

SUMMARY OF EDITS RR2/TL2

W614/N438

X3J11/95-03

> From cix.compulink.co.uklbsi_neil Wed Mar 29 15:59:41 1995 remote from uunet
> Received: by plauger.UUCP (UUL1.3#20134)
> from uunet with UUCP; Wed, 29 Mar 95 17:45:53 EST
> Received: from tom.compulink.co.uk by relay1.UU.NET with SMTP
> id QQyjex10248; Wed, 29 Mar 1995 15:59:41 -0500
> Received: from gonzales.compulink.co.uk (gonzales.compulink.co.uk [192.188.69.4]) by
tom.compulink.co.uk (8.6.9/8.6.9) id VAA19726 for pjp@plauger.com; Wed, 29 Mar 1995
21:59:33 +0100
> Date: Wed, 29 Mar 95 21:59 BST-1
> From: uunet!cix.compulink.co.uklbsi_neil (Neil Martin)
> Subject: Defect Report Log
> To: uunet!plauger.comlpjp
> Reply-To: uunet!cix.compulink.co.uklbsi_neil
> Message-Id: <memo.355974@cix.compulink.co.uk>

>
> Bill,

> Sorry about the delay but here are the minor issues I have picked up.

> DR 65, Page 8

> The addition of locale-specific issues to G4 raises the issue of whether
> the definition of a strictly conforming program in section 4 needs
> adjusting along with the requirement to document locale specific details.

May be true. No specific change suggested.

> DR 69, page 14-15

> If the document is to be printed "as is" then the pagination could be
> better at this point

Will check pagination before final runoff.

> DR73, page 21

> The translation unit given needs a
> #include<stdlib.h>

Done.

> DR78, page 27

> #Include needs a lower case i

Done.

> p.s I would appreciate if you have an on-line copy of the WG document
> list you could mail be the list with documents numbered since the Kona
> meeting.

> Regards

> Neil Martin

>
> From arl.millgwyn Mon Apr 3 19:45:56 1995 remote from uunet
> Received: by plauger.UUCP (UUL1.3#20134)
> from uunet with UUCP; Mon, 3 Apr 95 22:39:38 EST
> Received: from wharf.arl.mil by relay1.UU.NET with SMTP
> id QQyjxv22427; Mon, 3 Apr 1995 19:45:56 -0400
> Received: from vgr.arl.mil by wharf.arl.mil id ac21840; 3 Apr 95 19:36 EDT
> Date: Mon, 3 Apr 95 22:48:17 GMT
> From: uunet!arl.millgwyn

DR/TC2 review, page 2

> Subject: Gwyn comments on RR#2/TC#2 draft
> To: uunet!plauger.com!pjp, uunet!arl.millgwyn
> cc: uunet!farance.com!frank, uunet!cix.compulink.co.uk!bsi_neil,
> uunet!sefault.us.com!rfg
> Message-ID: <9504032248.aa14423@VGR.ARL.MIL>
>
> GWYN'S COMMENTS ON "FINAL" DRAFT OF RR#2/TC#2 03-Apr-1995
>
> Sorry it took me so long to complete my review. The good news is that I
> didn't find anything requiring non-editorial change. However I did find
> numerous small typos etc. and some responses where I think editorial
> changes are needed. I tried to check citations against the Standard
> and to improve consistency (e.g. some TCs give page and line numbers but
> most do not). One of Frank Farance's suggestions was incorrect, as noted
> in the following which includes some (or all?) of his corrections and
> discussion of points he raised questions about.
>
> DR#060 p.1: In Correction, before the comma insert " before the
> [bold]Examples[bold italic]"

Done.

> DR#065 p.7: In Response, 3rd paragraph, change entire 1st line to:
> The Committee believes that the first occurrence of the term
> "implementation defined" in

Done.

> In Correction, italicize "initial shift state" and "shift states" in both
> the original and changed (p.8) text from the Standard. p.8: Agree with
> FF that "C locale" should be "[courier]"C"[roman] locale". Also in the
> Annex G changes, "from subclause G.3" should be "under subclause G.3" as
> the way we use the term, subclause G.3 does not contain the text of G.3.4
> for example.

Done.

> DR#067 p.10: In Question (by the way, these DRs are all "Question 1",
> which suggests that we can get rid of the " 1"), 1st paragraph, insert
> "subclause " in front of "6.1.2.5" and "6.5.2". In Response a), capitalize
> the first S (in "signed integer type").

Done.

> DR#068, p.11: FF asks whether we answered part c). I assert that it is
> implied by our answer; it "behaves [the same as unsigned char] in every
> instance". No change suggested.

No change made.

> DR#069, p.15: Agree with FF about the bad page break (in middle of diagram).
> In Response d), change ": does the C standard" to ": Does the C Standard",
> and insert "subclauses " before "7.9.2". In Response e), change ": does"
> to ": Does". In Response m), delete "representation of " (redundant).

