Slay Some Earthly Demons III

Document: n3341 Author: Martin Uecker Date: 2024-09-08

This remaining issues from n3244 were split up into the following series:

```
n3340 - Slay Some Earthly Demons II

n3341 - Slay Some Earthly Demons III

n3342 - Slay Some Earthly Demons IV

n3343 - Slay Some Earthly Demons V

n3344 - Slay Some Earthly Demons VI

n3345 - Slay Some Earthly Demons VII

n3346 - Slay Some Earthly Demons VIII

n3347 - Slay Some Earthly Demons IX
```

Meeting meeting notes about previous discussion can be found in n3281. The following numbers correspond to N3220 and the ones with (\rightarrow) to N3301.

```
J.2.19 needs more work, cf. SC22WG14.25600 (note to editor: parts applied by mistake)
       J.2.21 done (incl. additional change), (note to editor: there is a "not" missing in 6.3.2.1)
n3340 J.2.40 (→ J.2.38) withdrawn in June, now revised (cf. SC22WG14.25600)
       J.2.56 done
       J.2.57 done (option 1)
n3341 J.2.58 (→ J.2.54) not discussed in June
       J.2.60 (\rightarrow J.2.56) direction to editor (note to editor: not yet done)
n3342 J.2.63 (→ J.2.59) no consensus in June, now revised to make implementation-defined
n3343
               wording change not related to an entry in Annex J
       J.2.67 done
       J.2.69 done (alternative wording for semantic section)
n3344 J.2.75 (→ J.2.70) now revised (cf. SC22WG14.25600)
       J.2.77 (\rightarrow J.3.13. 2) not discussed in June, but fixed editorially
       J.2.78 (\rightarrow J.3.13. 3) not discussed in June, but fixed editorially
n3345 J.2.79 (\rightarrow J.2.72) not discussed in June
n3346 J.2.80-J.2.82 (→ J.2.73-J.2.75) not discussed in June (cf. SC22WG14.25600)
n3347 J.2.87 (\rightarrow J.2.80) not discussed in June
```

Acknowledgments: Thanks to Joseph Myers, David Svoboda, Chris Bazley, and the UB study group for helpful comments and corrections.

Annex J (J.2.54 in N3301, J.2.58 in N3220)

(54) A structure or union is defined without any named members (including those specified indirectly via anonymous structures and unions) (6.7.3.2).

Example

https://godbolt.org/z/PhrETa3Kb

```
struct f { }; // UB
union u { }; // UB
struct g { struct { }; }; // UB
struct h { int i:3; }; // UB
struct v { char; }; // constraint violation
```

Analysis

This generally works in existing practice but may lead to zero-sized objects, which are widely supported but would need much more consideration. It is suggested to make this implementation-defined.

Proposed Change

6.7.3.2

10 The member declaration list is a sequence of declarations for the members of the structure or union. If the member declaration list does not contain any named members, either directly or via an anonymous structure or anonymous union, the behavior is **undefined implementation-defined**.