

AALTO UNIVERSITY, HELSINKI, ELEC-E8408 EMBEDDED SYSTEMS DEVELOPMENT

Tour-Tag - User Manual

prototype stage

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What is the Tour-Tag

Tour-Tag is a device designed for the tour guides working for the FinTour at cruises around Finland's coastline. The design provides tour guides the ability to provide the status of the tour visually for the travelers participating in the cruise. Tour-Tag system that has led display for presenting information for the travelers. Control system that is used to control the led display and makes it possible to set up the device via user mobile device or laptop.

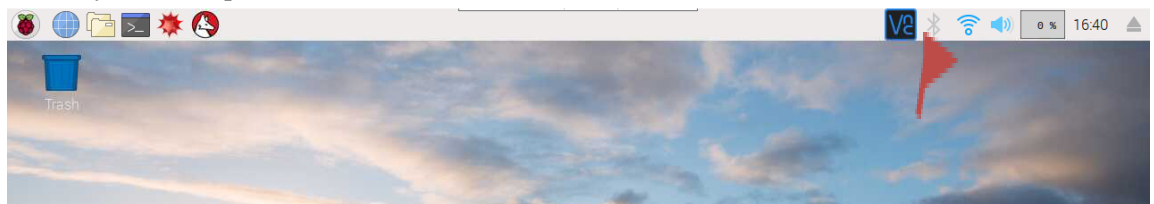
This user manual is considering the use of the prototype version of the Tour-Tag.

Getting started with the Tour-Tag

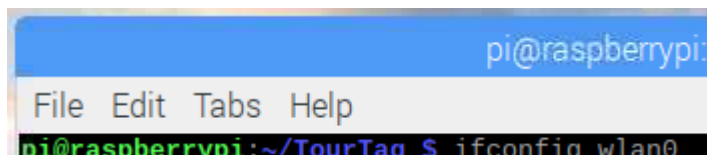
This getting started instructions for the prototype version of the Tour-Tag.

The Tour-Tag prototype consists of the Raspberry Pi with Unicorn HAT HD led display attached and a USB power supply to supply the Raspberry Pi. To access the device it is required to have an HDMI-cable, keyboard, display, and WLAN-network.

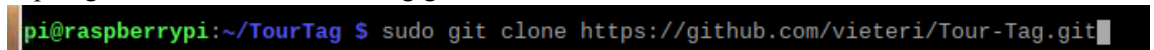
1. Connect the USB-power supply to the Raspberry Pi.
2. Connect the HDMI to the Raspberry Pi
3. Connect the keyboard USB-cable to the Raspberry Pi
4. Set up the wifi connection by selecting the network under the wifi button on the Raspberry Pi desktop



5. Check your Raspberry Pi IP-address by typing `ifconfig wlan0` in terminal

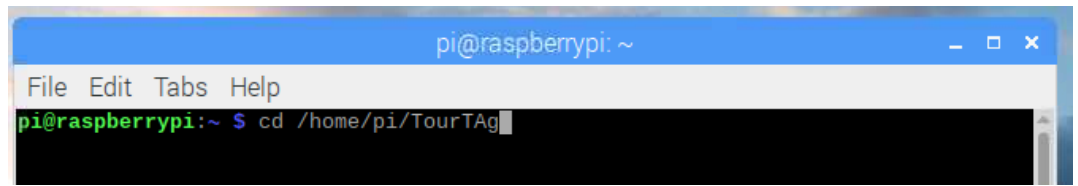


6. If you don't have the software installed it is possible to clone by typing `sudo git clone https://github.com/vieteri/Tour-Tag.git`

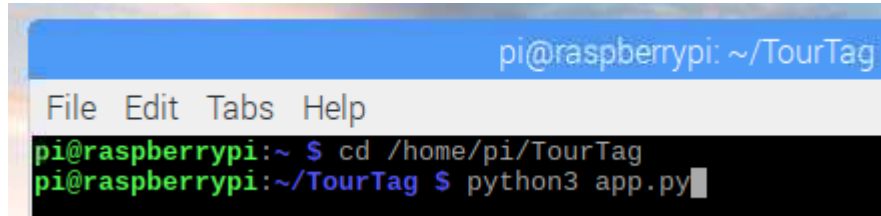


Correct folder needs to be created first using command `mkdir TourTag`
git command downloads the SW the folder where terminal currently is. So use "`cd TourTag`" to get the correct folder.

