The Agenda

- **Announcements**
- **Introducing new subcommittees**
- **Work done and current state by subcommittees**
- **Immediate plans subprojects, important PRs**
- **Discussion points**
  - **Indoor navigation: Startup discussion**
  - **Simulation: Startup discussion**
- **Conclusion**

Announcements

- ## We have 2 new subcommittees!
  - ### Indoor Navigation (Lead Mayank)
  - ### Simulation (Lead Aarsh and Rhys)
- ## Indoor navigation topic discussion by Mayank
  - https://discourse.ros.org/t/development-topics-for-aerial-robotics-indoor-navigation/36347/8
- ## REP147 discussion on ROS discourse by Ryan
  - https://discourse.ros.org/t/new-rep-to-replace-rep-147-for-autopilot-agnostic-ros-messages-optimized-for-flight-stacks/36362

Development topics for Aerial Robotics - Indoor Navigation ✏️

■ Aerial Vehicles   wg-aerial-robotics

☺ It's been a while since we've seen botmayank — their last post was 5 months ago.

botmayank   14d

Hey,
As a part of ROS-Aerial, we're starting an indoor navigation subcommittee. Let's use this thread to start ideating on existing projects which can be relevant that we can work on and also any new packages which can help push out an open-source autonomy stack for indoor navigation.

New REP to replace REP-147 for autopilot agnostic ROS messages optimized for flight stacks ✏️

■ Aerial Vehicles

RFRIEDM   2✏️ 14d   Feb 28

Purpose   1 / 1
                                                                Feb 2
This discourse thread can be used to discuss how to get started with the new proposed path for REP-147. As discussed in the February 28, 2024 ROS Aerial Working Group, we have found REP-147 to be insufficient for the needs of ROS developers that use flight stacks.
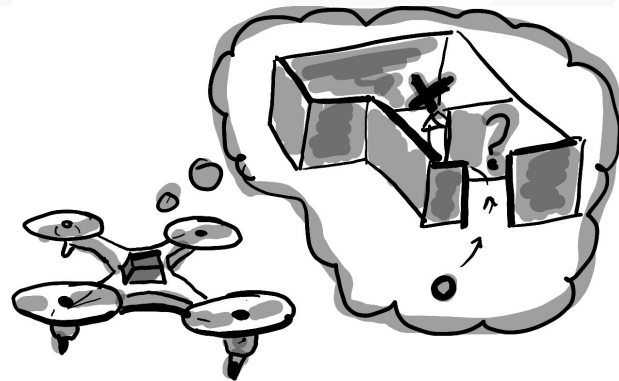
Problems with existing standards

- Some messages are too big for using in flight stacks, and overload bandwidth because covariances are mandatory

New Subcommittee introductions

- **Indoor navigation**
  - Mayank
- **Simulation**
  - **Rhys**
  - **Aarsh**

- **You can find the landing pages on:**
  https://github.com/ROS-Aerial/community **under**
  subprojects
  - **Add yourself with a PR**

Work done and current state by subcommittees

- **Indoor navigation**
- **Simulation**
- **Outdoor planning**
- **Documentation**

Next plans and PRs

- **Indoor navigation**
- **Simulation**
- **Outdoor planning**
- **Documentation**

Discussion - Start-up indoor Navigation

- Mayank –
- Study existing packages:
  - State packages - ROS2 ports or relevancy
  - Navigatation like aerostack2, work well for indoors?
  - 3D navigation of for camera based vehicles for ground robots
- Foundation - define tracks
  - Weight classes of platforms
  - Small platforms, definitions and limitation
- SLAM algorithms in simulation to try out
  - Depth cameras
  - Nano-slam
  - How good of the ROS2 support
- Important aspects of a 'navigation' stack for aerial robotics

Discussion - Start-up Simulation

- Aarsh
- Discourse topic simulation topic thread will be started
- A lot of simulation tools... can we choose one to focus on for now?
- Rhys
- Driven by other project (need slam for indoor navigation etc) requirements are given then.
- Narrow down on which are the most suitable
- Simulation topic is very overlapping

Next meeting: Presentation meeting

Presentation by Rhys about Gazebo and UAVs

- Wednesday **27th of March 2024** at **3 pm UTC**

Github organization for this working group: https://github.com/ROS-Aerial

- Aerial robotics landscape: Add a info page if you like
- Community: Add yourself as member

Wanna do a presentation? Email to kimberly@bitcraze.io &
rroche@linuxfoundation.com