

# “Smart” Mouse Trap Project

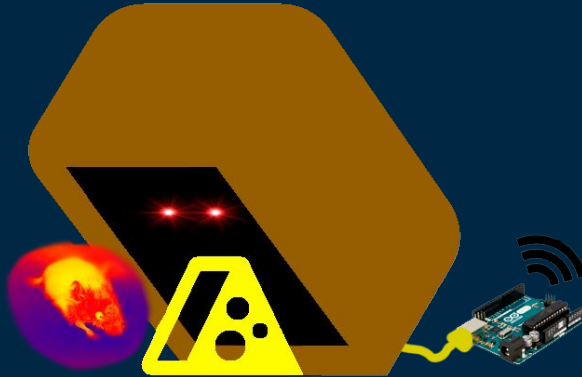
## Authors:

Cristina Pêra (up201907321);  
Diogo Ferreira (up201805258);  
Rogério Rocha (up201805123);  
Telmo Ribeiro (up201805124).

# Goals and Requirements (sorta...)

## Goals

- A **smart** yet **functional** mouse trap
- (...)



Photoshop = hard work

## Requirements

- detection ( $< 2s$ )
- warning ( $< 3s$ )
- close/open ( $< 3s$ )
- $> 1$  mouse trap (not anymore)
- 5s rule
- warning = sensor + photo

## So...

- keep RTT  $< 2s$  and we're fine!

# Specification (and more)



What is a **Request**? **Do** that!

- - - - - - (makes no sense?)
- **Photo Request (Pr)**
- **Open Request (Or)**
- **Close Request (Cr)**

We Present (HW -> Agent):

- **Raspberry Pi** as **Broker**
- **Raspberry Pi** (again) + (...) as **Field Brain**
- **Arduino** + (...) as **Field Muscle**
- **Android Phone** as **Mobile**

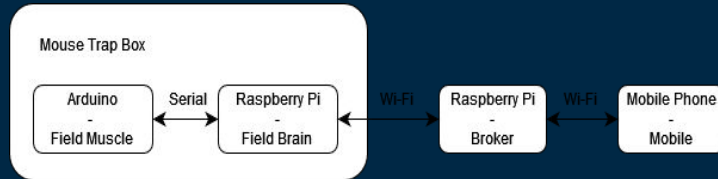
What is an **Event**? That **happened**...

- **Sensor Event (Se)**
- **Photo Event (Pe)**
- **Open Request (Or)**
- **Close Request (Cr)**

There is **more**...

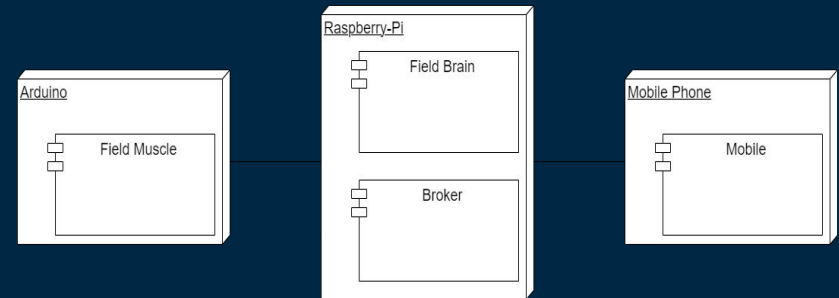
# Architectures

## HW Architecture



## SW Architecture no space...

Actually Deployed  
not optimal but...



# Demo Information

## Good:

- Flag Oriented Modeling!
- Abstractions & Modular
- Fast Enough
- Downtimes (when vs when not to)
- Arduino and Raspberry (+ points)

## Bad:

- Point of Failure (and yet...)

## Ugly:

- Bulldozer...
- Sensors...
- WiFiShield!?
- Our Initial Idea (components wise)

