

## DPRG RBNV Chat Record – August 1, 2023

Carl Ott

7:44 PM

~7:41pm - Ted working with a Time of Flight - Decawave module and ESP32, made by MakerFab - ultrawide GHz transceiver - also uses triangulation - getting decent accuracy (6 inches vs. 4 target), and can also range up to around 1,000 Ft for \$50 / module versus shorter range version for \$40 each. Next working to get sample rate up a little. Thinking to use for location vs. GPS - where Robot thinks it is vs. where it "actually" is...

Carl Ott

7:45 PM

looks like this module <https://www.makerfabs.com/esp32-uwband-ultra-wideband.html>

Carl Ott

7:46 PM

will work on calibration and pulse rate. Also need to explore lag from measurement to readout...

Ted Meyers

7:48 PM

<https://www.makerfabs.com/esp32-uwband-pro-with-display.html>

Carl Ott

7:48 PM

First link is the less expensive one - Second link has greater range / more powerful radio.

Carl Ott

8:01 PM

~8:00pm - Ted mentioned trying to replicate a 6502 chip redesign - and explained the LG O'Scope hiding in his background...

7 photons

8:06 PM

I have something to show!

Carl Ott

8:08 PM

~8:08pm - Scott - working on sensor array for his TURD rover...

Carl Ott

8:10 PM

Showed a nice set of pictures to document his sensor construction & assemblies...

Ponder SomeMore

8:17 PM

Scott mentioned an AHRS sensor. Was it one of these:

[https://www.amazon.com/s?k=wit+imu&crd=413FVU03ME3R&srefix=wit+imu%2Caps%2C84&ref=nb\\_sb\\_noss\\_1](https://www.amazon.com/s?k=wit+imu&crd=413FVU03ME3R&srefix=wit+imu%2Caps%2C84&ref=nb_sb_noss_1)

Mickey Dean

8:17 PM

Scott, I love your demonstrations and presentations, great camera work, well detailed and always neatly displayed.

Do you write blogs on your builds? If not, you should. Better yet a Vlog or YouTube Channel

Ponder SomeMore

8:23 PM

A good if basic intro to hard and soft iron calibration:

<https://www.vectonav.com/resources/inertial-navigation-primer/specifications--and--error-budgets/specs-hsicalibration>

Ponder SomeMore

8:25 PM

You can get stiffer after-market springs - sometimes.

going up to a larger model

Jim F - CalgaryAB

8:25 PM

Hello Roboteers! Hello Carl & Harold.

Carl Ott

8:28 PM

Hi Jim! Scott uses the HWT905-TTL

Ponder SomeMore

8:28 PM

[https://www.amazon.com/Precision-Accelerometer-Acceleration-Electronic-Magnetometer/dp/B07G21XRV6/ref=sr\\_1\\_3?crid=HOHQ5AVPA0MJ&keywords=wit+mpu&qid=1690939718&srefix=wit+mpu%2Caps%2C186&sr=8-3](https://www.amazon.com/Precision-Accelerometer-Acceleration-Electronic-Magnetometer/dp/B07G21XRV6/ref=sr_1_3?crid=HOHQ5AVPA0MJ&keywords=wit+mpu&qid=1690939718&srefix=wit+mpu%2Caps%2C186&sr=8-3)

Carl Ott

8:29 PM

~8:27pm - Scott showed that he uses the HWT905-TTL - <https://www.amazon.com/Precision-Accelerometer-Acceleration-Electronic-Magnetometer/dp/B07G21XRV6>

Carl Ott

8:38 PM

I have to step away a couple minutes

FYI - I have to step away a few minutes - here's the queue Doug - O'Scope story of the week Jack Open Mic

Mickey Dean

8:45 PM

I smoked my first motor this week during a test run. In all fairness I had a question mark on it for some clicking I was unsure about. I suspect the clicking was my indication I had worn brushes.

I will definitely get temperature sensors on them ASAP.

Carl Ott

8:48 PM

~8:46pm - Jack showed his coffee / Chocolate dispensing robot.

ed mart

8:57 PM

Willy wonka and amber heard

Carl Ott

8:58 PM

Big STAR for Jack - Drink dispenser named 'Benjamin' or maybe will be renamed 'Hector'. Plans to set the mechatronic part aside for a while and work on an app to control it. Then after that - a metal version...

Carl Ott

9:00 PM

~8:59pm - John K showed Milling Machine request from the Dallas Makerspace - somebody looking for help to get a basic project with a milling machine.

Carl Ott

9:03 PM

~9:02pm - Navin getting started into robotics. Parked the prior idea of doing a walking robot and asked recommendations for kits for a 4 wheeled robot...

Navin Kasa

9:04 PM

[https://www.amazon.com/gp/product/B07JK5S67V/ref=ppx\\_yo\\_dt\\_b\\_asin\\_title\\_o00?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B07JK5S67V/ref=ppx_yo_dt_b_asin_title_o00?ie=UTF8&psc=1)

Mickey Dean

9:05 PM

Ted too

Navin Kasa

9:06 PM

[https://www.mouser.com/ProductDetail/Seeed-Studio/110090325?qs=B6kkDfuK7%2FDH%252B8bPqZNKUA%3D%3D&mgh=1&qclid=Cj0KCQjw2qKmBhCfARIsAFy8buL6JX9gsp0BR\\_AJGcEzwNBFDR-xibRHukBoBB0l3shgESDRHCMGynMaAiJ7EALw\\_wcB](https://www.mouser.com/ProductDetail/Seeed-Studio/110090325?qs=B6kkDfuK7%2FDH%252B8bPqZNKUA%3D%3D&mgh=1&qclid=Cj0KCQjw2qKmBhCfARIsAFy8buL6JX9gsp0BR_AJGcEzwNBFDR-xibRHukBoBB0l3shgESDRHCMGynMaAiJ7EALw_wcB)

