

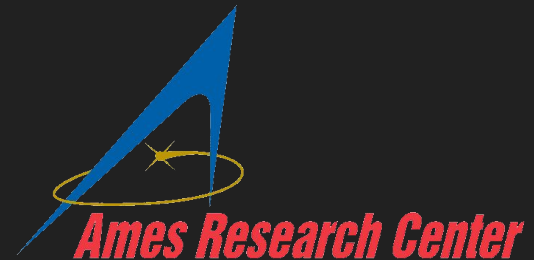
PLUMMRS: A Collection of Plan Ledgers and Unified Maps for Multi-Robot Safety

**Astrobee Working Group,
June 1st, 2023**

Ana Huamán Quispe, Stephen Hart & all the team!
COR: José V. Benavides



NASA SBIR 80NSSC20C0611

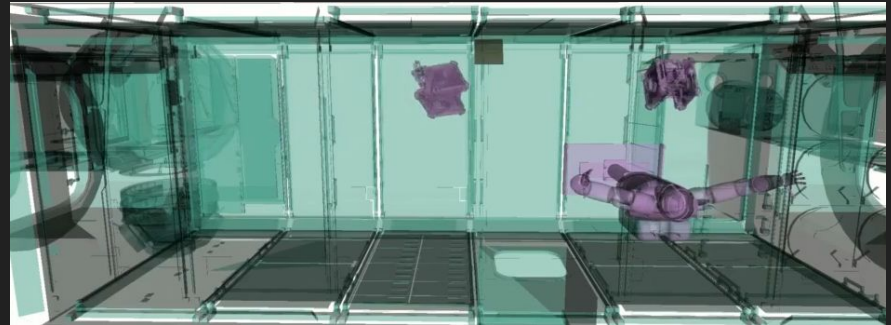
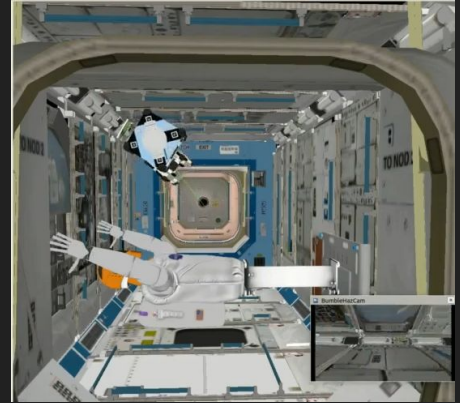


Motivation



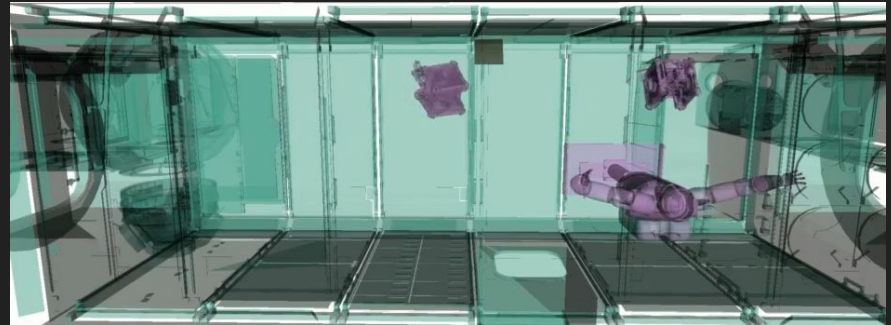
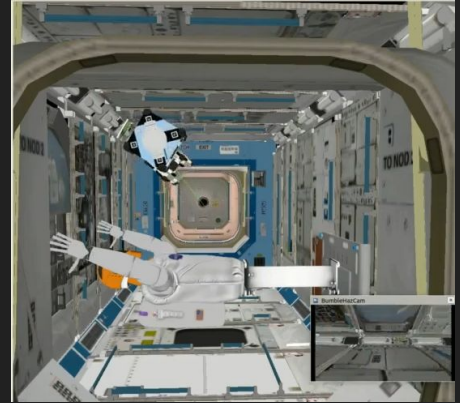
Requirements

1. Shared representation of scene
2. Shared knowledge of expected robot motion.
3. Constant evaluation of safety, while robots move.



