Raspberry Pi B+ als (Zeitraffer) Kamera

Quellen:

- Cron Jobs einrichten
- JPG-Bilder zusammenfügen

Basissystem

- Installation des Basissystems - Raspberri OS aka. Debian Buster vom 04.03.2021

Kamera testen - einzelne Aufnahme auslösen

```
# get image directly from camera:
christoph@christophs-nb:~$ ssh pi@raspberry-test-wlan 'raspistill -o
cam.jpg'; DATE=$(date +"%Y-%m-%d_%H%M"); scp pi@raspberry-test-
wlan:~/cam.jpg $DATE.jpg
```

USB-Stick einbinden

```
sudo su
echo "/dev/sda1  /mnt/sda1              ext4    defaults,noatime  0
1" >> /etc/fstab
```

Bilder aufnehmen

```
pi@raspicam:~ $ cat time-laps.sh
#!/bin/bash
#
#FOLDER=/home/pi/time-laps
#FOLDER=/mnt/sda1/time-laps
DATE=$(date +"%Y%m%d")
echo "DATE: $DATE"
TIMESTAMP=$(date +"%Y-%m-%d_%H%M")
echo "TIMESTAMP: $TIMESTAMP"
FILE=$TIMESTAMP.jpg
echo "FILE: $FILE"
FOLDER="/mnt/sda1/$DATE"
echo "FOLDER: $FOLDER"

if [ -d $FOLDER ]; then
```

```
 echo "Folder $FOLDER already exist!"
else
 mkdir $FOLDER
fi

echo -n "take a picture and store it to: $FOLDER/$FILE ... "
raspistill -o "$FOLDER/$FILE"
echo "done"
```

Automatische Aufnahmen via CRON Job

```
crontab -e
...
# execute every 5 minutes between 07:00 and 20:00 am:
*/5 7-19 * * *  /home/pi/time-laps.sh
```

Check `crontab` for user `pi`:

```
sudo su
cat /var/spool/cron/crontabs/pi
```

Aufnahmen vom Pi holen

```
christoph@christophs-nb:~$ DATE=20210408; mkdir $DATE; scp pi@raspberry-test-wlan:/mnt/sda1/$DATE/* $DATE/
```

Zeitraffer erstellen

```
ffmpeg -r 30 -pattern_type glob -i "*.jpg" -c:v libx264 -pix_fmt yuv420p -movflags +faststart timelapse.mp4
```