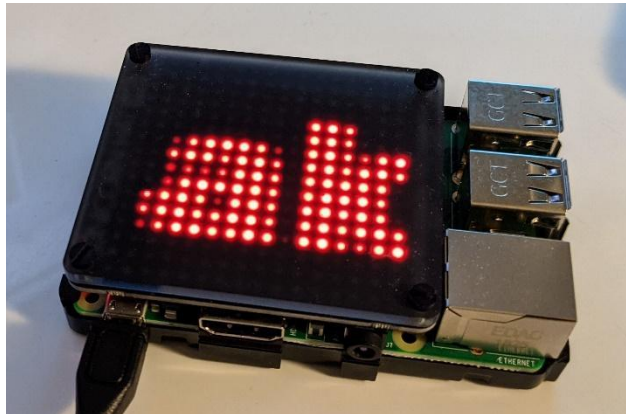
7. Turn on the python program using the command line
 - a. go to correct folder by typing `cd /home/pi/TouTag`




- b. Start the actual python application by typing `python3 app.py`



After this there should be some action on the led display for a short moment



8. Go to your laptop web browser and type in your device IP-address with the port number as follow `xxx.xxx.xxx.xxx:5010`

 `199.169.5.10:5010`

9. Now you should see the login page

Please login

<input type="text" value="Username"/>	<input type="text" value="Password"/>	<input type="button" value="Login"/>
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You need to login first.

10. Login to system username: admin and password: admin
11. Then you should be directed to the page where it is possible to feed the source port and destination port

Tour Tag

Set new route

You were just logged in

Source

Destination

12. Supply for example Oulu as source and Pori for the destination



The display will show the ports on the tour

13. Then you should be directed to the page where it is possible to set the next port to stop and stop duration at that port

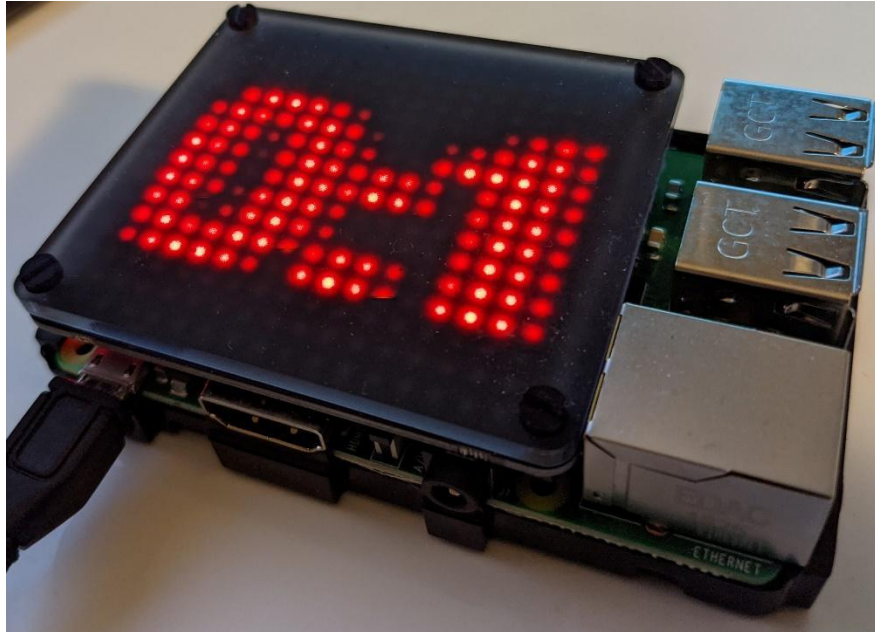
Tour is started

Next port

stop duration in seconds

Click [here](#) to stop route.

14. When the next port and stop time is submitted the display shows the time remaining to the next port. The minimum time is set to ten in the prototype.



15. After the time is run out the web page will update again to a page where the port and stop time is set.
16. The route can be diminished by clicking the link at the bottom of the page

Click [here](#) to stop route.

17. Log out of the system can be done by clicking the link on the set new route page

Click [here](#) to go logout.

18. The application running at the Raspberry Pi can be stopped by pressing Ctrl+C on terminal

References:

- [1] RaspberryPi performance specifications, <https://www.raspberrypi.org/documentation/faqs/#pi-performance-perf>