

Meeting Minutes – Project Ghost Shield

Date: February 5, 2025

Time: 5:00 PM EST

Attendees: Enzo Fernandez, Khoi Le, Phillip Dickey, Sasha Cherian, Mike, Other Mike

Agenda

1. Scheduling Bi-Weekly Meetings
 2. Project Updates – Good and Bad
 3. Next Steps and Possible Pivot
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1. Scheduling Bi-Weekly Meetings

- The team proposed holding recurring bi-weekly meetings on **Wednesdays at 5 PM EST**.
 - All attendees agreed to this schedule moving forward.
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2. Project Updates

Good News

- The team has started coding.
- Successfully implemented **multicast UDP** communication between multiple devices.
- Currently drafting a messaging template that defines **headers and payloads** for various message types.
- Working on code to enable **automatic movement coordination** among devices.
- The system will allow hardware to **communicate its location** over multicast, **space itself out dynamically**, and **activate/deactivate jammers** as needed.

Bad News

- Outreach efforts to **Geist Robotics (Brian)** have stalled.
- Geist was initially receptive and offered potential **loaners for jammers**.
- Since Thanksgiving, multiple follow-ups via email and over winter break have gone unanswered.
- **Major Impact:**
 - **PNT jammers** remain a big question mark.

- The **budget proposal** is on hold because it's unclear if jammers need to be purchased.
 - Without clarity on jammers, **hardware procurement** is delayed—a significant roadblock for experimentation.
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3. Next Steps & Plan Moving Forward

Action Plan

1. **Attempt One Last Contact with Geist Robotics (Brian) – Immediate**
 - Mike will reach out directly to Brian to determine if he is still willing to collaborate.
 - If Geist is unwilling/unable to loan jammers, the team will explore **purchasing** directly.
 2. **Investigate Alternative Jamming Solutions – Ongoing**
 - Research whether there are other companies with **cheaper jamming solutions** that fit project needs.
 - Determine feasibility of integrating these solutions into the **budget**.
 3. **Set a Hard Deadline for Geist's Response – February 28, 2025**
 - If no response by the end of February, **pivot** away from the jamming aspect.
 - **Goal:** Ensure hardware is in hand by early March to start testing.
 4. **Pivot Planning (If Jammers Are Unavailable)**
 - If Geist falls through, determine a new project scope that still meets objectives.
 - Continue developing the **drone coordination system** and **simulate jamming behavior** in software.
 - Explore **alternative air defense** applications within project feasibility.
 5. **Clarify Procurement Timeline for Hardware**
 - Team is unsure how long it takes for NSIN to **purchase and receive hardware** once a budget proposal is submitted.
 - Mike will reach out to the program manager (Caitlin) for clarity on turnaround time.
 - This will help determine how much buffer time is needed before **experimentation**.
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4. Timeline & Deadlines

- **Budget Proposal Submission:** TBD (pending Geist response & jamming decision)
 - **Final Project Deadline:** May 2, 2025
 - **Latest Date for Hardware Procurement:** Early March 2025
 - **Decision Deadline for Jammers:** February 28, 2025
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5. Additional Notes

- The team will brainstorm **alternative solutions** if jamming is removed.
 - Bi-weekly meetings will include updates on:
 - Geist communications
 - Procurement progress
 - Alternative plans
 - Mike and other mentors will also contribute **brainstorming ideas** for possible pivots.
 - **Next Meeting:** Wednesday at 5 PM, two weeks from now.
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Conclusion

- If Geist does not respond by the end of February, the team will **drop the jamming component** and pivot to a revised solution.
- Next immediate step: get **procurement answers** and finalize the **budget** ASAP to avoid missing the experimentation window.