Done.

> DR#070, p.16: In Question, 1st line ("Item 7"), fix spelling (should be
> "interchangeability"). Insert "subclause " before "6.3.2.2".

Done.

- > DR#071, p.17: In Correction, original standard text, change ". The" to
> ">"; the".

Done.

- > DR#072, p.20: In Response c), 3rd line, change "at" to "to". (To me, "at"
> implies the exact size while "to" implies the starting location.)

Done.

- > DR#073, p.21: FF's suggestion to use "C_PER_D" is wrong; the original
> example is correct. In Response, Lines A, B, C, 1st line, change "at" to
> "to", and in 2nd line change "struct" to "structure". In Response, Line D,
> change "struct" to "structure". In Response, Line E, change the 1st
> "struct" to "structure", and change the 2nd and 3rd "struct"s to
> "[courier]struct complex[roman]". In Response, Lines I, J, K, L, M, N,
> change "structs" to "structures".

Done.

- > DR#074, p.22: In Question f), change "structured" to "structure". In
> Response, 2nd paragraph, change "implementation defined" to
> "implementation-defined", change "holes" to "padding", and add a comma
> after "object" (before " ..."). p.23: In Response e), change the 1st
> "padding" to "alignment".

Done.

- > DR#076, p.25: In middle of page, insert "subclause " before "6.3.3.2".
> FF asks what it means for the issue to be open. I think the exact meaning
> is just what follows in our response. In fact (although not to be included
> in our response), Plum promised to work on words for a Correction to "fix"
> the "problem". Some of us don't think that this is feasible or necessary..
> Rather than leave a hole in the RR, I suggested that the tentative response
> be provided, which leaves it open for further debate and possible correction
> later, maybe even in C9x.

Corrected typo.

- > DR#078, p.27: Agree with FF that "#Include" should be "#include". Also
> agree with changing 19 to 17: in the example change the first "19" to "17"
> and change ">= 19" to "> 0"; in Response a) iii), change "19" to "17". Also
> in a) iii), I think we should not mention CPUs etc., so change "On a binary
> arithmetic CPU" to "However,". In Response a) ii), italicize "no linkage".
> In Response d), change "definition of" to "definition for", and italicize
> the next occurrence of "definition".

Done.

- > DR#080, p.30: In Correction, after "6.1.4" insert " before the [bold]Example
> [italic]".

Done.

- > DR#081, p.31: In Question, 2nd paragraph, insert "subclause " before
> "6.1.2.5". In Response, delete ", page 38,", change "'`what" to
> "'`What", change "value"" to "value?""", and change "implementation defined"
> to "implementation-defined".

Done.

- > DR#082, p.33: In Question a), last line, change "va_start" to
- > "[courier]va_start[roman]" (note close quote). In Question c), change
- > the first "." to "?". p.34: In Correction, after "second paragraph" add
- > " of the [bold]Description[bold italic]".

Done.

- > DR#083, p.35: In Correction, delete ", page 99, line 5" and add before
- > the colon " of the first paragraph".

Didn't delete the page reference. On the contrary, the TC requires such reference on all corrections, so I added them to all other Corrections instead.

- > DR#085, p.37: Missing "" after "\n" in printf invocation.

Done.

- > DR#087, p.39: In Question, interpretation 2), insert "subclause " before
- > "6.3".

Done.

- > DR#088, p.41: This was revised after the original Submission date and
- > perhaps that should be indicated (e.g. ", revised xx Dec 94"). In Question,
- > 3rd line (quote from Standard), change "are compatible" to
- > "have [italic]compatible type[roman]".

Done.

- > DR#089, p.43: In Correction, change "two places" to "the second and third
- > paragraphs".

Done.

- > DR#090, p.44: In Response, last paragraph, change ""the" to ""The",
- > put "%" in Courier font, and change "stream."" to "stream, ...".

Done.

- > DR#094, p.48: In Question, penultimate line of 1st paragraph, change
- > "constrain" to "constraint".

Done.

- > DR#095, p.49: In Question, quotation from 6.5.7, change "apply." to
- > "apply, ...".

Done.

- > DR#096, p.50: In Question, 1st paragraph, italicize "array type". In middle
- > of page, change "many/most" to "many". About 3/4 down the page, don't
- > italicize "the" (in "[italic]the[roman] simplest approach"). p.51: Align
- > the code in the function body. In Response, italicize "array type",
- > change "non-empty" to "nonempty", and italicize "element type" on 2nd line.

Done.

- > DR#097, p.52: In Question, suggested new text, change "struct" to "structure"
- > and change "enum" to "enumerated".

Done.

