

Introducing brigand

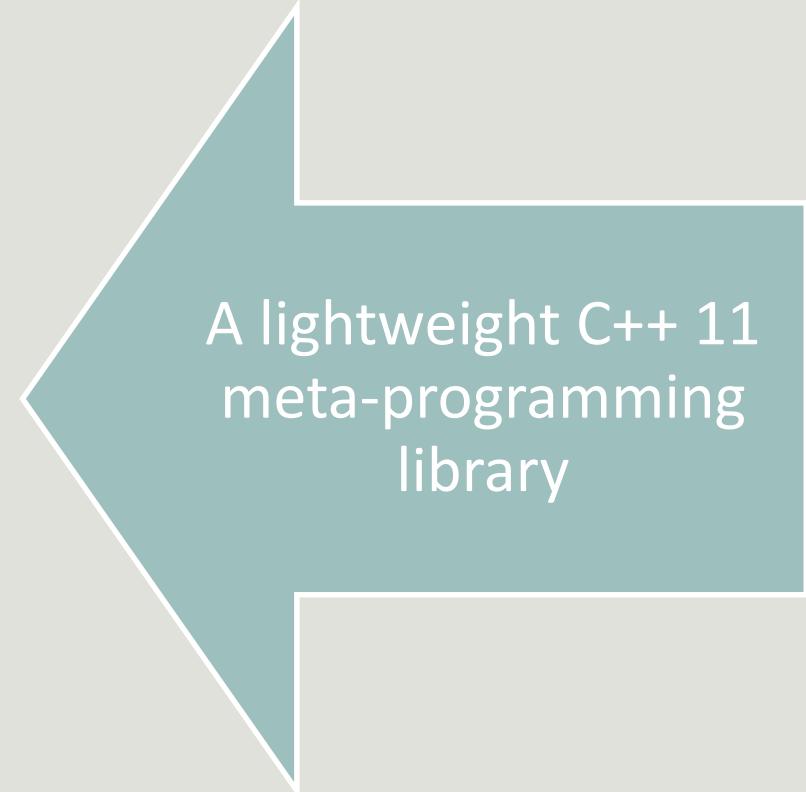
EDOUARD ALLIGAND – QUASARDB

JOEL FALCOU - NUMSCALE

What is brigand?



A **brigand** is a person who usually lives in a gang and lives by pillage and robbery.



A lightweight C++ 11 meta-programming library

Inspiration

Boost.MPL by *Aleksey Gurtovoy and David Abrahams*

Simple C++ 11 Metaprogramming Article by *Peter Dimov*

Tiny Metaprogramming Library by *Eric Niebler*

Goals

Instant-
compile time

Sustainable
code base

Wide
support

Use cases

Compile-time
checks

Constant
computations

Protocol
generator

Memory data
layout (NT^2)

And many
more!

Features

| Algorithms | Functions | Sequences |
|---|---|---|
| <ul style="list-style-type: none">• Count• Find• Fold• For_each• Remove• Reverse• Select• Transform• Wrap | <ul style="list-style-type: none">• Apply• Arithmetic• Comparisons• Logical• Repeat | <ul style="list-style-type: none">• List• Integral_list• Map• Set• Pair• Range |

99% of Boost.MPL is there!
Works on Visual Studio 2013 (Update 4)!
Macro-free!

Type manipulation

```
// this is my list, there are many like it but this one is mine  
using my_list = brigand::list<char, int, bool, void>; // yes void is supported  
using my_ptr_list = brigand::transform<my_list, std::add_pointer<brigand::_1>>;  
using my_ptr_tuple = brigand::as_tuple<my_ptr_list>;
```

```
// everything is a type list  
using my_list = std::variant<char, int, bool>;  
using my_ptr_list = brigand::transform<my_list, std::add_pointer<brigand::_1>>;  
using my_ptr_tuple = brigand::as_tuple<my_ptr_list>;
```

Range based interface

```
// find returns a range, not an iterator  
  
using my_list = brigand::list<char, float, void *, int, bool>;  
  
using found = brigand::find<my_list, std::is_same<int, brigand::_1>>;  
using found_alt = brigand::find_element<my_list, int>;  
  
// the result is brigand::list<int, bool>, you can search again  
using found2 = brigand::find<my_list, std::is_same<int, brigand::_1>>;
```

Go for it!

[HTTPS://GITHUB.COM/EDOUARDA/BRIGAND](https://github.com/edouarda/brigand)

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