



THE JSCONF 2013 NODEJITSU

NODECOPTER



nodejitsu

The Team

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Schedule

- 9:30am - 10am Takeoff
- 10am - 1pm Hacking
- 1pm - 2pm Lunch (box lunches - turkey, hoagie, chicken caesar, and veggie wraps)
- 2pm - 5pm Hacking
- 5pm - 6pm Demos (Bring your significant others & kids!)

History

The Drones

- Wifi Access Point (Drone Number = WiFi Name)
- Runs Linux (telnet 192.168.1.1)
- 2 Cameras (720p front, 360p bottom)

The Drones

- Changing / Charging Batteries
- Turn it upside down for emergency cutoff (kill switch)
- Download “AR Race 2” (iOS) or “AR.FreeFlight 2.3” (Android Google Play Store)

Programming

- install node.js
- npm install ar-drone
- docs at: <https://github.com/felixge/node-ar-drone>

Programming

```
1 var arDrone = require('ar-drone');
2 var client  = arDrone.createClient();
3
4 client.takeoff();
5
6 client
7   .after(5000, function() {
8     this.clockwise(0.5);
9   })
10  .after(3000, function() {
11    this.stop();
12    this.land();
13  });
```

<http://nodecopter.com/hack>

Ask us if you have any questions / need help!

Repairs

- Drone is pretty robust, but still - be careful
- Bring drone to us if you have a defect / suspect something to be misbehaving

Internet

- SSID: “AVT Event Technologoies” (jsconf / jsconf)
- Drones may cause interference

Ideas for Projects

Team Up With NodeBots

- Collaborate with a team from next door!
- Make the drone talk to a NodeBot
- Put a NodeBot on a NodeCopter! (peel off the bottom of the drone to get to the pins)

More Ideas

- Fly in a circle, eight or other pattern
- Coordinate flight with another drone
- Detect a face / follow that person (use node-opencv)

More Ideas

- Visualize music by flying to the beat
- Hack into the firmware (via telnet)

The Line Following Challenge

- Drone is placed at the beginning of the orange line, randomly rotated
- Takeoff, follow the line, land in the black square
- Hard Problem - fastest team wins a prize

Chandeliers

- Do not hit the chandeliers!
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Slides are available

<https://github.com/nodecopter/jsconf-2013>

Next

- Find a team (2 - 3 people)
- Pickup a drone
- Or: Meet at the water table to find a team

Questions?