

## DPRG RBNV Chat Record – Nov 23, 2021

Carl Ott  
7:45 PM

~7:44 - Pat talked about progress using Platform IO workflows in VS Code

Carl Ott  
7:49 PM

Pat also gave an update on his Wooden Monster robot - now working with a remote control...

Carl Ott  
8:04 PM

Raspberry Pi UPS - lots of options - e.g. [https://www.amazon.com/Pi-UpTime-2-0-Pi-4-Pi-3-Other/dp/B07YF45H2X/ref=sr\\_1\\_1\\_sspa?keywords=raspberry+pi+ups&qid=1637719206&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUEyUVJITDY5STFMQURFJmVuY3J5cHRIZElkPUEwNzAwMjQxMjBkQjQMERCRzZKVCZlbnNyeXB0ZWRBZEIkPUEwMDM1MzY3MTZYMjhUVjhIMlI5ViZ3aWRnZXROYW1IPXNwX2F0ZiZhY3Rpb249Y2xpY2tSZWRpcmVjdCZkb05vdExvZ0NsaWNrPXRydWU=https://www.amazon.com/MakerFocus-Raspberry-Standard-Expansion-Cellphone/dp/B01LAEX7J0/ref=sr\\_1\\_4?keywords=raspberry+pi+ups&qid=1637719206&qsid=147-9956704-5231507&sr=8-4&sres=B087FXLZZH%2CB01LAEX7J0%2CB082CVWH3R%2CB08D8PPCKN%2CB07Y213F8S%2CB08HLXGS3W%2CB08N6B8M1H%2CB091TL2Q9H%2CB096FT6THL%2CB096FPSTLH%2CB08DYHGD7P%2CB08D678XPR%2CB07VDB6ZCD%2CB07YF45H2X%2CB08DNRYM4Y%2CB07FDBZCXG](https://www.amazon.com/Pi-UpTime-2-0-Pi-4-Pi-3-Other/dp/B07YF45H2X/ref=sr_1_1_sspa?keywords=raspberry+pi+ups&qid=1637719206&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUEyUVJITDY5STFMQURFJmVuY3J5cHRIZElkPUEwNzAwMjQxMjBkQjQMERCRzZKVCZlbnNyeXB0ZWRBZEIkPUEwMDM1MzY3MTZYMjhUVjhIMlI5ViZ3aWRnZXROYW1IPXNwX2F0ZiZhY3Rpb249Y2xpY2tSZWRpcmVjdCZkb05vdExvZ0NsaWNrPXRydWU=https://www.amazon.com/MakerFocus-Raspberry-Standard-Expansion-Cellphone/dp/B01LAEX7J0/ref=sr_1_4?keywords=raspberry+pi+ups&qid=1637719206&qsid=147-9956704-5231507&sr=8-4&sres=B087FXLZZH%2CB01LAEX7J0%2CB082CVWH3R%2CB08D8PPCKN%2CB07Y213F8S%2CB08HLXGS3W%2CB08N6B8M1H%2CB091TL2Q9H%2CB096FT6THL%2CB096FPSTLH%2CB08DYHGD7P%2CB08D678XPR%2CB07VDB6ZCD%2CB07YF45H2X%2CB08DNRYM4Y%2CB07FDBZCXG)  
[https://www.amazon.com/SunFounder-Raspberry-Recharging-Function-Expansion/dp/B08HLXGS3W/ref=sr\\_1\\_9?keywords=raspberry+pi+ups&qid=1637719206&qsid=147-9956704-5231507&sr=8-9&sres=B087FXLZZH%2CB01LAEX7J0%2CB082CVWH3R%2CB08D8PPCKN%2CB07Y213F8S%2CB08HLXGS3W%2CB08N6B8M1H%2CB091TL2Q9H%2CB096FT6THL%2CB096FPSTLH%2CB08DYHGD7P%2CB08D678XPR%2CB07VDB6ZCD%2CB07YF45H2X%2CB08DNRYM4Y%2CB07FDBZCXG](https://www.amazon.com/SunFounder-Raspberry-Recharging-Function-Expansion/dp/B08HLXGS3W/ref=sr_1_9?keywords=raspberry+pi+ups&qid=1637719206&qsid=147-9956704-5231507&sr=8-9&sres=B087FXLZZH%2CB01LAEX7J0%2CB082CVWH3R%2CB08D8PPCKN%2CB07Y213F8S%2CB08HLXGS3W%2CB08N6B8M1H%2CB091TL2Q9H%2CB096FT6THL%2CB096FPSTLH%2CB08DYHGD7P%2CB08D678XPR%2CB07VDB6ZCD%2CB07YF45H2X%2CB08DNRYM4Y%2CB07FDBZCXG)

Carl Ott  
8:07 PM

8:06- Chris showed an inexpensive handy DC-DC converter - like this [https://www.amazon.com/DROK-Converter-5-3V-32V-Regulator-Transformer/dp/B078Q1624B/ref=asc\\_df\\_B078Q1624B/?tag=hyprod-20&linkCode=df0&hvadid=309708743736&hvpos=&hvnetw=g&hvrand=1738414238388427344&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9026796&hvtargid=pla-645064714280&psc=1&tag=&ref=&adgrpid=60510342446&hvpone=&hvptwo=&hvadid=309708743736&hvpos=&hvnetw=g&hvrand=1738414238388427344&hvqmt=&hvdev=c&hvdvcmdl=&h](https://www.amazon.com/DROK-Converter-5-3V-32V-Regulator-Transformer/dp/B078Q1624B/ref=asc_df_B078Q1624B/?tag=hyprod-20&linkCode=df0&hvadid=309708743736&hvpos=&hvnetw=g&hvrand=1738414238388427344&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9026796&hvtargid=pla-645064714280&psc=1&tag=&ref=&adgrpid=60510342446&hvpone=&hvptwo=&hvadid=309708743736&hvpos=&hvnetw=g&hvrand=1738414238388427344&hvqmt=&hvdev=c&hvdvcmdl=&h)

Pat Caron  
8:10 PM

<https://weeklyrobotics.com/>

Carl Ott  
8:10 PM

Thanks Pat - for that link to "Weekly Robotics" website & news-feed...

