Proposal for C23
WG14 N2602

Title:	Editors for NaN and infinity macros
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Proposal category:	Editorial
Reference:	N2573

Here is a comment from Joseph Myers, in the context of discussing the TS3 annex at the WG14 meeting this month:

> SNAN macros: I think the wording now in C2X about "If an optional unary + or - operator followed by a signaling NaN macro is used as the initializer" (not just if the macro itself is used as an initializer) should be used for the new macros. In fact I see the current C2X draft only has that applied to FLT_SNAN, DBL_SNAN, LDBL_SNAN, not for the decimal types, but surely + and - should be OK on D32_SNAN, D64_SNAN, D128_SNAN given they are on FLT_SNAN, DBL_SNAN, LDBL_SNAN. Is that an editorial issue regarding the application of N2406 to the working draft, or does applying that wording to the decimal FP macros need a new paper?

The first part of the comment has been addressed in an update to the TS3 annex.

The second part points to a few problems in the C23 draft (N2573) …

1. Yes, the "optional unary **+** or **−** operator" should appear in the decimal spec, as Joseph notes.

2. In N2573, the paragraphs 5.2.4.2.2 #16, #18, and #20 belong with the macros for decimal floating point, in 5.2.4.2.3, right after #2.

3. The words "signaling NaN macros" and "decimal signaling NaN macros" in 5.2.4.2.2 #15 and #16 in N2573 would be better not italicized. These are not terms that are used elsewhere. The "decimal" is not needed in the second case, once moved into the decimal subclause 5.3.4.2.3.

The changes below address these problems:

Suggested changes:

In the first sentence of 5.2.4.2.2 #15, remove italics from "signaling NaN macros."

In the first sentence of 5.2.4.2.2 #16, remove italics from "decimal signaling NaN macros."

Move paragraphs 5.2.4.2.2 #16, #18, and #20 to 5.2.4.2.3, right after #2.

Change the moved paragraph for signaling NaNs:

[2a] The ~~decimal~~ signaling NaN macros

```
D32_SNAN
D64_SNAN
D128_SNAN
```

each expands to a constant expression of the respective decimal floating type representing a signaling NaN. If an optional unary + or − operator followed by a signaling NaN macro is used for initializing an object of the same type that has static or thread-local storage duration, the object is initialized with a signaling NaN value.