

robo sub

2023

TeamTime

Friday, March 17, 2023 | 6:00 PM Eastern Time



robosub

2023

GET
STARTED



1

Edit your name to "Name | Team Name"

2

Let us know in the chat:

Are you a returning or new team?

AGENDA

- [12:00-12:05] Welcome & Introductions
- [12:05-12:10] Dates, Theme & Venue
- [12:10-12:20] Eligibility, Competition Structure
- [12:20-12:35] Tasks
- [12:35-12:45] Timeline (Registration, Due Dates, Etc.)
- [12:45-13:00] Questions?



Task Ideas Released





**ROBOSUB
2023**

Meet the Humans

 RoboSub.org/2023



Julianna Smith
Program Manager



Laverne Imori
*Community Engagement
Coordinator*



Lindsey Groark
Program Director



Cheri Koch
Senior Events Manager



Dave Novick
Technical Director





**ROBOSUB
2023**

Theme, Venue, Dates



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EXPLORATION: WHIRLPOOL X-TREME!

NIWC PACIFIC'S TRANSDEC
SAN DIEGO, CALIFORNIA



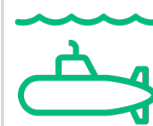
**FROM JULY 31 -
AUGUST 6, 2023**





Competition Structure

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Autonomy Challenge

Build an AUV to showcase autonomous performance.



Design Documentation

Prepare documentation showcasing AUV design and competition strategy.

Design Documentation

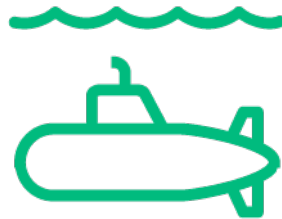
- *Team Website*
- *Technical Design Report*
- *Team Intro Video*
- *Design Presentation*





Eligibility

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All teams must build an AUV to compete; multiple vehicles may be entered in the competition.*



Teams must be comprised of:

- 75% or more full-time students
- 25% or less alumni



Most team members must be college or high school students. Teams may also include middle school students. Interdisciplinary teams are encouraged.





Eligibility

 RoboSub.org/2023

NEW: First-Year Teams

- First-year teams are eligible to participate without bringing an AUV to competition.
- First-year teams are expected to participate in Design Documentation and send representative(s) to the on-site event as a learning experience.
- These teams include those who've never competed at RoboSub before, or if your team has been out of the competition for 1 year.





