

Getting Started with TDD/ BDD in C++

About Me

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About This Talk

- Why C++?
 - It's what I'm using on my current project
 - A complex, multi-use, multi-paradigm, cross platform language
 - It's really widespread, but....
 - There isn't a lot of talk about test-driving it
 - It's easy to write really bad C++
 - It's hard to write really good C++

Why TDD and BDD with C++?

"In C++ it's harder to shoot yourself in the foot, but when you do, you blow off your whole leg."

— **Bjarne Stroustrup.**

Getting Started with TDD and GTest

- Initial Setup
- Basic assertions/expectations
- TestCase fixtures
- Parameterized tests

Code Examples

TEST ALL THE THINGS!



But wait,
my application is more complex than
this!

What about...

- Dependencies I want to inject?
- Resources I need to fake?
- Complex scenarios I want to cover?

I need more!



I Need Mocks!

GMock

- Creating mocks
- Nice vs Strict Mocks
- Expectations
- Ordered Calls
- Actions
- Matchers
- Custom Matchers

Code Examples

MOCK ALL THE THINGS!



But wait,
what about my application's behavior?

What about...

- The product owner's point of view?
- The actual functionality we're providing?
- High-level specifications?

I need more!

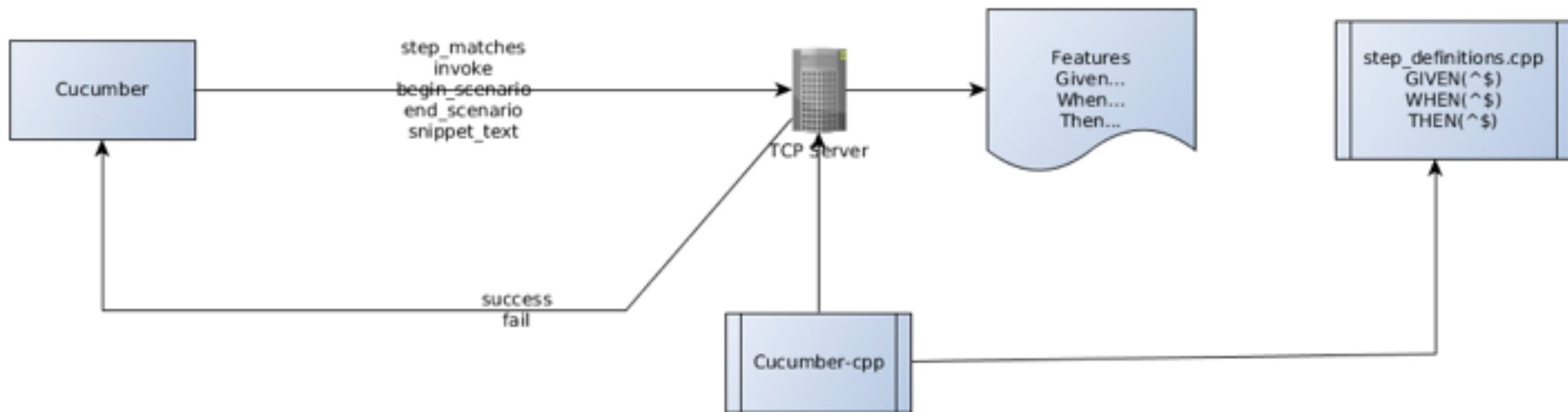


I need BDD!

Cucumber-cpp

- Wire protocol
- Gherkin
- step definitions
- Execution

Cucumber-cpp In A Nutshell



Code Examples

Thanks for listening!

Questions?

Links and References

Links

- [Googletest](#)
- [Googlemock](#)
- [Cucumber-cpp](#)
- [Vending Machine Kata implemented in C++](#)
- [Bjarne Stroustrup Quote](#)

Great Reads

- [*Modern C++ Programming with Test-Driven Development: Code Better, Sleep Better*](#) by Jeff Langr
- [*Effective C++: 50 Specific Ways to Improve Your Programs and Design \(2nd Edition\)*](#) by Scott Meyer