- > DR#098 p.53: In Question, 2nd indent, change postfix" to "postfix". In
- > Response, 2nd paragraph, change "side effects," to "[side effects,]" since
- > that text occurs only in 6.3.3.1 and we don't want anyone to think it should
- > also occur in 6.3.2.4. Next paragraph, italicize both "op"s and put parens
- > [Courier] around the second "E2". Final sentence has confusing referent
- > for "their" and ought to be reworded:
- > Since incomplete types and function types are not object types,
- > their use as operands of these operators is precluded.

Done.

- > DR#099, p.54: In Question, 1st indent, change "." to ", ...". In 2nd
- > indent, change "Cast" to "The cast". Just above the middle of the page,
- > line ending with "producing" ought to end with "produce" instead. Align
- > the function bodies of the code examples.

Done.

- > DR#101, p.56: In Question, about 1/3 down the page, after "return" in
- > Courier, "statement" should be in bold. About 1 inch later, the 1-liner
- > should be in Courier. At the end of the following indent, change "." to
- > ", ...". In Correction, change "page 41, lines 10-12" to
- > "[bold]Semantics[bold italic] section".

Done, but Correction page number retained, as before.

- > DR#102, p.57: In Question, at end of 1st indent, delete ""

Done.

- > DR#105, p.60: In Question, 2 lines before the final indent, change "th "
- > to "the" and change "rles" to "rules". (Is your character garbling
- > problem back?)

Done. And yes, it's still there.

- > DR#106, p.61: In Question, 1st indent, italicize "void expression", set
- > the next "void" in Courier, and add a comma after "way" (before " ...").
- > In middle of page (next indent), italicize 1st "lvalue" and delete extra
- > space in "incomplete type".

Done.

- > DR#107, p.63: In Question, 1st line, capitalize first letter of "synopsis"
- > and set in bold. Align function bodies in example code. In Response a),
- > capitalize first letter of "synopsis" and set in bold. In Response b),
- > change "requires no" to "does not require a" to prevent misunderstanding.

Done.

- > DR#108, p.64: In Question, 1st line, change "7.1.2.1" to "7.1.3".

Done.

- > DR#109, p.65: This was revised after the original Submission date and
- > perhaps that should be indicated (e.g. ", revised xx Jun 94"). In Question,
- > align function body in example code as FF suggested; also align comments.
- > In Response, end of 1st line, change "indeterminate valued" to
- > "indeterminately valued" (see p.3 of the Standard for a precedent).

Done.

- > DR#111, p.68: In Question, align function body code. In 1st indent, "void"
- > must be set in Courier. The next line needs to have the "):" rejoined to it
- > and put back into Roman. At the end of the last indent, change "..." to
- > "; ...". In Response, last line, insert "subclause " before "6.2.2.3".

Done.

- > DR#112, p.69: In Question, indent, italicize 1st "null pointer constant".
- > Change the following two occurrences of (Courier) "void"" to "void "".

Done.

- > DR#113, p.70: In question, 1st indent, set "void in Courier. Two lines
- > later, set "void" in Courier (in "the void type"). At end of next paragraph,
- > insert "subclause " before "6.6.6.4". In Response b), delete " code".

Done.

- > DR#114, p.71: In Question, 3rd indent, change" to ": ...". In
- > Response b), delete " code".

Done.

- > DR#115, p.72: In Question, align comments in sample code.

Done.

- > DR#116, p.73: In Question, indent, change "subclause 6.2.2.1" to "6.2.2.1".
- > Delete the comma after "Thus" on the same line. In Response b), delete
- > " code".

Done.

- > DR#117, p.74: In Question, about 2/3 down the page, change ""`occurrence""
- > to ""`occurrence"". 3rd line from bottom, change ", however" to
- > "; however,".

Done.

- > DR#118, p.76: In Question, "Subject:" line, change "enum" to "enumerated".
- > In 1st indent, insert "," before " ...". In 2nd indent, change "struct" to
- > "structure". About 3/5 down the page, line starting "The *real* problem",
- > change "struct" to "structure". Next line, change "enum" to "enumerated".
- > Two and three lines later, change "enum" to "enumerated". Three lines later,
- > change "enum" to "enumerated". Two lines later, change "struct" to
- > "structure". Two and three lines later, change "enum" to "enumerated".
- > On next p, last line, "sizeof" needs to be set in Courier. p.77: change
- > "#5..." to "#5;". In Correction, change ", page 61" to
- > "[bold]Semantics[bold italic]".

Done. Left page number in Correction, as before.

- > DR#120, p.79: In Question, Background, 1st indent, italicize "simple
- > assignment". About 2.5 inches from bottom, change "..." to ".,".
- > Discussion: We say the code is strictly conforming, but it isn't; the
- > bit-field arguments to printf in this example will promote to int (see
- > DR#015 and DR#122, with which I agree), so we should fix the code: Change
- > printf format "u"s to "d"s. (Alternatively, cast the arguments to (unsigned).)