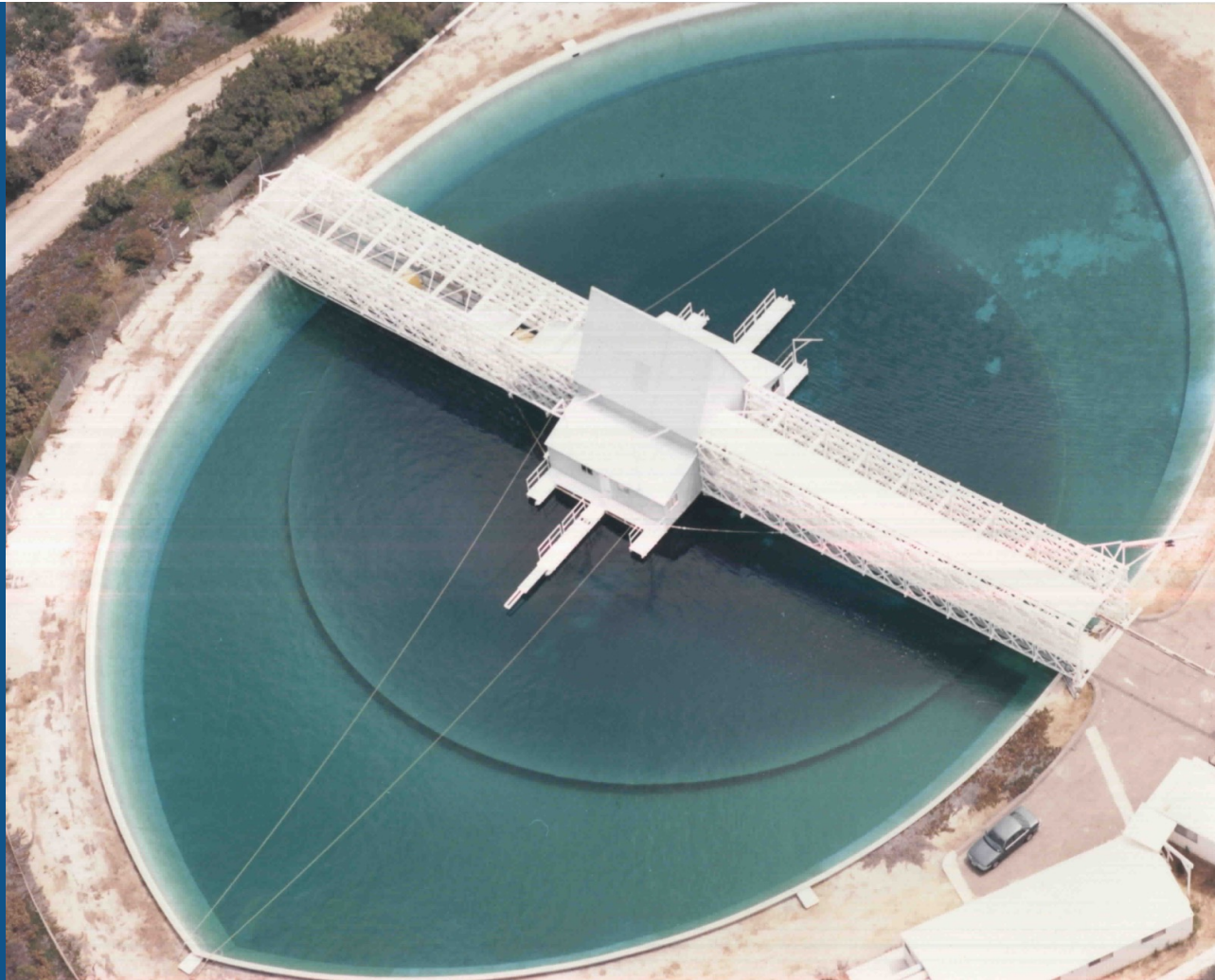
**ROBOSUB
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Preliminary Venue Layout



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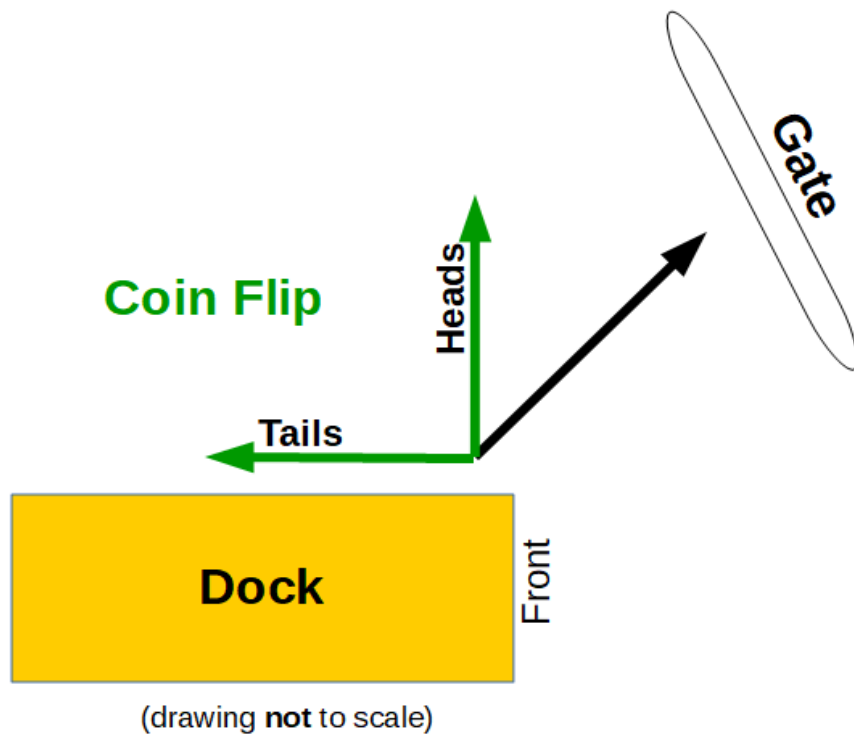
HELLO, TRANSDEC! Here we come!!