Rud Merriam  
8:18 PM

Some voltage converters to consider that are from the RC crowd so lite and small. <https://www.dimensionengineering.com/products/de-swadj3>  
<https://www.castlecreations.com/en/cc-bec-2-0-010-0154-00> which handles 14-15 amp.

Carl Ott  
8:28 PM

~8:26- John G showed a simple project to turn a toaster oven into a reflow oven  
<https://learn.adafruit.com/ez-make-oven>

Carl Ott  
8:54 PM

~8:49- Kumar - question around LiDAR - playing with an A1M8 LiDAR. Thinking about LiDAR vs. other sensors (IR, limit switches, encoders). Thinking about all the things which might be accomplished via a LiDAR alone. Wondering what challenges he'll face by trying to lean heavily (exclusively?) on a LiDAR...

Ray  
9:01 PM

I thought we used those lower cost sensors because we were a frugal group (aka cheap!)

Ponder SomeMore  
9:11 PM

Kumar, you said you were "enamored" with this sensor. 1. woefully under-used word these days. 2. may you have a long and happy life together.

Ray  
9:13 PM

The first step is to prefect hand waving..

Carl Ott  
9:19 PM

~9:17 - Rud - discussed his RVR modifications - serial to Wi-Fi to get commands over to RVR, and showed a demonstration - Commands from laptop to robot platform - driving a fixed pattern...

Thalanayar Muthukumar  
9:29 PM

Need to drop. Interesting discussions and thanks for good inputs.

Ponder SomeMore  
9:36 PM

I have an appeal to make on behalf of my team

Carl Ott  
9:36 PM

Ray mentioned GoPowerSports as a fun place for parts for larger robots.. <https://www.gopowersports.com/>

WE have Harold in queue, then Karim - anybody else want to jump in after Karim?

Carl Ott  
9:40 PM

~9:37- Harold asked a question - meeting spaces for another group - focused on 3D Printer

Carl Ott  
9:47 PM

Also gave a rousing demo ranging from Dungeons and Dragons to Grugu Ears and Display Glasses...

Carl Ott  
9:56 PM

~9:54- Karim asking for consultants for discussions - to talk through a complicated steering discussion - perhaps a 1 hour or so...

Carl Ott  
9:59 PM

Constraints - robot has to fit in an 18-inch sizing cube at start of match. Plus, a grid of 1 inch PVC tubing to climb over in the field. hence the team has decided to go with large 8" foam filled tires. Matched on a single axle - regular differential (can be driven differently). Arranged in a T-Shape, where there is a 'swerve' wheel - can independently rotate while driving - but that wheel is connected on a linear slide (can change it's distance from the differential / center of robot)

Chris N  
10:06 PM

FYI, Black Friday / Cyber Monday deals just went live on Pololu.com

John Gauthier  
10:09 PM

Darn. I just ordered two 25D motors from Pololu last week and they are 22% off on the Black Friday deal.

Doug Paradis  
10:23 PM

absolute encoders: [https://www.amazon.com/Magnetic-Encoder-Induction-Measurement-Precision/dp/B097QNG1CN/ref=sr\\_1\\_1?keywords=5pcs+AS5600+Magnetic+Encoder+Magnetic+Induction+Angle+Measurement+Sensor+Module+12bit+high+Precision&qid=1637727722&sr=8-1](https://www.amazon.com/Magnetic-Encoder-Induction-Measurement-Precision/dp/B097QNG1CN/ref=sr_1_1?keywords=5pcs+AS5600+Magnetic+Encoder+Magnetic+Induction+Angle+Measurement+Sensor+Module+12bit+high+Precision&qid=1637727722&sr=8-1)

Ray  
10:23 PM

Doug, Seeed has an AS5600 12 BIT magnetic rotary position sensor with a grove connector on it for ~\$5

Pat Caron  
10:25 PM

John, have you looked at Canada Robotix for Pololu motors? I just looked at some 37D motors c/w encoders and they are about \$3 CAD more expensive than at Pololu!

Shipping is \$13 CAD

Chris N  
10:26 PM

Calling it a day...

Pat Caron  
10:30 PM

Good night guys...

Ponder SomeMore  
10:32 PM

<https://www.desmos.com/calculator/wwsz2td5s3>

Carl Ott  
10:36 PM

Thanks Karim - that's the kids online graphing calculator modelling the robot geometry we just discussed...

Rud Merriam  
10:44 PM

Good night, gang.

Carl Ott  
10:44 PM

~10:43pm- Ray asking about Laptop replacement for a windows box... and recommendations for security software

Carl Ott

10:51 PM

Ray- here's the Lenovo outlet store - good way to get good boxes at last year's prices <https://www.lenovo.com/us/en/outletus/>