

# DPRG RBNV Chat Record – 12/28/21

Carl Ott

7:55 PM

~7:54- Harold - gave an update as he shared on his Twitch channel- working on his ExoMy robot -  
ref <https://github.com/pulcher/Xmo>

Carl Ott

7:56 PM

showed how he's using GitHub projects to manage issues / epics / feature sets

Carl Ott

8:07 PM

Showed how GitHub Projects provide nice capabilities to help organize / manage / assign and track  
issues in a similar way as JIRA or similar tools...

Carl Ott

8:08 PM

~8:08- Pat asked a question- around "short term memory for a robot"

Carl Ott

8:25 PM

discussed a rectangular "MapGrid" concept with variable persistence - to build and maintain a  
representation of "recently seen nearby objects" - which could be used to make short term decisions...

Carl Ott

8:26 PM

~8:24 - Doug P showed an instructible that describes a using a robot with an Adaptive Mapping and  
Wavefront Algorithm <https://www.instructables.com/Adaptive-Mapping-and-Navigation-with-iRobot-Create/>

You

8:27 PM

Society of Robots index of downloads: <https://www.societyofrobots.com/downloads/>

Carl Ott

8:45 PM

~8:44- Paul gave an update on MowBot - significant progress to share... especially with a sophisticated  
power system. falls under category of "integration project" - not really robotics but is something you have  
to do

Ray

8:48 PM

and shag carpet maybe...

Carl Ott

8:48 PM

maybe Harold's Chia head?

Carl Ott  
8:50 PM

~8:49 - Paul showed the Design Spec he wrote for Mowbot - to allow all combinations of using (or not) and connected (or not) on-board battery power and shore power - to facilitate development and use all while keeping the Mowbot system functionally working (e.g. w/o disturbance due to power cycling)

Carl Ott  
8:54 PM

Uses an old 19V / 60W laptop charger, a very versatile and robust / well protected Buck-Boost DC-DC converter, and an "Ideal Diode".

Carl Ott  
8:56 PM

Note that the Mowbot system normally goes to sleep on battery. But by firing an SSR (solid state relay) with an override switch, he's able to keep 24V and 5V powered to his robot even if the system would otherwise go to sleep automatically...

Carl Ott  
8:58 PM

note that mower only draws 5ma in sleep mode - lasts for weeks in sleep given size of battery packs...

Carl Ott  
9:05 PM

Note that Paul was using draw.io for his schematic <https://drawio-app.com/>

Carl Ott  
9:06 PM

draw.io is for confluence - listed as "Free" for up to 10 users

Carl Ott  
9:07 PM

9:06- Paul showed buck-boost converter - supports 30W w/o cooling or up to 50W with cooling well protected against over voltage / over current / over temperature...

Murray Altheim  
9:09 PM

Of course a link would be appreciated...

Carl Ott  
9:11 PM

Buck Boost converter looks like this one from Amazon

[https://smile.amazon.com/Converter-Regulator-Adjustable-Regulated-Laboratory/dp/B0978T3JKH/ref=sr\\_1\\_5?crid=2TOSDGTOPQ4DU&keywords=buck+boost+converter+with+display+and+knobs&qid=1640747448&sprefix=buck+boost+converter+with+display+and+knobs%2Cap%2C95&sr=8-5](https://smile.amazon.com/Converter-Regulator-Adjustable-Regulated-Laboratory/dp/B0978T3JKH/ref=sr_1_5?crid=2TOSDGTOPQ4DU&keywords=buck+boost+converter+with+display+and+knobs&qid=1640747448&sprefix=buck+boost+converter+with+display+and+knobs%2Cap%2C95&sr=8-5)

DC DC Buck Boost Converter Variable Voltage Regulator CC CV 0.5-30V 4A 5V 6V 12V 24V Power Module Adjustable Voltage Regulated Laboratory Power Supply

Carl Ott  
9:24 PM

~9:24 - Carl asked about recommendations for 3D model generator

Carl Ott  
9:25 PM

recommendations: <https://www.sketchup.com/plans-and-pricing#for-personal>  
<https://www.tinkercad.com/>

Carl Ott

9:27 PM

Tinkercad as gateway to fusion-360 <https://www.autodesk.com/products/fusion-360/pricing>

Carl Ott

9:29 PM

another option (albeit not pro level) - <https://www.freecadweb.org/>

Also, Designspark Mechanical <https://www.rs-online.com/designspark/mechanical-software>

Carl Ott

9:31 PM

Designspark Mechanical -> robust for building models for 3d printing...

Carl Ott

9:33 PM

also, solid works <https://www.solidworks.com/>

Carl Ott

9:34 PM

here's a link to Steve Edwards YouTube on DesignSpark Mechanical

<https://www.youtube.com/watch?v=aGK9i1OWtTE>

from DPRG July 12, 2014 monthly meeting at Dallas Makerspace

Carl Ott

9:36 PM

and then there's also OpenSCAD - <https://openscad.org/>

OpenSCAD good for gears / things with repeated features

Carl Ott

9:37 PM

OpenSCAD has good examples on Thingiverse

Pat Caron

9:42 PM

I've got to go.

Thanks guys

Carl Ott

9:46 PM

~9:45 - Doug D- demo converting an RC car to robot controllable platform

how to find the controls...

control signals

Carl Ott

9:48 PM

~9:48 - Doug P - shared a statement e.g., his Oak-D Lite order is on its way - past the export scan in Hong Kong! Ray's is already in Chicago!