26th Annual
RoboSub 2023
Task Ideas

Whirlpool
X-treme



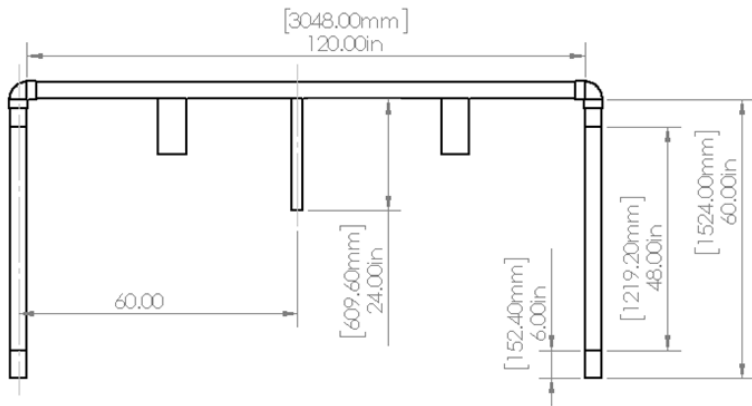
Oh for crying out loud | Coin Flip



- Random orientation
 - 90° or 180° from dock



Destination | Gate



Abydos



Earth

Choose your destination

- Abydos
- Earth

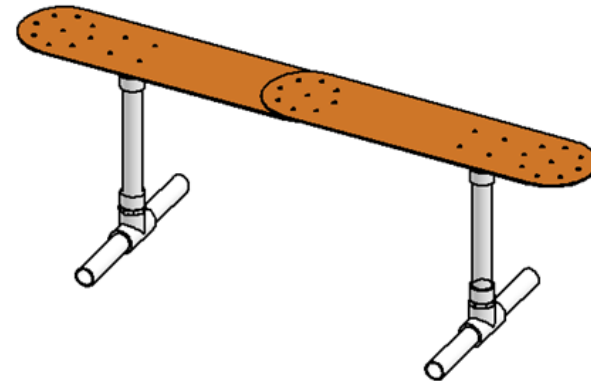
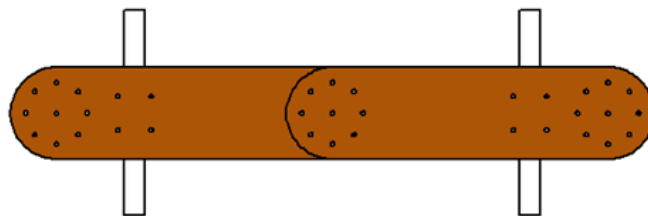
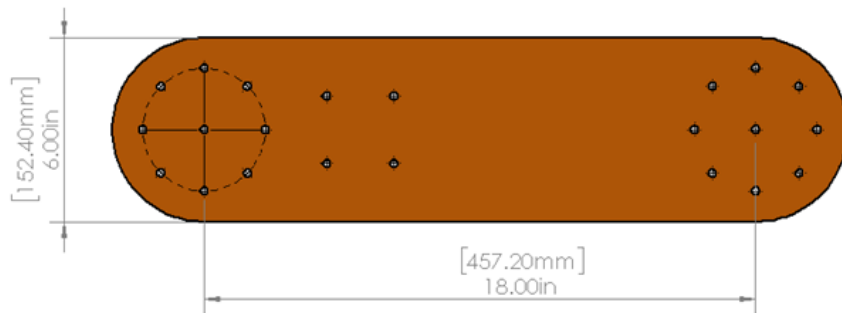
Extra points for staying with your destination for the remainder of the tasks

With Style

- 10 ft/3 m before/after gate
- Extra points
 - Every 90° change in orientation
 - Yaw: +100
 - Roll/Pitch: +200
 - Up to 800 points