Done.

- > DR#121, p.80: In Question, indent, delete first "the " and change "results"
- > to "result". The two paragraphs after "Here is a suggested replacement ..."
- > should be indented (block quote), and the "N"s in them should be italicized.

Done.

- > DR#123, p.82: in Question, 2nd indent, change "..." to ", ...". In 4th
- > indent, change "mentioned so far" to "so far mentioned", italicize
- > "unqualified type" and "qualified versions", and change "..." to ": ...".
- > In Response, last line, change "page 24" to "in the paragraph preceding your
- > last citation".

Done.

- > DR#124, p.83: In Question, "Subject:" line, second "void" must be in Courier.
- > In Correction, 1st line of original Standard text, "void" *must* be in Roman.
- > That is actually what motivated the whole DR.

Done.

- > DR#125, p.84: In Question, "Subject:" line, "extern" and "void" must be in
- > Courier. In the 2nd line of the paragraph beginning "The question raised",
- > capitalize the first letter of "semantics" and set the word in bold. At end
- > of 1st indent, change "." to "; ...". The next indent is messed up and
- > should be replaced with:
- > All declarations ... that refer to the same object or function
- > shall specify compatible types.

Done.

- > DR#127, p.86: In Question, 2nd indent, 1st line, italicize "compatible type"
- > and change "..." to "; ...". Delete following "...".

Done, except that I italicized 'composite type.'

- > DR#128, p.87: In Question, at end of paragraph after code example, change
- > "..." to ", ...". In the two indented block quotes, the Courier should
- > actually be italics.

Done.

- > DR#129, p.88: In Question, Background, indent, italicize "name spaces"
- > and "tags".

Done.

- > DR#130, p.89: In Question, last line of indent, change "newline" to
- > "new-line". On 4th line of example code, change "lex" to "len". In both
- > printf invocations, end the format strings with "\n". In first printf,
- > insert comma after "len".

Done.

- > DR#133, p.92: In Question, item 14 should not end in "." (or else items 1-3
- > should end in "."; your choice). It is probably better to turn these into
- > complete sentences, e.g. "2. A program containing no function called main
- > results in undefined behavior."

Done.

- > DR#138, p.97: In Question, indent, italicize the first "storgae duration"
- > and add the word "a " before it (in Roman). In Correction, change "page 22,
- > lines 7-8" (which should have been lines 6-7) to "first paragraph, second
- > sentence".

Done, with license on the Correction, as before.

- > DR#139, p.98: In Question, surround first line with "Subject: " and ".".
- > Change "c.f." to "cf." In Correction, change "page 25, lines 4-8," to
- > "first paragraph, third sentence".

Done, modulo usual license on Correction.

- > DR#141, p.100: I don't remember this being considered by Committee. Anyway,
- > I don't really agree with the argument given in the Question, because POSIX
- > fgetc() is based on read(), and read() returns "0 bytes transferred" in
- > various situations, not just "no data *at the moment* in disk file beyond
- > current position", but also "tape mark" and "terminal cooked queue delimiter
- > with no data since the previous new-line or delimiter". Normally a 0 read()
- > return is taken to indicate "end of file" *but a subsequent read() may
- > return non-zero" and this is *very* meaningful. I think it would be a big
- > mistake for us to try to force specific "end of file" semantics on the
- > underlying OS environment. However, we can preserve the intent of the
- > Response *for stdio streams only*, leaving it up to the POSIX utility
- > implementor which of read() or fgetc() has appropriate semantics for the
- > specific functionality he is trying to provide. To make sure that there is
- > no confusion about this, change the last sentence of the Response: Change
- > "a UNIX terminal" to "input from a stream". Immediately before that sentence,
- > insert ""Setting the end-of-file indicator" implies that [italic]that
- > stream[roman] is now considered to be "at end-of-file"." That also adds
- > strong justification for our interpretation.

Done.

> END OF GWYN'S COMMENTS ON "FINAL" DRAFT OF RR#2/TC#2

>

- > From arl.millgwyn Fri Apr 7 19:17:18 1995 remote from uunet
- > Received: by plauger.UUCP (UUL1.3#20134)
- > from uunet with UUCP; Fri, 7 Apr 95 23:16:32 EST
- > Received: from wharf.arl.mil by relay3.UU.NET with SMTP
- > id QQykmn22596; Fri, 7 Apr 1995 19:17:18 -0400
- > Received: from vgr.arl.mil by wharf.arl.mil id ac13512; 7 Apr 95 19:14 EDT
- > Date: Fri, 7 Apr 95 23:11:29 GMT
- > From: Doug Gwyn (ACISD/MCSB) <uunet!arl.millgwyn>
- > To: uunet!plauger.com!pjp
- > cc: uunet!farance.com!frank, uunet!cix.compulink.co.uk!bsi_neil,
- > uunet!segfault.us.com!rfg
- > Subject: Another Gwyn comment on RR#2/TC#2 draft
- > Message-ID: <9504072311.aa02504@VGR.ARL.MIL>
- >

> I found one more editorial change that ought to be made in the RR#2/TC#2

DR/TC2 review, page 9

> document: In DR#139, Correction, on p.98, the two occurrences of
> "enumeration" in the replacement (new) text should be "enumerated".

