C++ Club UK Meeting 106

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2020-04-30

2020-04 WG21 mailing is out

- Mailing
  - P1654R1 ABI breakage - summary of initial comments
  - P1949R3 C++ Identifier Syntax using Unicode Standard Annex 31
  - P2011R1 A pipeline-rewrite operator
- Reddit

- Article by Jonathan Boccara
- Reddit

STL writes:

> *`mem_fn` is less typing, but lambdas are higher performance (MSVC's optimizer can't see through `mem_fn`'s data member) and can handle overloaded/templated member functions much more easily.*

Parameter passing, by Raymond Chen, Microsoft

- If you plan on keeping the parameter anyway, then there's no need to have separate `T const&` and `T&&` overloads
- If you're not keeping the parameter, then you still want to have separate `T const&` and `T&&` overloads
- Reddit

- Reddit
- Paper PDF
- Paper GitHub
- Reference implementation

High performance SQLite, PostgreSQL, MySQL sync & async drivers

- Lithium
- Reddit

- Microsoft
- Reddit

- Microsoft
- Reddit

GSL 3.0.0 Release

The Guidelines Support Library (GSL) contains functions and types that are suggested for use by the C++ Core Guidelines maintained by the Standard C++ Foundation.

- Microsoft
- GitHub

Changes:

- New implementations of `gsl::span` and `gsl::span_iterator` that align to the C++20 standard.
- Changes to contract violation behavior.
- Additional CMake support.
- Deprecation of `gsl::multi_span` and `gsl::strided_span`.

DeepCode adds AI-based static code analysis support for C and C++

- Announcement
- DeepCode

Modern CMake is like inheritance

- Kuba Sejdak
- Reddit

> *If only the CMake website featured such a beginner-friendly description as found here, people would switch over to Modern CMake much faster.*

CMake links

- C++ Weekly: Intro to CMake
- C++Now 2017: Effective CMake
- CLion: Quick CMake Tutorial
- Programming C++ with the “4 C’s”
- Florent Castelli: Introduction to CMake
- Siliceum CMake articles:
  - Basics
  - Customisation points

On C++ exceptions

- H. Dembinski
- Reddit

2 Lines Of Code and 3 C++17 Features - The overload Pattern

- B. Filipek
- Reddit

```
1 template<class... Ts> struct overload : Ts... { using Ts::operator()...; };
2 template<class... Ts> overload(Ts...) -> overload<Ts...>;
```

C++ Compile Health Watchdog

- Link
- Reddit

Activity Indicators for Modern C++

- GitHub (header-only, C++11, MIT)
- Reddit

Table Maker for Modern C++

- GitHub (header-only, C++17, MIT)

- Reddit
- Makefiles from the ground up
- Makefiles for C/C++ projects

- Jonathan Müller
- Reddit

Why you use/don’t use Boost

- Why you don’t use Boost
- Why you trust in Boost