

### Decision making in First Meeting minutes(26/2/2025)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
26/2/2025	Confirm supervisor meeting time (Friday at 2:00 PM)	All members	All team members agreed on the time.	Approved
26/2/2025	Define team roles and responsibilities	Brian Ma Xingyu Luan	Clearly assigned roles for smooth task distribution.	Completed
26/2/2025	Set up GitHub repository for version control	Brian Ma		Completed
26/2/2025	Prepare initial project schedule and task distribution chart	Yifan Wu		In progress
26/2/2025	Test Wix platform for landing page feasibility	Xiang Peng	To evaluate if Wix is suitable for landing page design.	In progress
26/2/2025	Create templates for meeting minutes and decision log	Xingyu Luan		Completed

### Decision making in Second Meeting minutes(28/2/2025)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
28/2/2025	Confirm beacon hardware setup and basic communication	All members	Master beacon communication successful, distances need further evaluation.	In progress
28/2/2025	Finalize team task allocation for Audit 1	Brian Ma		Completed
28/2/2025	Identify and document key project stakeholders	Brian Ma	Includes school, clients, manufacturers, and collaborators	Completed
28/2/2025	Recognize and assess main project risks	Yoyo Lam	Battery charging, beacon integration, and environmental factors identified.	In progress
28/2/2025	Continue testing beacon signal range on robot platform	All members		In progress
28/2/2025	Optimize battery charging process for experiments	All members	Important for continuous operation during testing	Planned

### Decision making in Third Meeting minutes(15/3/2025)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
15/3/2025	Allocate specific tasks for Audit 2 preparation	Brian Ma Xingyu Luan	Clear division of Audit 2 responsibilities assigned to each member (Management, Engineering etc.)	Completed
15/3/2025	Replicate Arthur's previous experiment	Brian Ma	Understand experiment setup and code structure, with assistance from Shawn	In progress
15/3/2025	Set up documentation templates for meeting minutes and decision log	Xingyu Luan	Consistent and standardized documentation	Completed
15/3/2025	Establish weekly documentation and reporting structure	Yoyo Lam	Weekly reports prepared by team members, presented to supervisor Rob	In progress

### Decision making in meeting (Week 5)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
25/3/2025	Determines the subsequent project task allocation: FFBD add the energy as input (Brian Ma) conops add the decision about the onedrive and github repository things (Yoyo Lam) decision log add why we consider only a few step in the concept path, narrow down the concept (xingyu Luan) feedback plan (xingyu Luan) Requirement list show in photo as soon as possible (yuqiao xin)	Brian Ma Yoyo Lam		Completed
25/3/2025	Analyze the statistics of existing beacon signal data	All members	Understand the noise pattern and pole-related characteristics of the system.	In progress

25/3/2025	Brainstorm and propose a new multi-beacon algorithm	All members	Needs to avoid hardware changes; e.g., using pulse presence/absence, gain control, or ID-based scheme.	In progress
25/3/2025	Report algorithm idea to Rob in next weekly meeting	Brian Ma Yoyo Lam	Ensure Rob approves the direction before proceeding to experimentation.	In progress
25/3/2025	Design experimental method to validate multi-beacon algorithm	All members	Conditional on Rob's approval; ensures idea can be tested in a controlled setup.	In progress
25/3/2025	Set up the Nucleo board for testing	Yoyo Lam	The board is currently with Yoyo; setup guidance to be requested from Arthur.	In progress

## Decision making in meeting with Rob

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
28/3/2025	Split team into three subgroups.	Brian Ma Yoyo Lam	Two subgroups will test different multi-beacon approaches; one will handle system engineering tasks	Completed
28/3/2025	Explore Phase Shift Keying (PSK) approach.	All members	Suggested by Iain; Rob believes it's worth experimenting with	In progress
28/3/2025	Send a 16-bit data packet with a buffer length of 16 bits to encode the beacon ID.	All members		In progress
28/3/2025	Of the 16 bits, we decide that 8 bits are data, 2 are start/end flags, and 6 are parity bits.	All members		In progress
28/3/2025	Write the feedback plan into a file to indicate the actions taken in response to the feedback.	Xingyu Luan		Completed
28/3/2025	Write the meeting with Rob into the meeting minutes	Xingyu Luan		Completed

### Decision making in Sixth Meeting minutes(16/4/2025)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
16/4/2025	Change communication protocol from pulse to 8-bit encoding	Brian Ma Yoyo Lam	Original pulse-based approach was too complex; client suggested simpler method	In progress
16/4/2025	Modify unit testing method from Nuclear board to PC-based simulation	Brian Ma	Hardware tests were unreliable; PC simulation proved more stable and manageable	Completed

### Decision making in Seventh Meeting minutes(2/5/2025)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
2/5/2025	Finalize multi-beacon communication by next week	Brian Ma Yoyo Lam	Rob emphasized urgency; team expected to complete this milestone	In progress
2/5/2025	Design field experiment with moving master beacon on lake	All members	Real-world testing suggested by Rob; includes lake setup with mobile component	Planned
2/5/2025	Consider integration of SLAM techniques	All members	Optional enhancement if time allows	Optional
2/5/2025	Draft a thorough test plan for field experiment	Xiang Peng Xu Ben	Ensure structured testing with clear expectations and contingencies	In progress

### Decision making in Eighth Meeting minutes(4/5/2025)

Date	Decision/Action item	Responsible person(s)	Rationale/Notes	Status
4/5/2025	Review overall project progress and identify remaining milestones	Brian Ma	Ensure team alignment ahead of Audit 3	Completed
4/5/2025	Assign Audit 3 tasks to team members	All members	Efficient division of labor before Audit 3	Completed
4/5/2025	Confirm individual task deadlines	All members	Deadlines set for each deliverable to ensure timely submission	Completed

