C++ Club UK Meeting 119

Gleb Dolgich

2021-01-14

Reverse Engineering the source code of the BioNTech/Pfizer SARS-CoV-2 Vaccine

- Article
  - Reddit

Why Another C++ (And More™) Conference?

- JeanHeyd Meneide
  - Reddit

CoSy - Computing Systems Technology Conference

- Website

CoSy (pronounced like "cozy") is a Systems Programming Conference open to developers from all walks of life, both professional and non-professional, who want to engage other like-minded individuals for an intimate and wonderful blend of content.

- Broad scope (C++, C, Rust, Zig, FORTH, Nim, OCaml etc.)
- Double-blinded submission reviews

> *Of course, it's not always possible to double-blind everything! If someone writes a submission about how they wrote a Great Book On Large Scale Software Architecture That's Really Good And Helps You Modularize And Structure Large Software And The Sequel Is Out You Should Buy It Now, they have vastly reduced the pool of people they could be talking about.*

David Friberg - Three interesting minor features of C++20

- YouTube
- Slides

Wrapping C++ for use in Swift

- Reddit

A Small Open Source Game In C++

- Preshing
  - Reddit
  - GitHub
  - Code review

That tongue animation :-)

Graphics Library for simple 2D games

- Reddit
  - SFML
  - Allegro
  - SDL – C
  - olcPixelGameEngine

is::Engine - C++ SFML game engine

- Reddit announcement

Interactive C++ with Cling

- LLVM Blog

Calendar and Time-Zones in C++20: Time of Day

Rainer Grimm

FTL - A functional template library for containers processing in C++

- GitHub
  - Reddit

FTL is a C++17-based library that provides a more convenient API for collections processing. The API is heavily inspired by the Rust programming language.

```
1 const auto totalVolume = cityTrees.iter()
2   .filter([](const auto &tree) { return tree.kind ==
        Tree::Oak && tree.diameter > 25; })
3   .map([](const auto &tree) { return tree.volume(); })
4   .sum();
```

Compiling C/C++ on Apple M1

- Boris Kolpackov
  - Reddit

Linux developer going Windows

- Reddit

BinOpt — A Library for Self-guided Runtime Binary Optimization

- GitHub (LGPLv2.1+)

Conditionally Trivial Special Member Functions

- Sy Brand
  - Reddit

Best framework to create HTTP server

- Reddit

Boost 1.75

- Release notes
  - Reddit

C++ Russia 2020 Moscow

- Playlist on YouTube

mocxx: a versatile C++ function mocking framework based on Frida, by Guardsquare

No macros! Doesn't support mocking virtual functions yet.

- Reddit
  - GitHub (C++17, GPL-3.0)
    - Frida - Dynamic instrumentation toolkit for developers, reverse-engineers, and security researchers
  - Explanatory blog post at Guardsquare

Compile 1 Million Lines Of C++ In ~2 Minutes With A 16 Core Ryzen 9 5950x

- Embarcadero
  - Reddit

> *I love how a shitty, bug-ridden development environment that costs US$1359 for the most basic edition still requires you to buy a separate US$139 extension to enable parallel builds, a standard feature available on practically every other closed and open source compiler and build system out of the box for $0 extra.*

Dev-C++
A fast, portable, simple, and free C/C++ IDE for Windows, built in Delphi
- GitHub

Using std::list::splice to implement a LRU cache

- Article on nextptr
- `std::list::splice`

What should the state of a moved-from object be?

- Raymond Chen
  - Reddit

Reducing Memory Consumption in Visual Assist

- Blog post
  - Reddit

dont_deduce

- artificial::mind
  - Reddit

C++11

```
1 template <class T> struct foo_t { using type = T; };
2 template <class T> using foo = typename foo_t<T>::type;
```

C++20

```
1 template <typename T>
2 auto operator+(
3   vec3<T> const& a,
4   std::convertible_to<T> auto const& b
5 ) -> vec3<T>;
```

Writing a custom iterator in modern C++ (C++17)

- Article
  - Reddit

C++ for Swift developers

- Sidharth Juyal
  - Reddit

Is Zero a Butterfly?

- Shafik Yaghmour
  - Reddit

Linus Torvalds against 80-char line length limit

- The Register
  - Reddit