## C++ Club UK

Gleb Dolgich

2019-08-08

## What Happened to C++20 Contracts?

Nathan Myers: https://www.reddit.com/r/cpp/comments/cmk7ek/what\_happened\_to\_c20\_contracts/

This was the first time, in the (exactly) 30 years since ISO was first asked to form a Working Group to standardize C++, that the committee has removed from its Working Draft a major feature, for no expressible technical reason.

Almost immediately after the feature was voted in, one party to the original agreement -- authors of the rejected 2012 design -- began to post a bewildering variety of proposals for radical changes to the design, promoting them by encouraging confusion about consequences of the agreed-upon design.

## What Happened to C++20 Contracts? (cont.)

One of the proposals, not seen before the day it was presented, seemed to offer that simplicity, and the group seized upon it, voting for it by a margin of 3 to 1. It was opposed by four of the five participants of the original design group, because it was fatally flawed: in use, programmers would need to define preprocessor macros, and put calls to those in their code instead of the core-language syntax defined. It would breed "macro hell".

On top of its inherent flaws, it amounted to a radical redesign from what was originally accepted by the full committee.

The immediate, predictable effect was panic. <...>

Two days later, the same Evolution Working Group voted to remove the feature entirely.

My word, what a thread.

# Bryce Lelbach on the C++ Committee



### Bryce Lelbach @blelbach

50% of C++ programmers: the committee is moving too fast!

50% of C++ programmers: the committee is moving too slow!

#### #Cpp20

18h • 22/07/2019 • 21:31 •

#### Twitter: who does what in the C++ Committee



#### Jorg Brown @jorgbrown

Overhead at the C++ Standards meeting: "Libraries does naming; Core does punctuation"

"Evolution imagines that they provide solutions to real problems; Core provides real solutions to imaginary problems"

2d • 18/07/2019 • 18:44

## Improved Linker Fundamentals in Visual Studio 2019

https://devblogs.microsoft.com/cppblog/improved-linker-fundamentals-in-visual-studio-2019/

https://www.reddit.com/r/cpp/comments/chqj93/visual\_c\_linking\_speedup\_by\_23x\_in\_latest\_visual/

## Technical vision for Qt 6

```
https://blog.qt.io/blog/2019/08/07/technical-vision-qt-6/
```

#### https:

//www.reddit.com/r/cpp/comments/cn52ql/technical\_vision\_for\_qt\_6/

- ▶ C++17
- Strongly-typed QML
- QML to C++ compilation, JavaScript optional
- CMake as the build system
- Next-generation graphics support

# How do C++ developers manage dependencies?

https://www.reddit.com/r/cpp/comments/c6l3eg/how\_do\_c\_developers\_manage\_dependencies/

Through much pain and anguish.

# Scott Meyers' TD trick

https://www.reddit.com/r/cpp/comments/c6vnb3/just\_started\_learning\_ c\_coming\_from\_python\_and/eshq8vb?utm\_source=share&utm\_medium= web2x

```
1 template <typename T> struct TD; // no definition
```

Now you write something like TD<decltype(thing)> and the error message tells you the type of thing (as deduced by decltype, of course, but in this case that's probably what you want).

# Just started learning C++ coming from Python

https://www.reddit.com/r/cpp/comments/c6vnb3/just\_started\_learning\_ c\_coming\_from\_python\_and/

The new GCC compiler with colour highlighting is a little bit better at pointing out errors. It's generally quite helpful for pure C/C++ until you make an error with the standard library and you get 200 lines about std:: whatever<random characters>

In C++ a trick I always use when the error message is massive is to just focus on the first error.

## Use **constexpr** for faster, smaller, and safer code

```
https://blog.trailofbits.com/2019/06/27/use-constexpr-for-faster-smaller-and-safer-code/
```

https://www.reddit.com/r/cpp/comments/c646ng/use\_constexpr\_for\_faster\_smaller\_and\_safer\_code/

https://github.com/trailofbits/constexpr-everything (Apache 2.0)

# A closer look at **bake**: a tool that makes building C/C++ code effortless

https://medium.com/@cortoproject/a-closer-look-at-bake-a-tool-that-makes-building-c-c-code-effortless-b2e0409fad8f

- https://www.reddit.com/r/C\_Programming/comments/a85f6w/meet\_ bake\_a\_new\_build\_system\_package\_manager\_for/
- https://www.reddit.com/r/cpp/comments/a8d7ny/meet\_bake\_a\_ new\_build\_system\_package\_manager\_for/
- https://news.ycombinator.com/item?id=18787777

https://github.com/SanderMertens/bake (GPLv3)

A cargo-like buildsystem and package manager for C/C++

Magic.

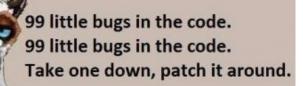
#### CosmoScout VR

A virtual universe which lets you explore, analyze and present huge planetary datasets and large simulation data in real-time.

Uses C++17 and OpenGL.

https://github.com/cosmoscout/cosmoscout-vr (MIT) Copyright (c) 2019 German Aerospace Center (DLR)

https://www.reddit.com/r/cpp/comments/cn657d/the\_german\_center\_for\_aerospace\_dlr\_just\_open/



127 little bugs in the code...