Robot Builders Night Virtual for February 17th, 2026

https://www.youtube.com/watch?v=jFnLaZOrvgU

Main Discussion Points

Mark Dombrowski's Robot Chassis and Communication Bus

- Mark presented his design of a new robot chassis featuring a prototype wheel mechanism with a 3D printed bearing setup and integrated motor.

- Discussion on using N20 motors and airsoft BBs for bearings, with plans to include a magnetic angle sensor for independent wheel motion detection.

- Mark also shared progress on his PCB designs and communication bus for a robotic network using Raspberry Pi Picos, benefiting from a custom protocol over UART.

- Emphasized on sharing hardware modules to ease the creation and integration of robotic parts.

Doug Paradis' Laser Upgrade Projects

- Doug discussed enhancements made to his Monport Reno 65 Pro laser cutter, focusing on improving the air assist system to prevent material burning during cuts.

- He shared insights into using a separate relay and solenoid setup to control air pressure from a compressor versus the default aquarium pump.

- Doug highlighted considerations for adding modular controls to switch between different air assist levels, aiming to optimize cutting efficiency on various materials.

Mike Williamson's Platform Development

- Mike showcased his progress in developing a platform capable of supporting substantial weight, integrating rotation mechanics facilitated by casters and a robust drive wheel system.

- Described a control system using Wi-Fi and AI-assisted programming to refine microcontroller functionality.

Harold Pulcher's Coding Insights

- Harold offered advice on effective use of AI tools like Co-pilot for coding assistance, alongside strategies to optimize token usage and manage workflows for better coding outcomes.

Conclusions and Insights

- Utilizing modular, shareable components in robotics can significantly streamline development processes and promote collaboration among hobbyists and professionals alike.

- Upgrading equipment like laser cutters with enhanced control systems can provide safer and more efficient operation, translating to better project results.

- There is a growing interest in leveraging AI for both development of code and management of robotics systems, presenting opportunities and challenges for integration.

Referenced Links

- **Doug Paradis** provided several links:

  - [Digi-Key Sponsored Robot Design Course](#)

  - [Monport Reno65 Pro](#)

  - [Amazon Link for Monport Laser](#)

  - [CW-5200 Chiller](#)

- **Pat Caron** shared a humorous robot fail video:

  - [Robot Fail Video](#)

- **Mark Dombrowski** suggested an interesting robotics video:

  - [Interesting Little Robot](#)