

# FileMaker or Python in control?

Setting the right environment for Python, everytime.

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# University of Groningen

- CIO Centre for Isotope Research
- Carbon 14 Dating
- Instruments from OS2/Warp - W11
- Users on Mac
- FileMaker Swiss Knife





# CIO Instruments





# CIO Weigh Stations



One acts like USB keyboard (easy)

Serial Interface

Cable Cost \$600

Pinout Available - make own cable

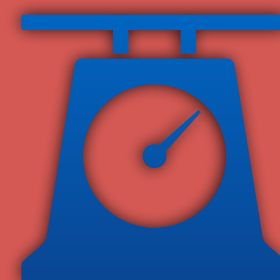
Challenge Different Scales

3 brands (2 now connected)



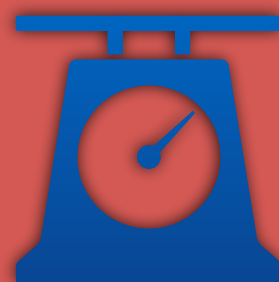


# Overview



Scale with

Serial Interface



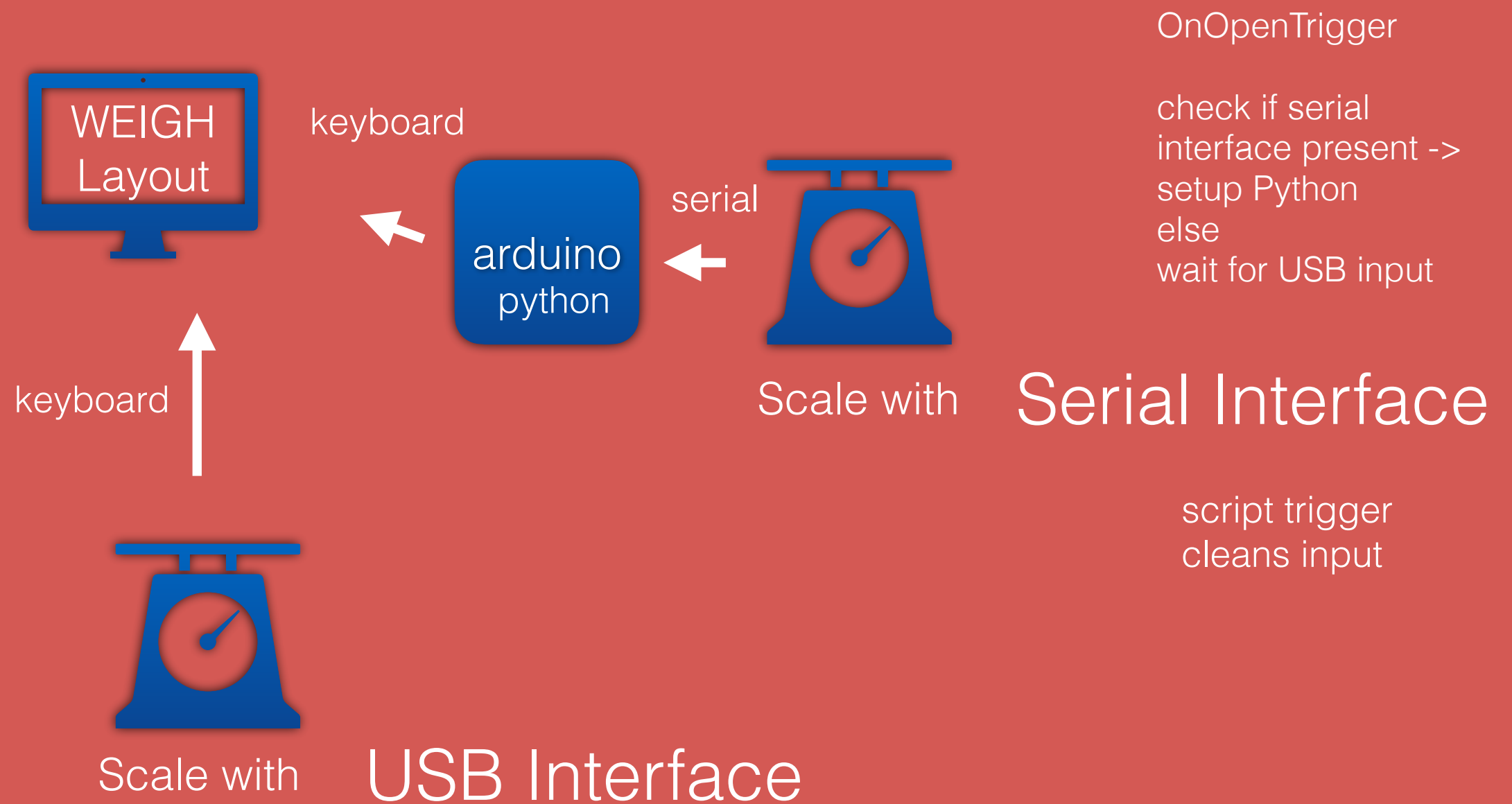
Scale with

USB Interface

User can  
connect any  
Macbook with  
FM to either  
scale

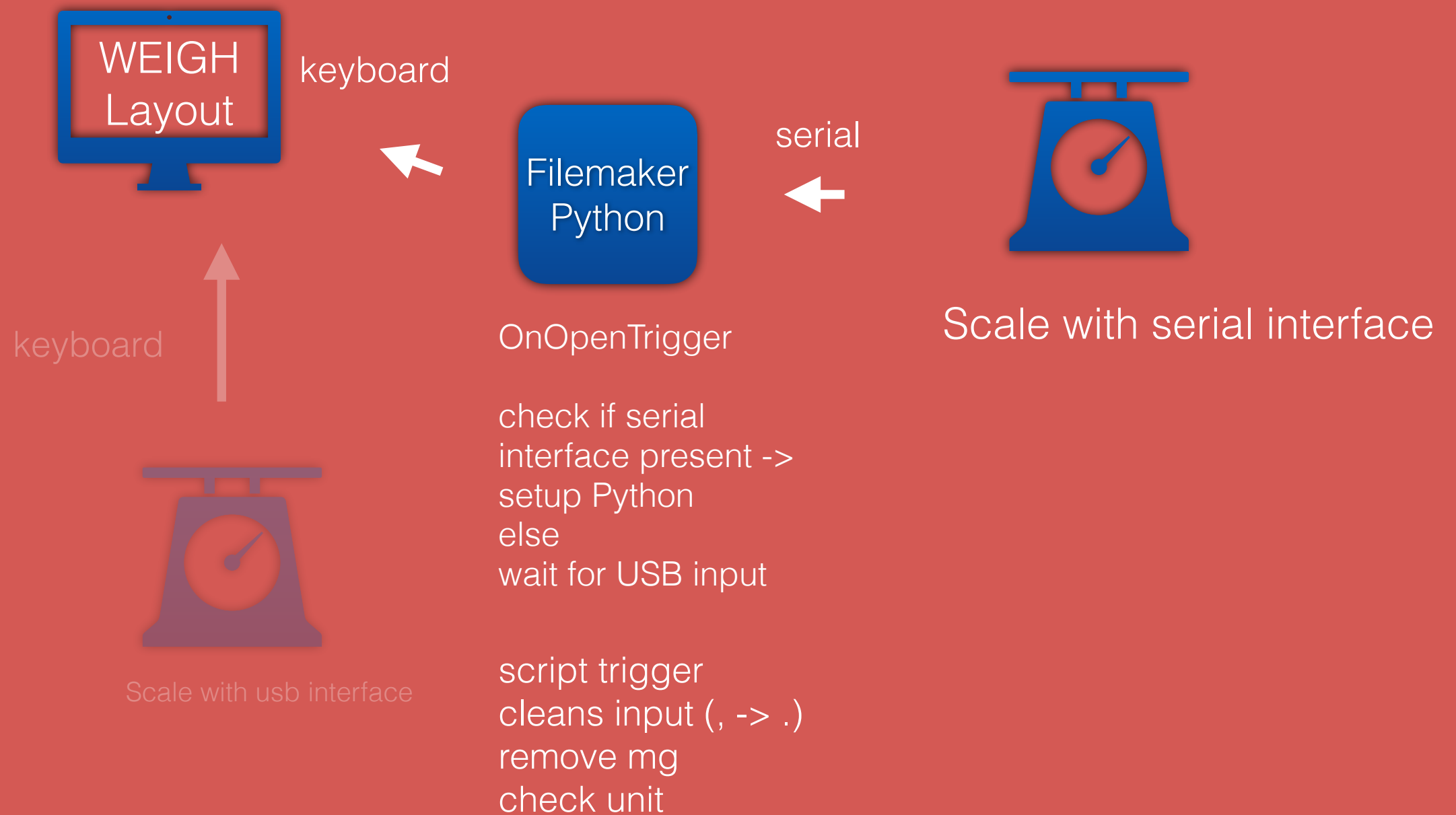


# One idea





# Morphed into





# Failed Approach

## Scale with serial interface

“unix” redirect serial input to text file

```
(stty speed 115200 >/dev/null && cat) </dev/cu.usbserial-FTB3VVRf | tee serial.log
```

FileMaker Poll for text file read input delete file

PySerial = or ≠ Serial? confusing!

## Issues

proces not closing, deleting file should close redirect, but low priority?  
two pipes : 223344ggmm or 24rm

serial plugin also option but want to try Python and the Library / Module challenge



# Challenge

Getting the right Python called  
Getting Libraries installed in the Python you think you use.

Testing in Terminal difficult, cause FileMaker uses different shell.

Different Serial Interfaces

# Solution

Get FileMaker to set it's own environment (PATH), install library needed.

Get FileMaker to save py.scripts in the right place.



# Working Setup



“Init Script” checks / setup

check connected serial devices (we have a couple different ones) save -> file *ActiveSerialDev.txt* for Python to use

check for Python installation  
install needed libs  
save Python script  
set environment vars (PATH)

Call the Python script



# Call Python



Python

wait for serial input (cr end)

sends result out as keyboard strokes

check for stop & wait again

## Meanwhile in FileMaker...

Trigger on input fields, when cr

- fix input (, instead of .)
- set units right

# Tools

redirect Error / Output command line call to text file

```
cmd >>file.txt 2>&1
```

Old fashioned search for Python Examples

No AI used





# Demo

