

DPRG RBNV Chat Record – Oct 24, 2023

Carl Ott

7:43 PM

~7:40pm - Ted- gave a fun update - a story about the Eclipse from Colorado- also showed dips in solar panel output due to the eclipse - similar to Ray's solar panel output drop during that time...

Carl Ott

7:45 PM

~7:43pm - Ted had question about magnetometer vs. Gyro - magnetometer drifting 2 or 3 degrees. Gyros so accurate by comparison. Tried Kalman filter on magnetometer but no luck yet...

Mickey Dean

7:52 PM

If I have my IMU in a project box along with a Raspberry Pi, can I just calibrate that box (even if I have to do it directly above the mower,) or will I have to figure a way to pick up a 75-pound mower in Figure 8's?

Carl Ott

8:02 PM

~7:59pm - Chris gave an update on his Romi project. He realized that his older self hadn't documented enough to explain how it works... Then he shared his system diagram and discussed the system design...

Doug Paradis

8:17 PM

Here is an easy to understand example of adaptive mapping and navigation: <https://www.instructables.com/Adaptive-Mapping-and-Navigation-with-iRobot-Create/>

Doug Paradis

8:29 PM

Programing Robots with ROS and A gentle Introduction to ROS - 2 good books about ROS1

Carl Ott

8:29 PM

Chris recommended this book for ROS - <https://www.amazon.com/Programming-Robots-ROS-Practical-Introduction/dp/1449323898>

Pat C

8:30 PM

Here's one I found for ROS2 v

<https://www.theconstructsim.com/wp-content/uploads/2019/03/ROS2-IN-5-DAYS-e-book.pdf>

Chris N

8:30 PM

A Concise Introduction to Robot Programming with ROS2

Carl Ott

8:43 PM

~8:41pm - Tom asked about Roomba's - he has a collection with potentially useful firmware... Showed his RS232 interface cobbled together with hand-made PS2 connector... First question - any windows app to query the Roomba?

Carl Ott

8:47 PM

~ 8:40pm - Tom asked about Roombas. Doug mentioned a book that could help: <https://www.amazon.com/Hacking-Roomba-ExtremeTech-published-Wiley/dp/B00EKYXT14>

Carl Ott

8:50 PM

~8:49pm - Doug mentioned 1 or 2 things in his garage that he's looking to pass along. One is an HP X/Y plotter - the other (if he still has it) is an old Roomba...

Carl Ott

8:53 PM

~8:51pm - Harold asked what happens to bad rainbows. Nobody knew the correct answer: "They send them to prison. But it's a light sentence, with no time to reflect."

Mickey Dean

8:56 PM

sure

I would like some input.

lol

yes

OzzyMaker Berry GPS-IMU

Mickey Dean

8:57 PM

it has great python docs.

it has excellent python libraries.

Carl Ott

8:57 PM

<https://ozzmaker.com/product/berrygps-imu/>

Mickey Dean

8:59 PM

yes

Carl Ott

8:59 PM

uses this for Gyro/ Acc/ Mag LSM6DSL

<https://www.st.com/resource/en/datasheet/lsm6dsl.pdf>

Mickey Dean

9:00 PM

but in general calibrating an IMU on a mower can I calibrate it separate?

Tom C - Hamilton, ON

9:00 PM

for the Magnetometer calibration, some thoughts: <https://learn.adafruit.com/adafruit-sensorlab-magnetometer-calibration/magnetometer-calibration>

Mickey Dean

9:00 PM

but can I calibrate it separately from mower?

I guess given the metal and all that.

I just need to know if I can calibrate the project box separate then put it on the mower.

or will the environment matter?

Mickey Dean

9:02 PM

Thanks Doug I will check that out, it might just need a x and Y axis.

this is all new to me, so I am still piecing it together.

Thanks Doug, that is encouraging.

Yes sir.

I am overthinking it

Mickey Dean

9:03 PM

correct

that is what I thought.

thanks

ah I see.

thank you.

Mickey Dean

9:05 PM

yes

Thanks Doug, much appreciated.

gas

Mickey Dean

9:06 PM

that is hopeful.

lol

I will have a upper platform I can build even taller mast on

Mickey Dean

9:08 PM

ideally

I had to buy tubeless wheels.

I feel comfortable with the tubeless cargo cart wheels.

Mickey Dean

9:09 PM

thanks guys.

Mickey Dean

9:13 PM

lol

Pat C

9:14 PM

<https://rpilocator.com/?country=US>

Carl Ott

9:15 PM

Pat - thanks for that link on the RPi locator - sounds like a great resource - especially when Dallas locals can't rely on local MicroCenter stock...

Mickey Dean

9:21 PM

excellent job Doug D

Carl Ott

9:21 PM

~9:20pm - Doug D shared pics he took from South Padre of the recent solar eclipse...

You

9:22 PM

Doug also showed his reflector adaptor with solar film that he used with his Nikon D780 DLSR using a 300mm prime lens...

Carl Ott

9:27 PM

The Quantum Series by Douglas Phillips 5 books in this series. Pretty fun Science Fiction stories <https://douglasphillipsbooks.com/books>

Carl Ott

9:36 PM

~9:35pm - Tom shared a presentation on a solar eclipse viewer cobbled together "MacGyver" style.

Pat C

9:37 PM

Some good topics tonight! See you next week.