Digital Splitflap Number Screen

This project is meant to give a base for further development of a simple screen that just shows a number. This can be used to show customers which one is next. It does not rely on any other third-party services.

Idea

A screen hangs somewhere prominent in a room. It has some sort of small computer attached running software to drive the display. A worker has a small controller that connects to the display (or rather the computer). With the controller, he can control the number displayed.

Solution



The GIF shows not the latest version. The clock is disabled by default and I removed all the letters so the split-flap is only going through all the numbers.

Screen

I choose a 27-inch 1080p monitor that was under 200€. The only things really of interest were the size and good viewing angles.

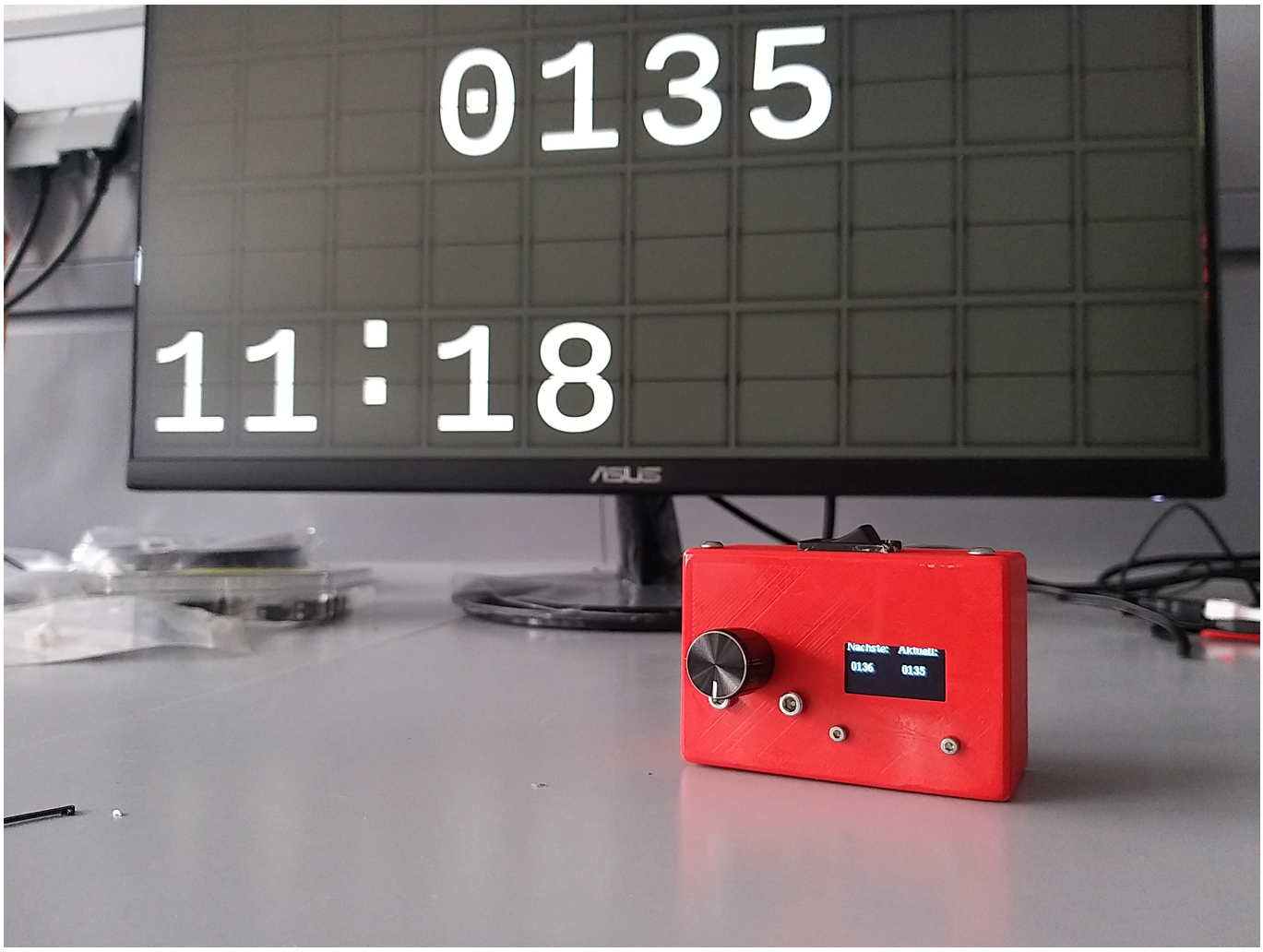
Computer

As a computer, I choose the (now new) Raspberry Pi Zero 2. It definitely has enough horsepower to run a little application to display numbers. It also runs the RaspAP software. Which makes the Raspberry Pi a small router. It is a bit overkill but works flawlessly. It just creates a WiFi Hotspot for the controller to connect to. So it is independent of other hardware.

Number display software

I choose to write my own little software for that. More information can be found here: Link to the Readme The software is autostarted by the Raspberry. This article by Lucas Vogel helped with some best practices: https://lucas-vogel.de/blog/perfect-electron/

Controller



The controller consists of an ESP8266 with a battery, a rotary encoder, and a small display. All together in a 3d-printed housing. More information can be found here: Link to the Readme

Github

The whole documentation can be found in this GitHub Repository:
https://github.com/SirSundays/Simple-Digital-Number-Screen

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