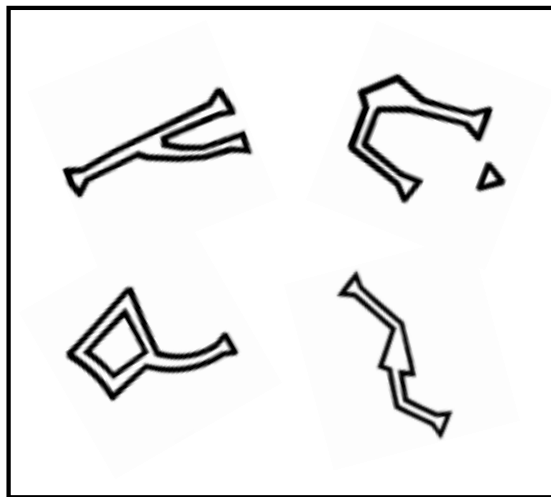


Path



Start Dialing | Buoy

🚢 Buoy is two sided



Floor

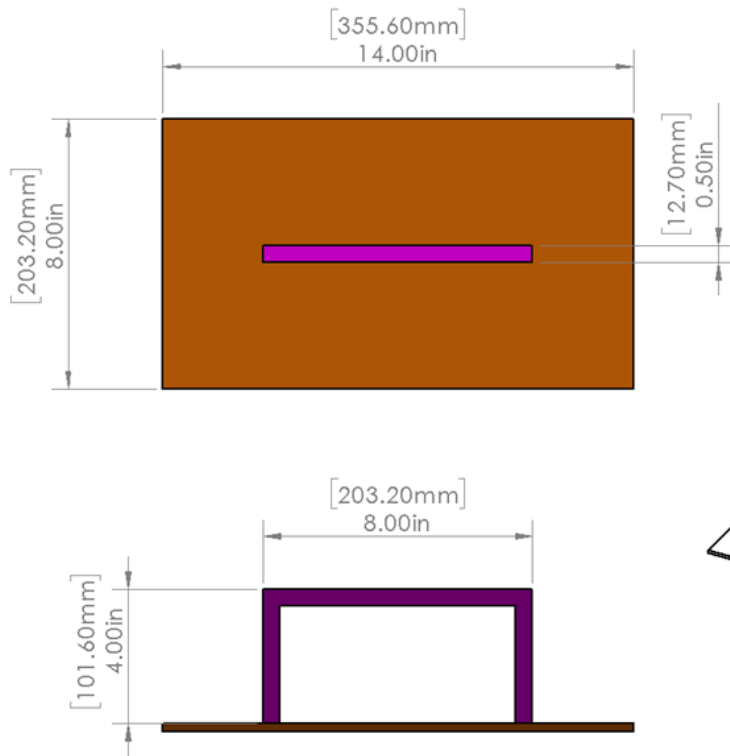
Abydos



Earth



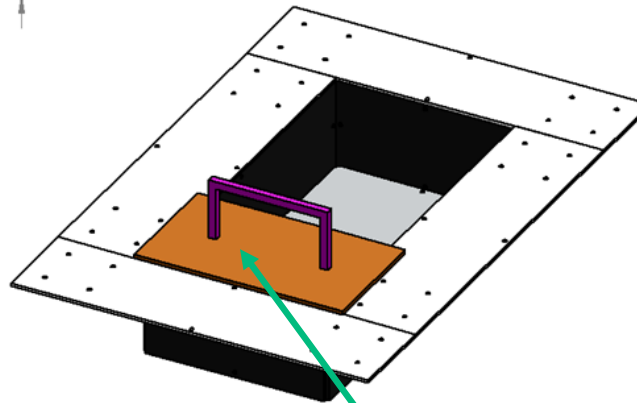
Location | Bins



1/3 of each bin is covered

- Lift off cover

Place marker in correct bin for your destination



Vote on the color of the cover and handle



Location | Bins



Abydos



Earth

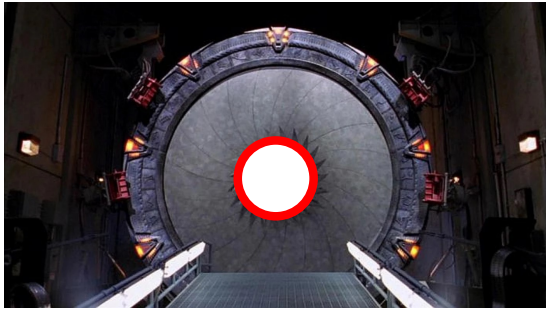
1/3 of each bin is covered

- Cover can be anywhere
- Lift off cover

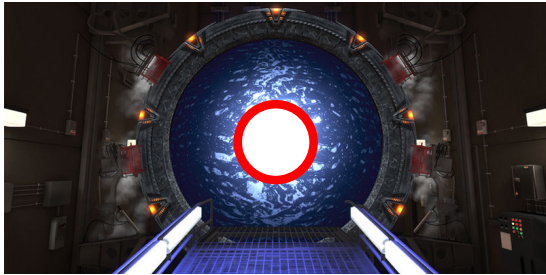
Place marker in correct bin for your destination



