The Twisted Way

PyCon Ireland 2013

-Ashwini Oruganti
 @_ashfall_
Twisted

asynchronous event-driven networking framework
Twisted

asynchronous event-driven networking framework

aka... HARD
The Need

Twisted Reality: The Game

Threads and Java

The sadness
The Beginning

select()
asyncore and Medusa

...
The Beginning

Medusa: 
Unmaintained and direct socket manipulation

...
The Beginning

... Twisted
Programming Models

Single-threaded
Multi-threaded
Asynchronous
Single-threaded
Single-threaded

<limitations>
Multi-threaded
Multi-threaded

<limitations>
Event-driven
Event-driven

<advantages>
The Reactor

Waits on and handles events
abstracts away platform-specific behavior
while True:
    timeout = time_until_next_timed_event()
    events = wait_for_events(timeout)
    events += timed_events_until(now())
    for event in events:
        event.process()
“Twisted softens your brains and makes you feel like your head is actually a blender optimized for gray gloop.”
“It was created by a couple of dudes who dropped out of school, and a 16-year-old.

HOW HARD COULD IT BE?”
The Box Metaphor
“How do I even get this thing to do anything?”
When you look for it, there is nothing to see.
When you listen for it, there is nothing to hear.

When you use it, it is inexhaustible.
from twisted.internet import reactor
reactor.run()
“The Master does his job and then stops. He understands that the universe is forever out of control.”
It’s humongous!
“Core can fit into a floppy disk.”
It’s just code.
Know what you're doing.
questions