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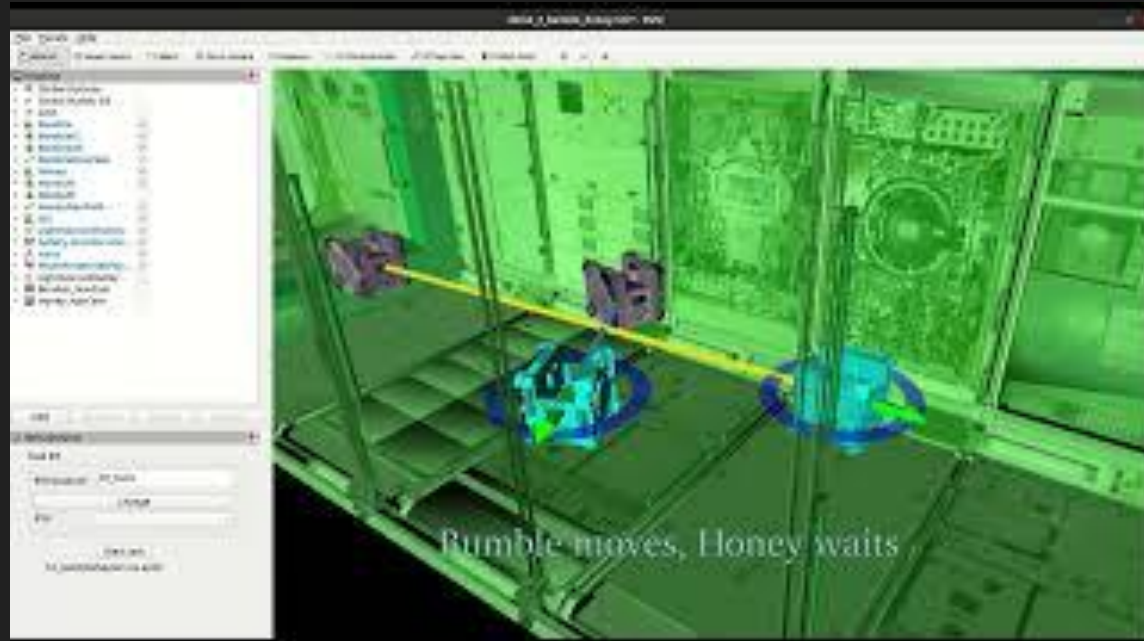
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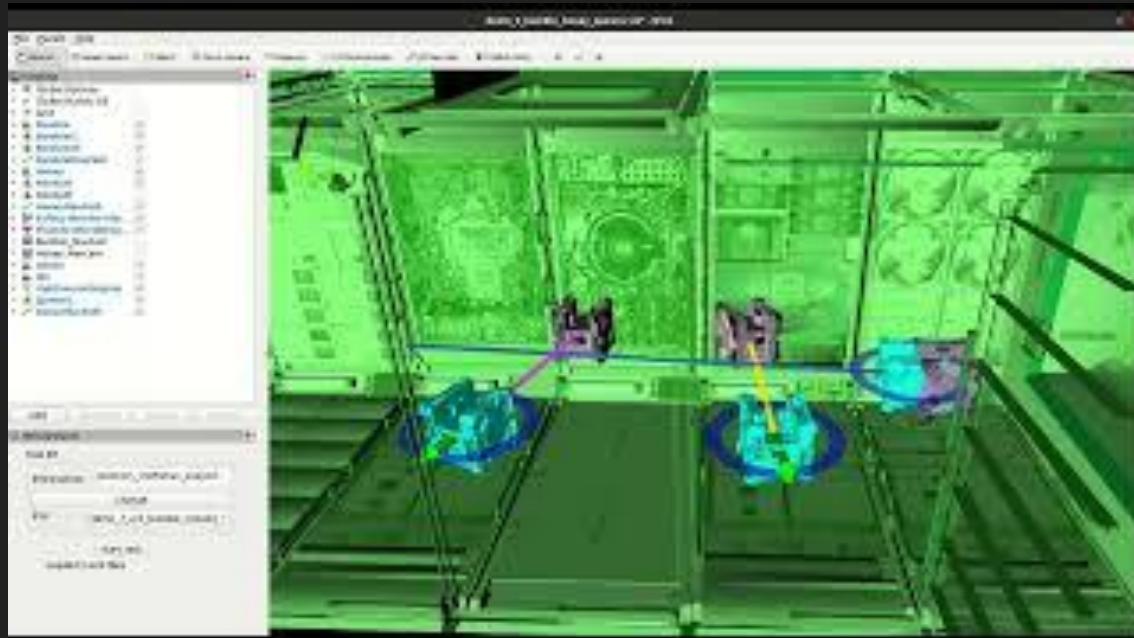
Example of multi-robot inspection task



Safety Monitor Updates: Safely navigating 2 robots



Safety Monitor Updates: Safely navigating 3 robots



Safety Monitor Updates: Safely navigating and moving