Goa'uld Attack | Torpedoes



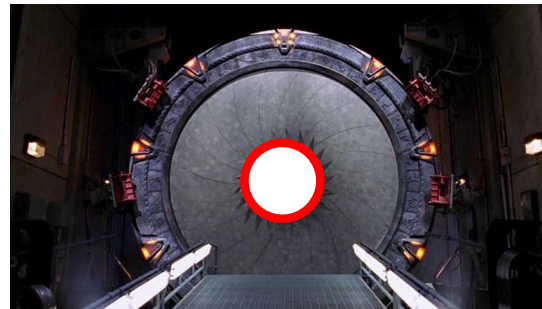
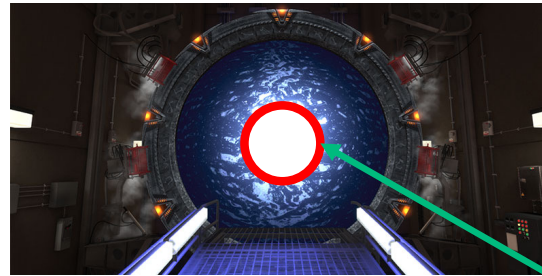
Closed



Open

 The panel has two different openings

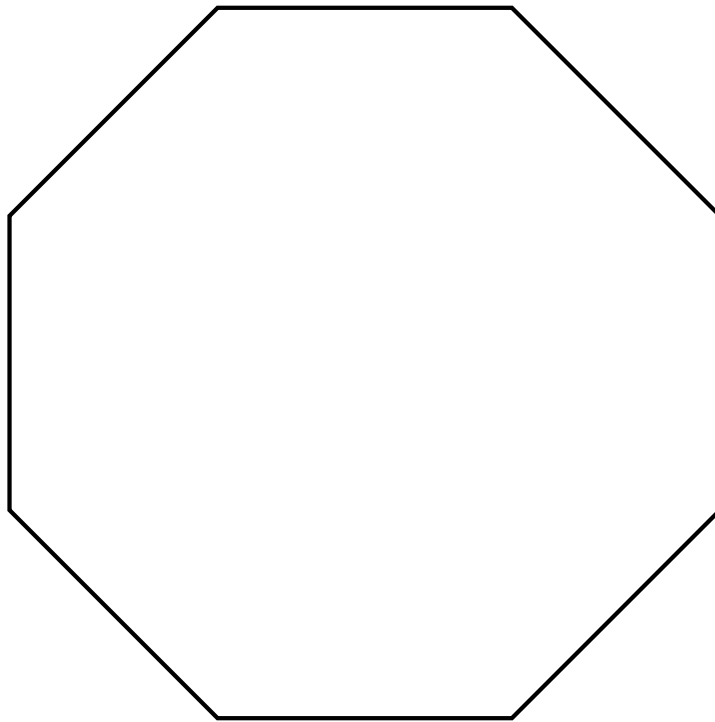
- Close the Iris to stop the attack.
- One torpedo through the open gate
- One torpedo through the closed iris



Vote on the color of circle



Engaging Chevrons | Octagon

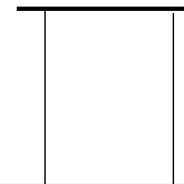


- 🚢 “Ring” floating on the surface
- 🚢 4 “chevrons” in the center of the Dial Home Device (DHD).
 - Use the 4 to finish the dialing sequence
- 🚢 One Pinger located at the center of the octagon