Done.

> From dkuug.dk!SC22WG14-request Sun Apr 30 06:27:22 1995 remote from uunet
> Received: by plauger.UUCP (UUL1.3#20134)
> from uunet with UUCP; Sun, 30 Apr 95 07:35:08 EST
> Received: from eunet.EU.net by relay1.UU.NET with ESMTP
> id QQynrl02787; Sun, 30 Apr 1995 06:27:22 -0400
> Received: from dkuug.dk (dkuug.dk [193.88.44.89]) by eunet.EU.net (8.6.10/8.6.10) with
SMTP id MAA20360 for <mcsun!plauger!pjp>; Sun, 30 Apr 1995 12:27:19 +0200
> Received: by dkuug.dk id AA15545
> (5.65c8/IDA-1.4.4j for SC22WG14-list); Sun, 30 Apr 1995 12:13:00 +0200
> Message-Id: <199504301013.AA15545@dkuug.dk>
> To: uunet!dkuug.dk!sc22wg14
> Subject: (SC22WG14.1277) Re: sequence points; in particular those in DR 87, line A
> In-Reply-To: Your message of Sun, 23 Apr 1995 20:59:22 +0200.
> <199504231859.AA20675@dkuug.dk>
> Reply-To: uunet!segfault.us.com!rfg
> X-Copyright: (c) 1995 Ronald F. Guilmette; All rights reserved.
> Date: Sun, 30 Apr 1995 03:09:45 -0700
> From: "Ronald F. Guilmette" <uunet!segfault.us.com!rfg>
> X-Sequence: SC22WG14@dkuug.dk 1277
> Errors-To: uunet!dkuug.dk!SC22WG14-request
> X-Charset: ASCII
> X-Char-Esc: 29

> In message <199504231859.AA20675@dkuug.dk>, Jutta Degener wrote:

> >I am currently reading replies to two defect reports that are both
> >scheduled for RR2, both on the subject of sequence points: DR 87 and
> >DR 117. I could develop models to cope with the either alone; but
> >in combination, they vex me.

> Having reviewed both, I agree with Jutta that the responses given for
> DR #087 (example line A) and DR #117 are completely contradictory to
> one another.

> I have stated before that I believe the response given to DR #117 is
> the Right Answer, and thus, I now hope that the response given for
> DR #087 will be amended so as to render it consistent with the response
> the committee has provided for DR #117.

I don't see the contradiction, right off, so I'm not about
to alter any committee decisions right before publication.

>
> -- Ron Guilmette, Sunnyvale, CA ----- RG Consulting -----
> --- E-mail: rfg@segfault.us.com -----Purveyors of Compiler Test Suites -
> --- finger: rfg@rahul.net -----

> From cs.tu-berlin.deljutta Tue Apr 25 17:59:53 1995 remote from uunet
> Received: by plauger.UUCP (UUL1.3#20134)
> from uunet with UUCP; Tue, 25 Apr 95 19:59:04 EST
> Received: from mail.Germany.EU.net by relay1.UU.NET with ESMTP
> id QQynat07120; Tue, 25 Apr 1995 17:59:53 -0400
> Received: by mail.Germany.EU.net with ESMTP (8.6.5:29/EUnetD-2.5.1.e) via EUnet
> id AAA01089; Wed, 26 Apr 1995 00:01:16 +0200

> Received: from kugelbus.cs.tu-berlin.de (jutta@kugelbus.cs.tu-berlin.de [130.149.25.95])
by mail.cs.tu-berlin.de (8.6.10/8.6.10) with ESMTP id XAA23807; Tue, 25 Apr 1995 23:48:36
+0200

> From: Jutta Degener <uunet!cs.tu-berlin.de!jutta>

> Received: (jutta@localhost) by kugelbus.cs.tu-berlin.de (8.6.10/8.6.6) id XAA29167; Tue,
25 Apr 1995 23:48:34 +0200

> Message-Id: <199504252148.XAA29167@kugelbus.cs.tu-berlin.de>

> Subject: Typo (?) in RR2's DR139 Normative Change

> To: uunet!plauger!pip

> Date: Tue, 25 Apr 1995 23:48:33 +0200 (MET DST)

> Cc: uunet!rahul.net!rfg (Ron F. Guilmette)

> X-Mailer: ELM [version 2.4 PL24]

