 guidelines on extended characters. WG 14 has also keeps appraised of the requirements of the LIA-1, 2 standards.

WG14 liaison appointments are:

Group	Name	Person assigned
WG 11	Language Independent Datatypes	Willem Wakker
WG 21	C++	Group liaison assigned[1]
FSG	Free Standard Group	Nick Stoughton
WG 23	Vulnerabilities	Tom Plum

3.   FOCUS NEXT WORK PERIOD

WG14 will focus on:

- Work item JTC 1 NP 24732, a type II technical report; see SC 22 N3720, N3740 and N4060. The IEEE finally published the revised 754 Standard in July of this year. WG 14 will review the IEEE 754R and make any appropriate changes to keep the text of TR 24732 consistent with IEEE 754R, then forward the TR for ballot and publication.
- Work item JTC 1 NP 24747, an international standard, see SC 22 N3814, and N4201.
- Work item JTC 1 NP 24731 Part II, a type II technical report, see SC 22 N4176.

The Committee has discussed several other possible new work items, but believes it is time to start working on a revision of the standard. See WG 14 N1250.

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

WG 14 will concentrate on the work item NP 24731 Part II. WG 14 will respond to any Defect Reports logged for the current ISO/IEC 9899:1999 Standard and the two published Technical Reports TR 18037, TR 19769, TR 24731–1, and IS 24747. WG 14 has started the process of revising the C standard.

---

[1] Dinkumware, Intel, Microsoft, Oracle, Plum Hall, Perennial, and Sun Microsystems.

4.   OTHER ITEMS

4.1.   POSSIBLE ACTION REQUESTS AT FORTHCOMING PLENARY

None.

4.2.   PROJECT EDITORS

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

JTC 1.22.20.01, Programming Language C (Revision of ISO/IEC 9899:1990)
        Larry Jones (Project Editor), David Keaton (Backup Project Editor).

JTC 1 NP 18037, Extensions for the programming language C to support embedded processors.
        Willem Wakker (Project Editor), John Benito (Backup Project Editor)

JTC 1 NP 19769, Specification for Additional Character Data Types to the Programming
Language C.
        Nobuyoshi Mori (Project Editor), John Benito (Backup Project Editor)

JTC 1 NP 24731, Extensions to the C Library – Part I: Bounds-checking interfaces
        Randy Meyers (Project Editor), P. J. Plauger (Backup Project Editor)

JTC 1 NP 24731, Extensions to the C Library – Part 2: Dynamic Allocation Functions.
        John Benito (Project Editor)

JTC 1 NP 24732, Extensions for the programming language C to support decimal floating point
arithmetic
        Edison Kwok (Project Editor), P. J. Plauger (Backup Project Editor)

JTC 1 NP 24747, Extensions for the Standard Library of the Programming Language C to Support
Mathematical Special Functions
        P. J. Plauger (Project Editor), John Benito (Backup Project Editor)

4.3.   ELECTRONIC DOCUMENT DISTRIBUTION

WG 14 has conducted some of its detailed technical discussion using email reflector provided by
the Danish UNIX Users Group, Copenhagen University College of Engineering and Keld
Simonsen.

WG 14 also has an ftp and Web site provided by courtesy of the Copenhagen University College
of Engineering, Danish UNIX Users Group and Keld Simonsen.

WG 14 uses a secure wiki setup and maintained by Dinkumware, Ltd. This wiki is used for quick
exchange of documents during and between meetings.

WG 14 is now providing all the appropriate committee documents on the Committee Web site,
eliminating the need for paper mailings.

4.4.   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	Apr 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, Dinkumware
25-29	Oct 2004	Redmond, WA USA	ANSI, Microsoft
04-08	Apr 2005	Lillehammer, Norway	SN, RAP, Dinkumware
25-28	Sep 2005	Mt Tremblant, Canada	SCC
27-31	Mar 2006	Berlin, Germany	DIN, SAP
23-27	Oct 2006	Portland, OR USA	ANSI, Intel Corp
23-26	Apr 2007	London, UK	BSI
08-11	Oct 2007	Kona, HI USA	ANSI, Plum Hall
14-18	Apr 2008	Delft, Netherlands	NIN, ACE
08-12	Sept 2008	Santa Clara, CA USA	ANSI, Cisco Systems
30-04	Mar/Apr 2009	Toronto, Canada	SCC, IBM

4.5. FUTURE MEETINGS

26-30	Oct 2009	Santa Cruz, CA USA	ANSI, Plantronics
19-23	Apr 2010	Florence, Italy	Università Firenze