Navin Kasa

9:12 PM

[https://www.gobilda.com/ftc-kits/?qclid=Cj0KCQjw2qKmBhCfARIsAFy8buLW0MA6zzlq-9g58gG-ckw5S\\_EILvE1R1CFU3-jARZfMvqdf8B42AgaAsDCEALw\\_wcB](https://www.gobilda.com/ftc-kits/?qclid=Cj0KCQjw2qKmBhCfARIsAFy8buLW0MA6zzlq-9g58gG-ckw5S_EILvE1R1CFU3-jARZfMvqdf8B42AgaAsDCEALw_wcB)

Mickey Dean

9:12 PM

Karim, was that pun intentional about not "steering" him away from omnidirectional wheels?

Ponder SomeMore

9:13 PM

guilty

Carl Ott

9:13 PM

[https://campaign.aliexpress.com/wow/gcp/tesla-pc-new/index?UTABTest=aliabttest377151\\_530968&src=google&src=google&albch=shopping&acnt=708-803-3821&slnk=&plac=&mtctp=&albbt=Google\\_7\\_shopping&albagn=888888&isSmbAutoCall=false&needSmbHouyi=false&albcpr=19108282527&albag=&trgt=&crea=en2255800796953601&netw=x&device=c&albpg=&albpd=en2255800796953601&gclid=Cj0KCQjw2qKmBhCfARIsAFy8buKCCvP8xxnC\\_TQNUL1zNE-XVpLUHADRR8g3JLVdT-kv8q\\_J9R96kaAvHXEALw\\_wcB&gclsrc=aw.ds&aff\\_fcid=0394841d18a34e6bae3904cf9b43606a-1](https://campaign.aliexpress.com/wow/gcp/tesla-pc-new/index?UTABTest=aliabttest377151_530968&src=google&src=google&albch=shopping&acnt=708-803-3821&slnk=&plac=&mtctp=&albbt=Google_7_shopping&albagn=888888&isSmbAutoCall=false&needSmbHouyi=false&albcpr=19108282527&albag=&trgt=&crea=en2255800796953601&netw=x&device=c&albpg=&albpd=en2255800796953601&gclid=Cj0KCQjw2qKmBhCfARIsAFy8buKCCvP8xxnC_TQNUL1zNE-XVpLUHADRR8g3JLVdT-kv8q_J9R96kaAvHXEALw_wcB&gclsrc=aw.ds&aff_fcid=0394841d18a34e6bae3904cf9b43606a-1)

Doug Paradis

9:14 PM

carl link doesn't work

Carl Ott

9:14 PM

[https://www.aliexpress.us/item/2255800796953601.html?\\_t=pvid%3Aab1e3ebe-7955-467b-a62c-a6d6c49bcc73](https://www.aliexpress.us/item/2255800796953601.html?_t=pvid%3Aab1e3ebe-7955-467b-a62c-a6d6c49bcc73)

Mickey Dean

9:16 PM

no suspension either, eh?

Ponder SomeMore

9:21 PM

this guy is pretty small and light loads:

<https://www.seeedstudio.com/Robot-Car-Kit-6WD-Off-Road-Chassis-p-4222.html>

Ponder SomeMore

9:31 PM

god we've all reverted to 14yo

Mickey Dean

9:31 PM

the contest to remove horse apples before the contest.

Carl Ott

9:31 PM

~9:25pm a quite serious discussion flowed around a new robot contest to be named "Hit The Fan"

Jim F - CalgaryAB

9:32 PM

Bye & Cheers Y'All



Carl Ott

9:32 PM

See ya Jim

Mickey Dean

9:32 PM

Scott, you do very impressive work

Navin Kasa

9:33 PM

[https://www.aliexpress.us/item/2255800257441258.html?spm=a2g0o.productlist.main.57.2ac62bfetlyogi&algo\\_pvi\\_d=a19d957a-99dd-44c7-a9d5-c225ec136b6e&algo\\_exp\\_id=a19d957a-99dd-44c7-a9d5-c225ec136b6e-28&pdp\\_npi=3%40dis%21USD%21214.37%21203.65%21%21%211529.05%21%21%40210321c316909432045221393ec0df%2110000001823072566%21sea%21US%210&curPageLogUId=D3Pnyk0zMnas](https://www.aliexpress.us/item/2255800257441258.html?spm=a2g0o.productlist.main.57.2ac62bfetlyogi&algo_pvi_d=a19d957a-99dd-44c7-a9d5-c225ec136b6e&algo_exp_id=a19d957a-99dd-44c7-a9d5-c225ec136b6e-28&pdp_npi=3%40dis%21USD%21214.37%21203.65%21%21%211529.05%21%21%40210321c316909432045221393ec0df%2110000001823072566%21sea%21US%210&curPageLogUId=D3Pnyk0zMnas) Another one claiming to

support 20KG.

Carl Ott

9:33 PM

~9:33pm - Pat shared a link about the new Arduino R4

Pat Caron

9:34 PM

<https://community.element14.com/technologies/embedded/b/blog/posts/pulse-width-modulation-pwm-with-renesas-ra-series-microcontrollers>

Scott Gibson

9:34 PM

Thanks Mickey.

Carl Ott

9:36 PM

Navin - that looks like a decent all-in-one price for the kit from Moebius. But it looks very much like the same kit I have - and no way would I dream of putting 20Kg load (44 pounds). I'd feel lucky if I could put 10 or pounds on it... I bet the motor brackets would sag and deform in no time.