> MIME-Version: 1.0

> Content-Transfer-Encoding: 7bit

> Content-Type: text/plain; charset=US-ASCII

>

> Bill,

>

> the correction in the reply to DR139 in the draft RR2 is missing

> a few half-sentences. I asked the DR's author, Larry Jones, for the

> rationale behind the omission:

>

>> looking at the Correction in response to your DR139 in RR2,

>> I see [funny indentation by me]

>>

>> Moreover, two structure, union, or enumeration types

>> declared in separate translation units

>> are compatible

>> if

>> they have the same number of members,

>> the same member names,

>> and compatible member types;

>> for two structures,

>> the members shall be in the same order; /* XXX */

>> for two structures or unions,

>> the bit-fields shall have the same widths;

>> for two enumerations,

>> the members shall have the same values.

>>

>> changed to

>>

>> Moreover, two structure, union, or enumeration types

>> declared in separate translation units

>> are compatible

>> if

>> at least one is an incomplete type

>> or if

>> they have the same number of members,

>> the same member names,

>> and compatible member types;

>> for two [complete] structure or union types

>> the bit-fields shall have the same widths;

>> for two enumerations,

>> the members shall have the same values.

>>

>> Whatever happened to the bit about members being in the same order

>> (marked /* XXX */)?

>

> Larry Jones replied:

>

> | [...] that is NOT the language I proposed or that the committee approved.
> | According to the minutes, the correct text is:
> |
> | Moreover, two structure, union, or enumeration types
> | declared in separate translation units
> | are compatible
> | if
> | at least one is an incomplete type
> | or if
> | they have the same number of members,
> | the same member names,
> | and compatible member types;
> | for two complete structure types, the members shall be in the
> | same order;
> | for two complete structure or union types,
> | the bit-fields shall have the same widths;
> | for two enumeration types,
> | the members shall have the same values.

Changed as above, except I altered 'enumeration types' to
'enumerated types.'

> | The significant differences are the retention of the same order
> | requirement and the clarification that the additional requirements apply
> | only to complete types, not incomplete types. Otherwise, one could argue
> | equally well that an incomplete type either does or does not vacuously
> | satisfy them, or that the answer is simply unknowable which would
> | presumably result in undefined behavior.

> |
> | Did someone skip a line while typing, or did you decide to cut
> | the text? (The "[complete]" insertion in the quote from my email
> | to Larry attests to the fact that I slipped myself while typing
> | it in...)

> | Kind regards,

> | Jutta Degener (jutta@cs.tu-berlin.de)

> |
> | From cs.tu-berlin.de/jutta Thu May 11 11:25:47 1995 remote from uunet
> | Received: by plauger.UUCP (UUL1.3#20134)
> | from uunet with UUCP; Thu, 11 May 95 16:47:18 EST
> | Received: from mail.cs.tu-berlin.de by relay4.UU.NET with ESMTP
> | id QQypgv00462; Thu, 11 May 1995 11:25:47 -0400
> | Received: from kugelbus.cs.tu-berlin.de (jutta@kugelbus.cs.tu-berlin.de [130.149.25.95])
> | by mail.cs.tu-berlin.de (8.6.10/8.6.10) with ESMTP id LAA03545 for
> | <plauger!pjp@uunet.uu.net>; Thu, 11 May 1995 11:27:27 +0200
> | From: Jutta Degener <uunet!cs.tu-berlin.de/jutta>
> | Received: (jutta@localhost) by kugelbus.cs.tu-berlin.de (8.6.10/8.6.6) id LAA04349 for
> | plauger!pjp@uunet.uu.net; Thu, 11 May 1995 11:27:24 +0200
> | Message-Id: <199505110927.LAA04349@kugelbus.cs.tu-berlin.de>
> | Subject: Comments on RR2.
> | To: uunet!plauger!pjp (P.J. Plauger)
> | Date: Thu, 11 May 1995 11:27:23 +0200 (MET DST)
> | In-Reply-To: <9505092032.0.UUL1.3#20134@plauger.UUCP> from "P.J. Plauger" at May
> | 9, 95 08:32:47 pm
> | X-Mailer: ELM [version 2.4 PL24]
> | MIME-Version: 1.0
> | Content-Transfer-Encoding: 7bit
> | Content-Type: text/plain; charset=US-ASCII

> Bill,
>
> here are the late comments I told you about. The quoted text
> is from Mark Brader <msb@sq.com>; the non-quoted parts, and all
> errors, are mine.
>
> In my opinion, many of these comments (both Mark's and my own)
> are concerned with contents, not form, and perhaps directed to
> the wrong person at the wrong time. Rather than edit them out,
> I have retained them and leave it for you to decide which issues
> you agree with and intend to address, and which ones (if any)
> you want to leave for later.
>
> Thank you very much for listening;
>
> Jutta Degener (jutta@cs.tu-berlin.de, DIN WG14)
> --
> DR 060:
>
> > It could be considered ambiguous whether the added wording
>
> [``or fewer characters in a string literal or wide string
> literal used to initialize an array of known size,"]
>
> > applies to
> >
> > char *p[4] = {"t", "h", "i", "s"};
> >
> > but it obviously isn't supposed to. This could be corrected by making
> > the wording more explicit, for example:
>
> > or fewer characters in a string literal or wide string literal
> > used to initialize an array with known size and elements of
> > character or wchar_t type,

Done.

