1. Status

N1401 is a revised draft incorporating the changes detailed in the Markham minutes (N1380) plus a few more corrections and editorial changes. It contains diff marks for all of the changes from N1362 except for minor formatting changes and subclause number changes.

2. Newly Applied Content

1. N1349 Parallel memory sequencing model proposal
   I omitted the `atomic_ssize_t` type since we don’t have `ssize_t`.
2. N1350 Analyzability (#1, #4 - conditionally normative)
   We should consider whether the definition of `__STDC_LIB_EXT1__` should be changed, now that it’s part of the Standard.
3. N1353 FLT_EVAL_METHOD issues (first change only)
4. N1356 `__Bool` bit-fields
5. N1357 `tgamma` range error (first way)
6. N1358 Extensions to the C1X Library (#1, #2, #3 along the lines)
   Note that the table of modes in change #2 is incorrect: the modes starting with `w` are included by reference from `fopen`. The table should include the corresponding modes starting with `u`.
7. N1359 Technical corrigendum for C1X
   4. I did not add the forward reference to 6.7.6 since there is already a forward reference to all of 6.7.
   11. I did not add forward references to 6.7.5.2 because there were already references to 6.7.5.2.
8. N1360 Benign typedef redefinition
9. N1361 FLT_EVAL_METHOD and constants (back out N1321)
10. N1363 Editor’s Report
   2.7 Moved feature test macros to 6.10.8, made the `wchar_t` encoding implementation-defined if not ISO/IEC 10646, and removed the footnote from `quick_exit` that claimed (incorrectly) that file buffers are not flushed.
   11. N1364 Thread-local storage (plus make auto access imp-def just like thread local)
12. N1365 Constant expressions (second bullet except “are covered” rather than “are not covered”)
13. N1367 Contractions and expression evaluation methods
14. N1371 Thread Unsafe Standard Functions
   This required extensive reworking since it was written as edits to the C++ draft, which is organized quite differently than the C standard. I opted not to make the changes specified for 18.4 and 21.5 at this time.
   I believe it is already unspecified whether a call to `atexit` after `exit` has been called (and similarly `at_quick_exit` after `quick_exit`) succeeds or not and no explicit statement to that
effect is necessary. (The committee may disagree.)
I intend to make the changes specified in 21.5, but require some additional time to ensure they are
made correctly in the context of the C standard.

15. N1372 Threads for the C Standard Library

16. N1373 Wording improvements for \texttt{mblen}, \texttt{mbtowc}, and \texttt{cl6rtomb}
For the last two changes, I opted to make changes along the lines suggested to the containing
clauses rather than specifically to the \texttt{mbtowc} and \texttt{cl6rtomb} functions so that similar functions
would be covered, too.

17. N1376 Adding pole error to math library functions

18. N1377 \texttt{xxx\_DECIMAL\_DIG} macros for \texttt{<float.h>}
Also added to Annex E.

19. N1380 Minutes for Markham, March/April 2009 (4.29 WG14 Mail 11572)

20. N1381 \texttt{memset\_s()} to clear memory, without fear of removal
Since this was written as a bounds-checking function, I added it to Annex K with the others.

21. N1382 \texttt{FLT\_EVAL\_METHOD} and return

3. Previously Applied Content

1. N1252 A finer-grained specification of sequencing
2. N1282 Clarification of Expressions
3. N1285 Extending the lifetime of temporary objects (factored approach)
4. N1300 Draft minutes for April 2008 9.19 N1271
5. N1310 Requiring \texttt{signed char} to have no padding bits
6. N1311 Initializing static or external variables
7. N1316 Conversion between pointers and floating types
8. N1319 Adding \texttt{EPOLE} to math library functions (modulo change in minutes N1346)
9. N1320 Integrating C89 Defect Report 25 into CIx (modulo N1346)
10. N1321 Split \texttt{FLT\_EVAL\_METHOD} into operations and constants (modulo N1346) [subsequently
removed by N1361]
11. N1326 Adding TR 19769 to the C Standard Library
12. N1327 Abandoning a Process (adding \texttt{quick\_exit} and \texttt{at\_quick\_exit}) (modulo N1346)
13. N1330 Static Assertions (modulo N1346)
14. N1338 More Thoughts on Implementing \texttt{errno} as a Macro
15. N1346 Draft Minutes for September 2008 (3.2 Report of the Project Editor) [Update Annex C
(Sequence Points) to match revised text]

4. N1362 Errata

1. In 5.2.4.2p9, the reference to constants was removed from the overall description of
\texttt{FLT\_EVAL\_METHOD} but not from the descriptions of the individual values. This is moot since the
changes were undone by N1361.
2. References to \texttt{EPOLE} were added due to a misunderstanding of what was agreed to from N1319.
They have been removed.
5. Other changes and comments
   1. I added C99 and its corrigenda to the Bibliography along with TR 24731−1.
   2. I spelled "September" correctly in the page heading this time (cf. N1256).

6. Open Issues
   1. The N1371 21.5 changes need to be completed.
   2. The index probably needs work, particularly for the newly added material.
   3. The list of changes from the previous edition needs to be populated.
   4. The library synopses need to be examined and extraneous headers removed.

-- Larry Jones