MAEbot Datasheet

EECS 467

January 7, 2015

Table 1: Units

Distance:	meters	m
Linear Velocity:	meters/second	m/s
Orientation:	radians	rad
Angular Velocity:	radians/second	rad/s

Table 2: Robot Parameters

Ticks/Rev:	480
Wheel Diameter:	0.032m
Wheelbase:	0.08m

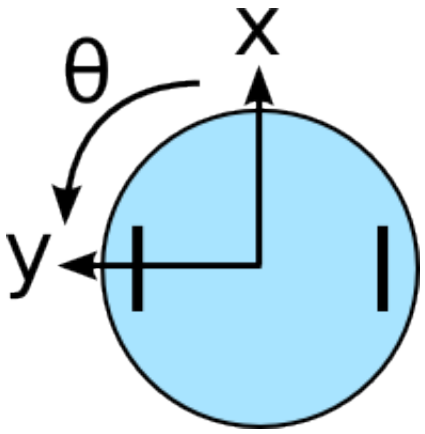

Figure 1: The MAEbot reference frame uses a right-handed coordinate system. The robot drives forward along the x-axis. Positive angles are to the left of the robot, negative angles to the right.

Connecting to the MAEbot

Each team has an account on every MAEbot.

User: teamN (where N is your assigned team number)

Password: eecs467

This setup allows you to easily switch between robots if your battery dies or something else is wrong with your robot. You can simply pull your repository into your home directory on the new robot and off you go!

There are two ways we've been connecting to the MAEBots:

- Plug-In Console
- SSH over 802.11 WiFi

Plug-In Console

Plug a usb mini cable into the console port on the top board and execute:

```
screen /dev/ttyUSBX 115200
```

You can also watch the whole boot sequence on this port, which can be useful for debugging. Though hopefully you won't need to debug anything in the boot process. Be careful with this cable. If you trip over it, you can pull the connector off the board, which will require your robot to be sent off to the repair shop to reconnect it.

SSH over WiFi

The MAEBots are programmed to connect to an open network named "maenet", configured on the 192.168.3 network. Each robot will connect with an IP address of 192.168.3.S/N. The serial numbers are written on the top and bottom of each robot.