> DR 061:
>
> In the Response,
>
> | A directive composed of white-space character(s) can
>
> is slightly ungrammatical. How about
>
> | A directive composed of one or more white-space characters

The phrasing echoes the C Standard, but I changed it anyway, for clarity.

> DR 065:
>
> In the response,
>
> | Nevertheless, it is agreed that a strict reading of the cited
> | extract from subclause 7.4.1.1 could be read as ...
>
> a reading cannot be read.

Reworded.

> DR 066:

- >
- > The last two questions of the DR,
- >
- > | If so, can the shift state contain shift sequences? If so,
- > | can the string end other than in the initial shift state?
- >
- > don't appear to have been addressed.

The questions are precluded by the answers given.

> DR 067:

- >
- > > A question of the form "Is it this or that?" should not be answered "No."
- > > In (e), "No" should be "It must be a type in the list."
- >
- > I agree. The question was:
- >
- > `....can size_t and ptrdiff_t be one of these other
- > types, or must it be a type in the above list?"
- >
- > (I also think that in the question, either the last "it" should have
- > been a "they" or the last "and" should have been an "or".)

Again, the question is precluded by earlier answers, but I clarified the answer anyway.

> DR 069:

- >
- > In addition to the remarks below, the "CHAR_BITS" in the question should
- > be "CHAR_BIT".
- >
- > > [1] In the DR as quoted, something seems to be missing from the quotation
- > > from 05.03.07: "dix notation" seems to be truncated.

It seemed best to drop the offending line.

- > > [2] Answer (f) does not appear to account for the guarantee given in
- > > answer (e) regarding unsigned character types. Shouldn't (f) read
- > > as follows?
- > >
- > > (f) No, except for character types as mentioned above.

Done.

- > > [3] Similarly, answer (k) allows SCHAR_MAX == UCHAR_MAX, contradicting
- > > answer (e). Shouldn't it read as follows?
- > >
- > > (k) No. If the question had mentioned only short, int, long, and
- > > their unsigned variants, the implementation would be allowed provided
- > > there was no other violation of the C standard. However, SCHAR_MAX
- > > and UCHAR_MAX cannot be equal, since all bit patterns of the object
- > > representation of unsigned char must represent numbers.

Reworded to reflect this intent.

- > In addition, the reply to DR068 affirms that the treatment of plain chars
- > as unsigned or signed chars is determined strictly by the value of
- > CHAR_MAX == SCHAR_MAX; if SCHAR_MAX == UCHAR_MAX, CHAR_MAX must be

> equal to both SCHAR_MAX and UCHAR_MAX at the same time in such an
> implementation---and DR068 says they can't.

>

> > [4] The first part of the response states that the bits of the object
> > representation that aren't part of the value representation are
> > "holes" and *do not participate* in determining a value. Hence,
> > if there exists a bit pattern in the object representation that
> > does not represent a number, then there must also exist such a
> > bit pattern in the value representation. In that case, it would be
> > helpful to explain that answer (e) applies to both object and value
> > representations. To be consistent with the final group of answers,
> > it appears that at most one such value representation bit pattern
> > is permitted for a type; for 1's complement it must be 111...111
> > and for 2's complement 100...000. (Otherwise the type would not be
> > able to express enough distinct negative values.) It would be helpful
> > to state this explicitly. Or if this is not the intent, it appears
> > something needs to be corrected.
> >
> > In the terms of the response, question (g) appears to be asking
> > what happens if a value representation that does not correspond
> > to a numerical value is generated by bitwise operations. This is
> > not answered.

No change.

> I agree with the last bit and lost track somewhere in the first paragraph.

>

> > [5] The distinction between "holes" and "padding" seems unlikely to be
> > helpful, considering that structure padding bytes have traditionally
> > been referred to as holes. Why not use "padding bits"?

>

> I disagree; to me, holes and padding work on different levels.

No change.

> > [6] At least some of this material appears to be normative; I can see
> > nothing in the standard to correspond to the distinction made between
> > object representations and value representations. The response
> > should be clarified to explain why it is not normative, or if it is,
> > then an amendment to 6.1.2.5 should be provided, along the lines
> > of the first part of the response.

>

> In C9X perhaps, but clearly not as an editorial change to the RR now.

Yes.

