

Brief:

Player / Stage

Part 2: Player / Stage

Player

Robotics Middleware

Provides interfaces and drivers

Stage

Low fidelity simulator

GUI

Player

The Server

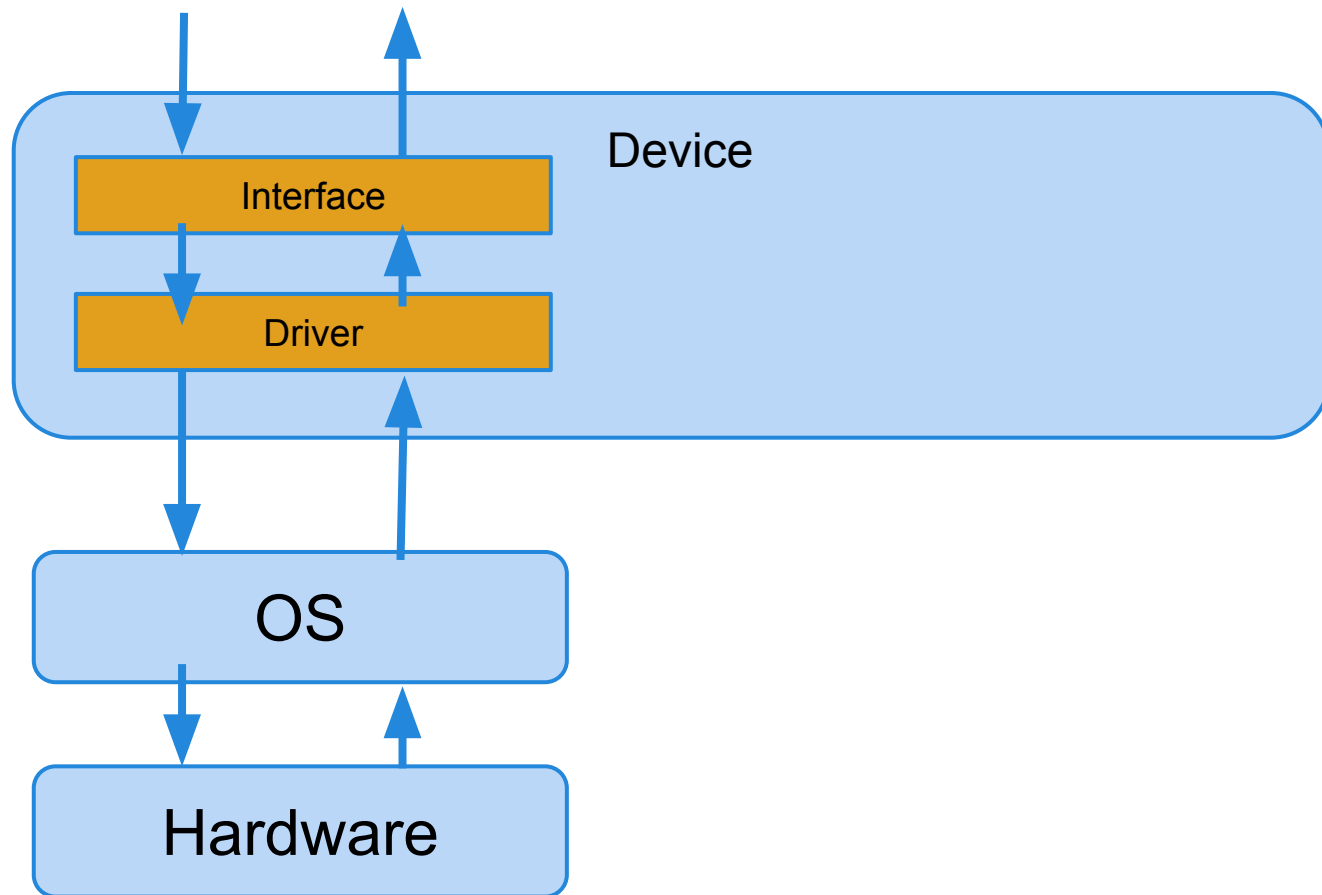
Clients are control programs

Allows access to devices

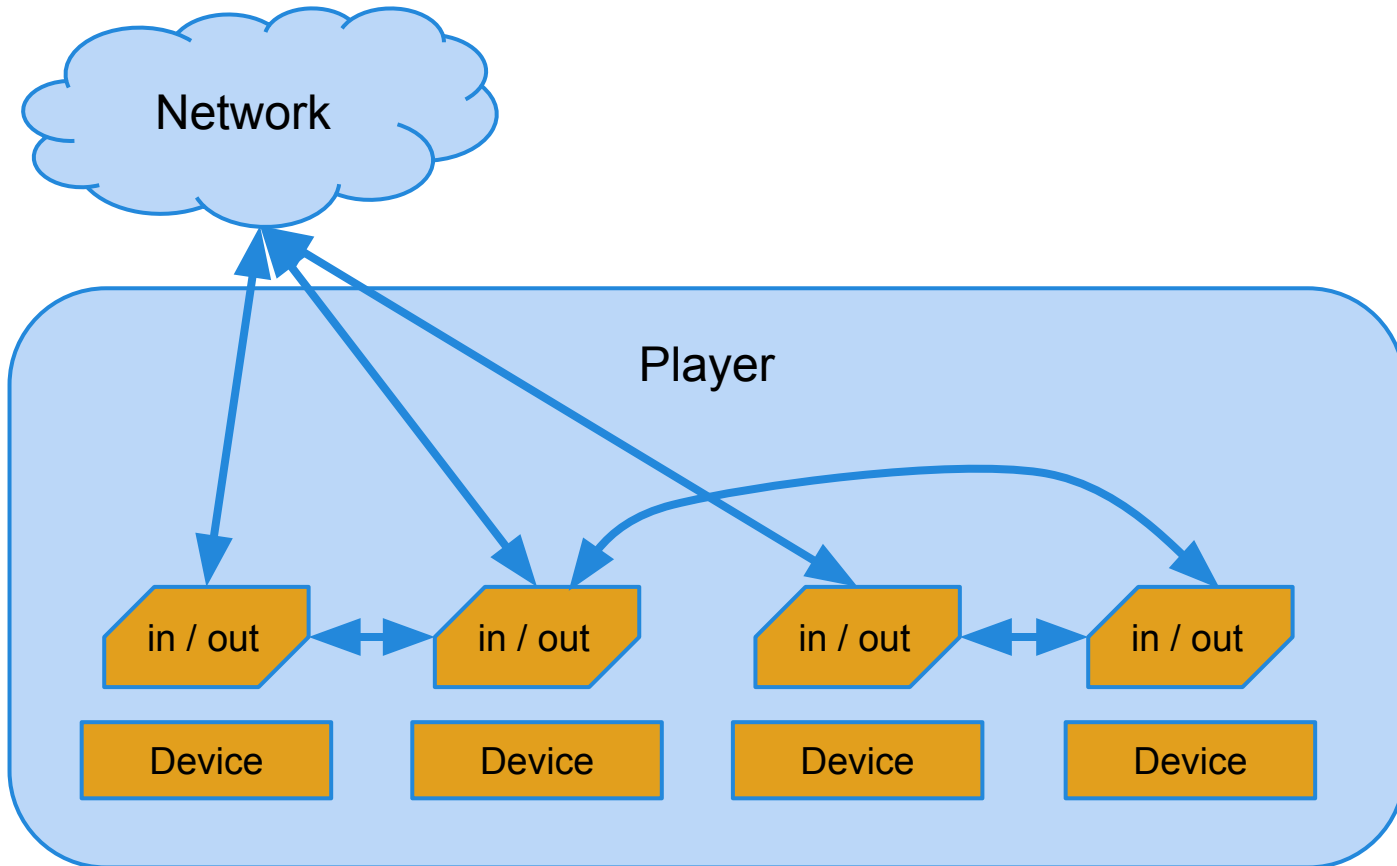
- Defines interfaces

- maintains queues

Devices



Message Passing



.cfg

Sets up drivers
Communication
channels
Driver parameters

```
driver
(
  model "hank"
  name "stage"
  provides ["localhost:6665:position2d:0"
           "localhost:6665:ranger:0"
           "localhost:6665:graphics2d:0"]
)

driver
(
  name "rangertolaser"
  requires ["localhost:6665:ranger:0"]
  provides ["localhost:6665:laser:0"]
)

driver
(
  name "vfh"
  requires ["localhost:6665:position2d:0"
           "localhost:6665:laser:0"]
  provides ["localhost:6665:position2d:1"
           "localhost:6665:planner:0"]
  safety_dist_0ms 0.2
  safety_dist_1ms 0.24
  distance_epsilon 0.2
  angle_epsilon 5
)
```

