

Robotics 2020 YetiBorg Racing

Basic Instructions

February 27th 2020

**Do not hesitate to contact me (erwin@liacs.nl),
if you encounter any problems getting started!**

1. To start the YetiBorg insert the 9V battery. The YetiBorg will now boot. Wait until the green-light becomes stable.
2. After the YetiBorg booted it will automatically connect to a wireless network (2.4G) with SSID *lmlrobotics* and password (as given in the Racing Team Document). Note: A wireless network with these characteristics is available just in front of the LIACS Media Lab (right to the reception) and in the Robotics Lab (Room 404).
3. Login with a notebook to the same wireless network and use *ssh* or *RealVNC* to connect to the Yetiborg. Note the name of the Yetiborg or the mentioned IP-address that most probably will be assigned to the YetiBorg when connecting to the wireless access point at the LIACS Media Lab.
4. Once connected to the YetiBorg you can for example add credentials for other wireless networks.
5. Always shut down the YetiBorg before detaching the 9V battery. Do this by issuing a command through *ssh*, or by selecting <shut down> from the upper left menu. (Failing to do so may corrupt the SD-Card. You also may want to make a copy of the SD-Card using the SD Card Copier tool in <Accessories>.)

The following necessary packages already have been installed:

- bash <(curl <https://www.piborg.org/installer/install-picoborgrev.txt>)>
- bash <(curl <https://www.piborg.org/installer/install-zeroborg.txt>)>
- bash <(curl <https://www.piborg.org/installer/install-yetiborg-v2.txt>)>
- sudo apt-get -y install python-picamera
- sudo apt-get -y install libcv-dev libopencv-dev python-opencv

The resolution of your screen can be set by:

<Raspberry Upper Left><Preferences><Raspberry Pi Configuration><System>[Set Resolution]

For further information and code examples please see the related articles on page:

<https://www.piborg.org/robots-1/yetiborg-v2>

Assignment, due Monday March 2nd 2020 at 14.00:

Check that the camera works by issuing the following command in a terminal on the YetiBorg:

In a terminal issue the command: `raspistill -o cam.jpg`

Check that the motors work by issuing the following commands in a terminal on the YetiBorg:

`cd /home/pi/yetiborgv2`

`./yeti2Sequence.py`

Send an e-mail of your findings to erwin@liacs.nl with subject ***Robotics YetiBorg Findings***.