> [7] In each item (n), (q), and (s), questions are asked for character,
> short, int, and long types, respectively; the answers are "No"
> for all of them. It seems that the character types should have
> been excluded from these negative answers; in particular,

>

> (n) shouldn't SCHAR_MAX_be_ guaranteed as $2^{(\text{CHAR_BIT}-1)} - 1$?
> (q) shouldn't UCHAR_MAX_be_ guaranteed as $2^{\text{CHAR_BIT}} - 1$?
> (s) shouldn't SCHAR_MIN_be_ guaranteed as either $-(2^{(\text{CHAR_BIT}-1)} - 1)$
> or $-(2^{\text{CHAR_BIT}} - 1)$?

>

> > I suggest either:

> >

> > (n) Respectively: yes, no, no, no.

> > ...

> > (q) Respectively: yes, no, no, no.

> > ...

> > (s) Respectively: yes, no, no, no.

> >

> > or

> > (n) Yes for signed char, no for the other types.

> > ...

> > (q) Yes for unsigned char, no for the other types.

> > ...

> > (s) Yes for signed char, no for the other types.

No change.

> DR 072:

>

> > Answer (d) is justified only by reference to DR 051, but I cannot

> > see how the code can be considered equivalent now that neither the

> > -> nor the . operator is being used. Either the response should change

> > to say that the code is legal, or it should explain what array or notional

> > array is providing the bounds that determine whether the addition at

> > Line D is legal, and where those bounds came from.

No change.

> DR 074:

>

> | These requirements may be further strengthened

> | using the implementation defined behavior ..

>

> implementation-defined (hyphen missing).

Done.

> DR 079:

> | The contents of standard headers are implementation defined.

>

> implementation-defined

Done.

> DR 081:

>

> > The question asked which of two models is correct. The answer says

> > only that the result is implementation-defined. This rules out the

> > second model but does not necessarily support the first. However,

> > the paragraph in 6.3 cited in the response, in conjunction with the

> > response, does appear to support the first model. It would be helpful

> > to explicitly say that the first model is correct or to describe another

> > possibility that the implementation might define.

No change.

> DR 082:

>

> In the question, closing quotes are missing after va_start in the

> last item of a):

>

> | In f4a ... which is not ``the same ... by va_start" (...)

Done.

> DR 085:

>

> > This change appears to be normative, and hence should not be in a footnote.

No change.

> DR 087:

>

> > [1] The question of which, if any, of the given interpretations is
> > correct was not answered.

>

> > Developing a full, normative model for sequence points is more
> > than I expect a committee meeting to do, let alone an editor.

>

> > [2] The answer regarding Line A appears to be wrong, as explained in the
> > response to DR 117.

No change.

> DR 088:

>

> I think the answer "Yes" to items (c) and (h 1) will lead to
> trouble. Consider

>

```
> struct x;                | struct y;  
> struct x { int i; }      | struct y { double d; }
```

>

> In the first line, structs x and y are compatible. In the
> second line, struct x and struct y are "the same type" as two
> types that are compatible with each other; at the same time,
> they are not compatible with each other by themselves.

>

> One more for C9X?

Yes.

> DR 109:

>

> > Although the question asked about "undefined values", which as the
> > response correctly notes is not a phrase used by the standard, the
> > cited text from 6.3.8 speaks of *results* as being "undefined", and
> > the response does not address the meaning of this phrase, which
> > might reasonably be assumed to also have been asked about.

>

> I agree. Too bad.

No change.

> DR 112:

>

> In the Response:

> | The code does not require a diagnostic but is undefined behavior

>

> Code is not behavior. is -> "has" or "causes".

Done.

> DR 114:

>

- > In the Response:
- > | The phrases "two dimensional array" and "three-dimensional array"
- >
- > Inconsistent hyphenation.

Fixed.

- > | Since this is the case, the Semantics description for
- > | for initializing aggregates and sub-aggregates
- >
- > "sub-aggregates" is hyphenated "subaggregates" in the standard.

Hyphen removed.

- > | the Semantics description ... apply.
- >
- > Description is singular; "apply" should be "applies". (Or "description"
- > deleted.)

Fixed.

- > DR 125:
- >
- > In the Response,
- > | Applying & to an identifier of type const void is undefined
- > | behavior.
- >
- > Causes it, but not `_is_` it.

Fixed.

- > DR 138:
- >
- > > The intent of the new wording is clear, but it appears to be setting
- > > the reader up for a definition of "allocated storage duration", which
- > > phrase does not actually appear in 7.10.3. Perhaps it should.

No change.

- > In C9X.
- >
- > DR 141:
- >
- > The Response states:
- > | For a UNIX terminal to return other than EOF after once returning
- > | EOF (with no intervening file-positioning operations)
- >
- > file-positioning operations or calls to `clearerr()`, to be precise.

Fixed.

•