Stage

Simulator focused on multi-robot scenarios

Gazebo is available

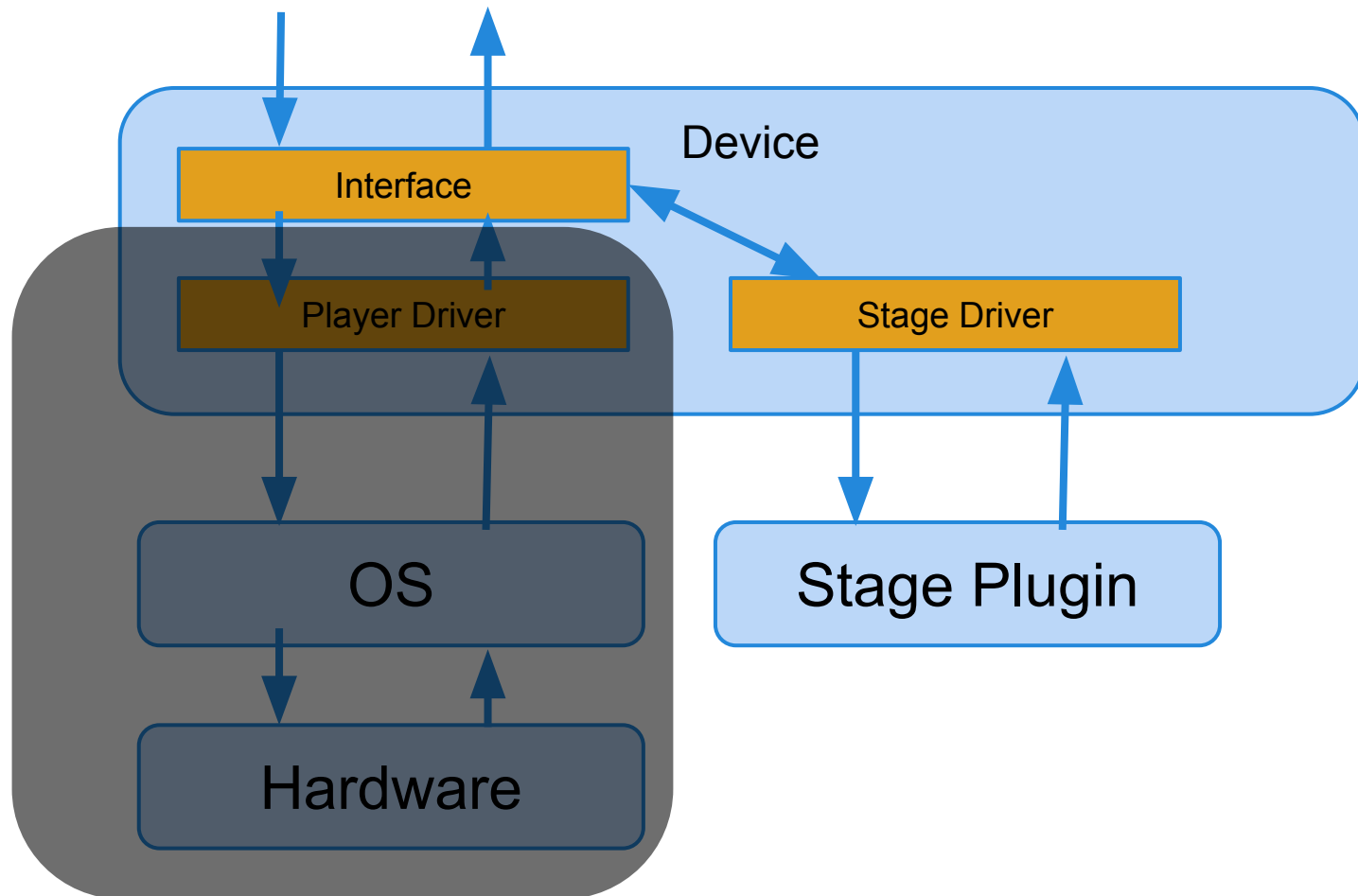
2D

Works well with Player

- Set of drivers

- Plugin

Devices (with Stage)



Virtual Drivers

Drives do not have to be related to hardware

vfh+

wavefront

Just need to conform to an interface

Complex behavior can be composed