Disposition of Comments on SC22/N1443, Normative Addendum to ISO/IEC 9899:1990 Programming Language C

10 February 1994

SC22/N1531 provides the summary of voting and comments received on the Proposed Draft Amendment (PDAM) to ISO/IEC 9899:1990. Briefly, we in committee WG14 were informed that:

10 members supported PDAM registration without comments
 3 members did not support PDAM registration
 1 member abstained
 8 did not vote

We also received a number of suggestions for small improvements and minor corrections through less formal channels from various members of SC22, which we have gratefully incorporated.

WG14 met 1-3 December 1993 in Kona, Hawaii and reviewed these votes and comments. Four members sent delegations of technical experts: Denmark, Japan, United Kingdom, and USA. After careful deliberation, the committee voted to make a number of revisions to the PDAM. Once the PDAM is revised and reviewed, the Convener is instructed to submit the document for final balloting as a Draft Amendment (DAM). The committee believes this is the best course of action even though we were unable to resolve two of the negative votes in the most recent ballot. To justify this course of action, we first detail our responses to all the comments received with the summary of voting. Then we summarize the progress we've made toward achieving greater consensus.

Japan voted not to support registration of the PDAM, unless a number of comments were accepted. The first called for the addition of an informative annex describing the rationale for producing the Normative Addendum (NA), which they kindly provided. The remaining comments pointed out a number of typographical and other minor errors. The committee agreed to accept all these comments, and the Japanese delegation indicated that Japan was accordingly changing its vote to support registration of the revised PDAM.

Netherlands voted not to support registration, with the comments:

> The NNI regrets that it has to vote against
> SC22/N1443. The NNI does not wish to support the solu-
> tion offered for the usage of C with national vari-

ants of the ISO 646 character set. This solution is
contained in clauses 2, 3 and 4.4 of N1443.

There is pressure from countries using national vari-
ants of ISO 646 to have a standard way of expressing
C in the invariant subset of ISO 646 that is more aes-
thetically pleasing than the trigraph solution that
is embedded in the current C standard. We understand
their wish. But we have come to the conclusion that
we do not see an acceptable way of realizing this
wish. We see three criteria for proposed solutions:
completeness, aesthetics and technical cleanness.

☐   The solution in N1341 is both incomplete and over-
complete. Incomplete because no solution is of-
fered inside strings and literal characters.
Overcomplete because, to remain consistent with
macro definitions for characters in the variant
subset, it also contains macro definitions for
the invariant subset; e.g. **and_eq** for **&=**, because
or_eq needs to be defined as **|=**.

☐   The result is barely aesthetically acceptable.

☐   The proposal is technically feasible, but unsatis-
factory. The solution uses two technically differ-
ent approaches to solve the same problem;
alternate spelling of tokens and macro defini-
tions.

Standardization of macro definitions is, strictly
speaking, not necessary. Users can create their
own sets of definitions, without threatening port-
ability.

The use of the macro names **and_eq** and **not_eq** is
confusing. **and_eq** is to be used as replacement
for the assignment operator **&=**, while **not_eq** is
to be used as replacement for the comparison op-
erator **!=**.

The proposal also seems to be in conflict with
the emerging C++ standard with respect to the di-
graphs **<:** and **%:**.

We would further like to make the following two obser-
vations:

1. Usage of ISO 8859-1 (Latin-1), which solves this
problem, is becoming widespread.

2. We expect that the proposed solution will be little used. Programs written in the ISO 646 invariant representation of C look so different from the current representation that they will be hard to maintain for people used to the current representation, i.e. the rest of the world. We expect that for this reason a large part of the community in countries that stated interest in this proposal will keep on using the current representation of C.

Furthermore, only a few of the countries with national variants of ISO 646 have expressed interest in this proposal.

The proposal in clauses 2, 3 and 4.4 is not good enough to be acceptable, even as a compromise. Especially because it solves a disappearing problem. We see no reason to burden the international community with this part of N1443.

The rest of N1443 is a worthwhile document that we welcome. We will support N1443 if the objections mentioned above are taken away by removing the clauses 2, 3 and 4.4.

In response, WG14 noted that these are essentially the same comments presented by the Netherlands when it voted not to support registration of the NA as a Committee Draft (CD). We have been unable to determine an intermediate position that will satisfy the Netherlands, short of eliminating the specified clauses. At least two other members have indicated an unwillingness to do so.

We also noted that the apparent conflict with C++ does not seem to be a problem. Our liaison to WG21 (C++) has informed that committee of the current technical content of the PDAM and WG21 has taken no position on the matter.

UK voted not to support registration, with the comment:

The following have not been deleted, as requested in our vote on N1341: Clauses 2, 3, 3.1, and 4.4. Deletion of these clauses will change our vote to approval.

After deliberation, the technical experts representing the UK at the WG14 meeting could identify no intermediate position short of eliminating these clauses.

Summary

Our belief is that we can now count eleven members in support of
PDAM registration and two opposed. Both members who remain op-
posed also opposed registration of the NA as a CD, for essen-
tially the same reasons. We in WG14 do not believe that we can
make technical changes to the NA to make it more acceptable to
these to members without losing support of at least two other
members.

We repeat our observation from the preceding Disposition of Com-
ments on CD registration. The overwhelming bulk of the NA now
stems from a proposal by Japan to significantly enhance the capa-
bilities within ISO C to manipulate large character sets. That
large component has achieved widespread support. Indeed, some of
the support is enthusiastic and none has been grudging.

We in WG14 would not like to see honest differences of opinion
over the added digraphs and macros dominate the wider perception
of the NA to C. We consider the C community well served by regis-
tering the NA, as revised, as a PDAM.

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