

# C++ Club Meeting Notes

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► [Email](#)

## Website

A global, inclusive, and diverse community for developers interested in C++. Here, you can find a welcoming space to learn and discuss C++. We also provide resources to create safer, more inclusive, community gatherings.

# Announcing Meeting C++ 2018

- ▶ **Announcement**
- ▶ When: 15th–17th November
- ▶ Where: Andels Hotel Berlin
- ▶ 4 Tracks: ~30+ Talks about C++
- ▶ 3 Keynotes:
  - ▶ Andrei Alexandrescu
  - ▶ Lisa Lippincott
  - ▶ Nicolai Josuttis

# Björn Fahller – Type Safe C++? LOL! :-)

► Video

► Slides

```
1 enum class Apple{};
2 enum class Orange{};
3
4 Orange o{4};
5 Apple a{3};
6 Apple x{o}; // Oops
```

► Type\_safe

► NamedType

## Outcome 2.1 progress report

- ▶ [Reddit](#)
- ▶ [Outcome - GitHub](#)
- ▶ [Boost.Outcome - GitHub](#)

## ► Article

```
1 auto doesItBlend() -> bool;  
2 auto whatsYourFavouriteNumber() -> int;  
3 auto add(double a, double b) -> double;  
4 void setTheControls();
```

# Why = means assignment?

## ► Article

```
1 integer algol_x; algol_x := 5;
2
3 cpl_by_value = 5;
4 cpl_by_reference ~= 5;
5 cpl_by_subst ≡ 5;
6
7 apl x ← 5
```

ALGOL -> CPL -> BCPL -> B -> C



# IsCool Entertainment's General Purpose C++ Library



IsCool Core is a collection of general purpose C++ libraries developed at IsCool Entertainment. This code is used intensively in Bazoo, Garden of words (iOS, Android) and Bouquet of Words (iOS, Android).

## SG13 (2D Graphics): why it failed

- ▶ [Reddit](#)
- ▶ [Jeremy Ong feedback post](#)
  - ▶ “The parts that are hard but critical (window surface, choice of driver backend, input) are vastly underspecified.”

# Proposed standard low level file i/o library for C++20

- ▶ [Reddit](#)
- ▶ [Draft proposal announcement](#)
- ▶ [Draft proposal PDF](#)

## ► Product page

- Windows only, programs must be built with MSVC, 32 or 64 bit
- 30 day trial, then EUR 119 (ind.) or EUR 199 (business) per year

*Live++ enables live coding (hot-reload) for C/C++ applications, combining the power of rapid iteration with the speed of a compiled language. Live++ compiles your changes in the background, directly patching the machine code of the running executable(s). It links against existing code and data symbols, automatically persisting the state of global symbols, function static variables, and the like. It works with any kind of C/C++ code and requires neither plug-ins nor a debugger or IDE.*

# A C++ implementation of a memory efficient hash map and hash set

- ▶ [GitHub \(MIT\)](#)
- ▶ [How Google Sparsehash achieves two bits of overhead per entry using sparsetable](#)

# Type.Erasure - C++17 run-time polymorphism library

- ▶ [GitHub](#)
- ▶ Similar:
  - ▶ [Adobe.Poly](#)
  - ▶ [Boost.TypeErasure](#)
  - ▶ [Folly.Poly](#)
  - ▶ [Dyno](#)

# There is much more to `std::for_each` than meets the eye, by Ivan Čukić

## ► Article

```
1 for (item : items) {  
2     // do something  
3 }  
4  
5 for_each(items, [](item) {  
6     // do something  
7 });
```

### ► Article

- Initial code
- p0847: Deducing this / Code
- P0892: Explicit(bool) / Code
- P0848: Conditionally Trivial Special Member Functions / Code
- Code +spaceship operator
- Code +concepts



# Reflection in C++ Part 1: The Present

- ▶ [Article](#)
- ▶ [Reddit thread](#)

## Topics:

- ▶ Type introspection using SFINAE
- ▶ The `magic_get` library [GitHub](#)
- ▶ Reflecting function types
  - ▶ [Boost.CallableTraits](#)

## 5 Reasons NOT to Use `std::ostream` for Human-Readable Output

### Article

- ▶ `i18n`
- ▶ `multithreading`
- ▶ `sticky flags`
- ▶ `readability`
- ▶ `{fmt}` is much better

# CryptoPP 7.0 released

- ▶ [Release notes](#)
- ▶ [Home page](#)
- ▶ [GitHub](#) (Boost Software License)

# Twitter: John Regehr



John Regehr

@johnregehr

↑ 3 Replies, 13 Quotes



RT if you also enjoy pronouncing the names of -f\* compiler flags where the next letter is a vowel:

- funsigned-char
- fext-numeric-literals
- falign-loops
- fivopts
- fopt-info
- etc.

04/04/2018, 19:33 (Wednesday)

Twitter Web Client

Retweeted by @mattgodbolt


05/04/2018, 13:31

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Thread >


# Twitter: James McNellis



James McNellis

@JamesMcNellis

↑ 9 Replies



"Hey, std::variant looks pretty cool!"

[Makes small mistake; gets 20 page long, incomprehensible compilation error.]

"Well, I guess unions aren't so bad..."

[#CPlusPlus](#)


From Washington, DC  
04/04/2018, 15:24 (Yesterday)  
[Twitter Web Client](#)

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# Twitter: Kévin Boissonneault



Kévin Boissonneault

@kaboissonneault



4 Replies

Interviewer: "How would you rate your C++ knowledge, out of 10?"

Interviewee: "I can initialize any object properly"

Interviewer: "So, that's a 9.9?"

09/03/2018, 15:57 (Friday)

Twitter Web Client

Retweeted by @pfultz2

10/03/2018, 19:11

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