21 September 2017

CppCon 2016: Richard Smith “There and Back Again: An Incremental C++ Modules Design”

- YouTube
- Clang’s “C++98 Modules”; GDR in the audience (RS: “Do you like it?” GDS: “I don’t know!”)
- Modules TS
- Why Google needs macros in modules (`#export_macros`)
  - To support incremental transition (`import legacy foo.h`)
  - P0273R1: Proposed modules changes from implementation and deployment experience

C++Now 2017 keynote: Ali Cehreli - Competitive Advantage with D

YouTube

- Unified call syntax:

```
1 auto minutes(int n) { ... }
2 minutes(10);
3 10.minutes;
4
5 writeln(evens(divide(multiply(values, 10), 3)));
6 values.multiply(10).divide(3).evens.writeln;
```

- Post by Simon Brand ([@TartanLlama](https://twitter.com/TartanLlama))
- Code samples
- Intro to GPGPU computing
- Libraries: triSYCL and ComputeCpp
- SyclParallelSTL implements Parallelism TS

Transferring data from main memory to the GPU is slow. Really slow. Like, kill all your performance and get you fired slow.

VXL: Computer vision library

- Home
- FAQ

C++ Map

- Original
- Local copy

Polymorphic clones in modern C++

Jonathan Boccara

- “virtual constructors” returning covariant bare pointers
- “virtual constructors” returning `unique_ptr<Interface>`
- multiple inheritance: use different “constructor” names

Quentin Duval, Reddit

- provide a free function `clone` to wrap the returned pointers in `unique_ptr`
- Non-Virtual Interface + CRTP
- additionally, return pointers using GSL’s `owner`

CopperSpice YouTube C++ Channel

YouTube

std::visit is everything wrong with modern C++

Post

- `union`, `std::variant`
- Open Pattern Matching for C++, by Yuriy Solodkyy, Gabriel Dos Reis, Bjarne Stroustrup (PDF)
  - Mach7 on GitHub
- P0095R1: Pattern Matching and Language Variants, by David Sankel :: Article

Optional: command-line argument parsing library

Home

- The library name is very confusing

Just::thread Pro Library v2.5.0

- Written by Anthony Williams
- Home
- Pricing
- Now includes coroutines!

Thoughts on destructive move

Post

- Move operations are allowed to throw
  - `std::move_if_noexcept`
- Move operations are potentially expensive
- Moved-from state

The Release Uncertainty Principle says you can accurately know what the software will do, or when you will get it, but not both.

– @sanityinc

Programmer's motto: "We'll cross that bridge when it's burning underneath us."

– @garybernhardt