

DPRG RBNV Chat Record – Sep 5, 2023

Carl Ott

7:42 PM

~7:40pm Doug D showed a live demo - RoboDog now with a head on, and being controlled via an app on his phone (same base from his telepresence roadbot)... Black STAR for Doug!

Or wait - Gold Star!

Carl Ott

7:49 PM

Doug Also talked about adjacent hobby - Astro Photography - mentioned working on a narrow band-stop filter that is designed to block city light pollution from LED lights and sodium lights...

Carl Ott

7:52 PM

~7:51pm - Pat had a little progress today. Shared a screenshot from his Arducam time-of-flight camera in his backyard - looking at a chain link fence with a metal pole. Demonstrated that he's able to detect the fence with this setup!

Carl Ott

7:54 PM

Field of View is just 70 degrees - is now wishing he might have bought 2 cameras to get a wider field of view...

Carl Ott

7:56 PM

Pat's algorithm defines 3 vertical regions for the image. He then sorts through all points in each region and builds a list of the 10 closest points.

Ponder SomeMore

8:04 PM

https://www.amazon.com/Arducam-Rolling-Shutter-Raspberry-Solution/dp/B0BRB12W7Y?&linkCode=sl1&tag=arducam-20&linkId=dbe12e3f26b0957c62532e910f830211&language=en_US&ref_=as_li_ss_tl

Carl Ott

8:09 PM

~8:07pm - Michael I - working's on his claw machine... - showed his spooling mechanism to wind & unwind the lifting cable to raise and drop the claw. But the coolest part Michael showed was a Slip Ring he purchased from Amazon circa \$10....

Carl Ott

8:11 PM

Pretty clever mechanisms to feed servo signals to the servo which actuates the claw.

Paul Bouchier

8:12 PM

Pat Caron - tof sensors are subject to aliasing, where objects beyond the maximum range can report a range that is $\text{mod}(\text{max-range})$. So your observation that the fridge handle (which is very reflective) being sensed much closer is very feasible. See pg. 10 of file:///home/bouchier/Downloads/Time-of-flight-Basics-Application-Note-Melexis.pdf

Paul Bouchier

8:13 PM

Pg 10

of https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewit3PTj5pSBaxWRIGoFHRWsDA0QFnoECAQQAw&url=https%3A%2F%2Fmedia.melexis.com%2F%2Fmedia%2Ffiles%2Fdocuments%2Fapplication-notes%2Ftime-of-flight-basics-application-note-melexis.pdf&usq=AOvVaw1YleJL_2NqnyzNKFA-ILRC&opi=89978449

Pat Caron

8:14 PM

Thanks Paul B.

Carl Ott

8:16 PM

Paul / Pat - that's fascinating. When I designed the "range counter" for military targeting systems - we had a minimum range gate and a maximum. Our system only accepted & reported ranges between minimum and maximum range.

There was no possibility of this aliasing...

Carl Ott

8:19 PM

~8:16pm - Paul shared pics from a visit to the American Museum of Computers and Robotics in Boseman Montana...

Paul found the most interesting item as a WWII Enigma machine - with an explanation of how it worked...

Ponder SomeMore

8:23 PM

sorry bout that

Carl Ott

8:23 PM

no worries :-)

Carl Ott

8:32 PM

~8:28pm - Harold showed calibration attempts for a BNO-085. Tried to compare it to a traditional magnetic compass from the camping section at Bass Pro Shops. Harold found that the traditional compass was also mis-measured based on placement & orientation with respect to his workbench...

Ponder SomeMore

8:49 PM

I'm writing an article on the conflicting conventions of navigation, math and computer graphics. Inviting commentary:

https://docs.google.com/document/d/112VvK_ltylStOMHTBOouDkjzmszYMsS0psIR5ljkXIQ/edit?usp=sharing

Michael Ivison

8:51 PM

new welder.

https://www.vevor.com/tig-welder-c_10066/vevor-3-in-1-tig-welder-hf-tig-arc-clean-welding-machine-210amp-w-pulse-torch-p_010354932216

Carl Ott

8:52 PM

For Karim's article - Please review & share feedback to Karim - areas that could help make it read more clearly....