Octagon



DHD

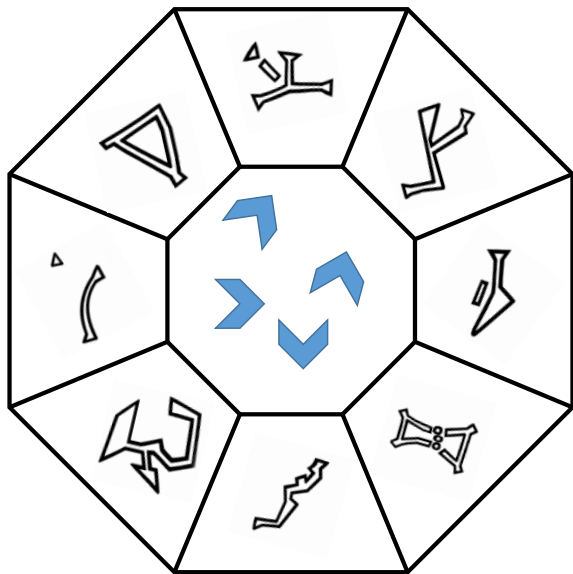


Floor



DHD | Octagon

Vote on the color of the chevrons



4 “chevrons” in the center.

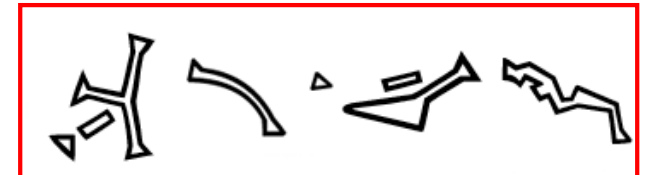
• Place them in the correct bins to finish the sequence

- Abydos
- Earth

Abydos



Earth



Finding the tasks

🚢 Path

- One from Gate to Start dialing (Buoy)

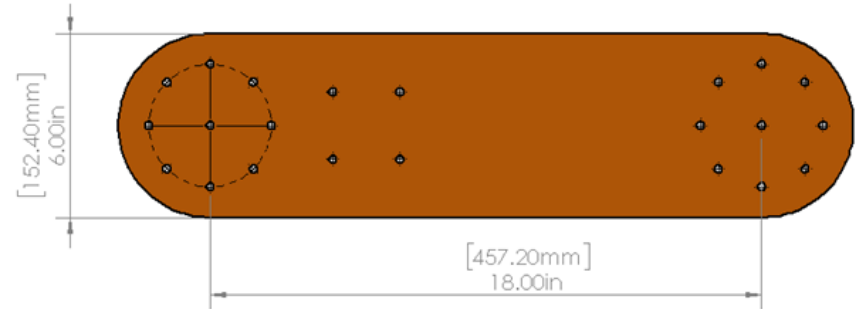
🚢 Pinger

- One located at the center of the octagon




🚢 **Vote** on the location of the second pinger

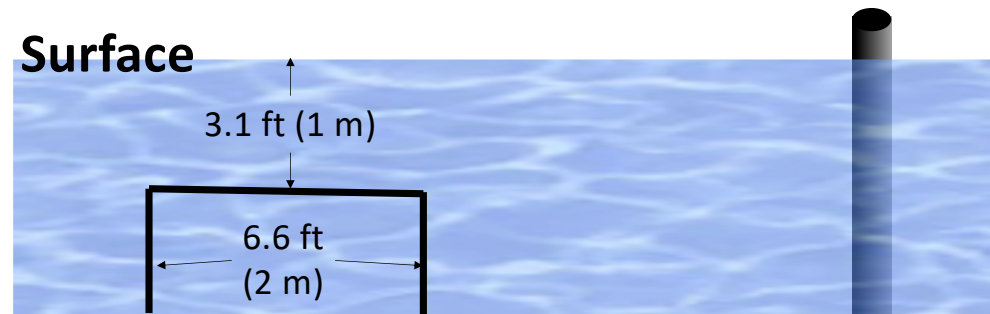
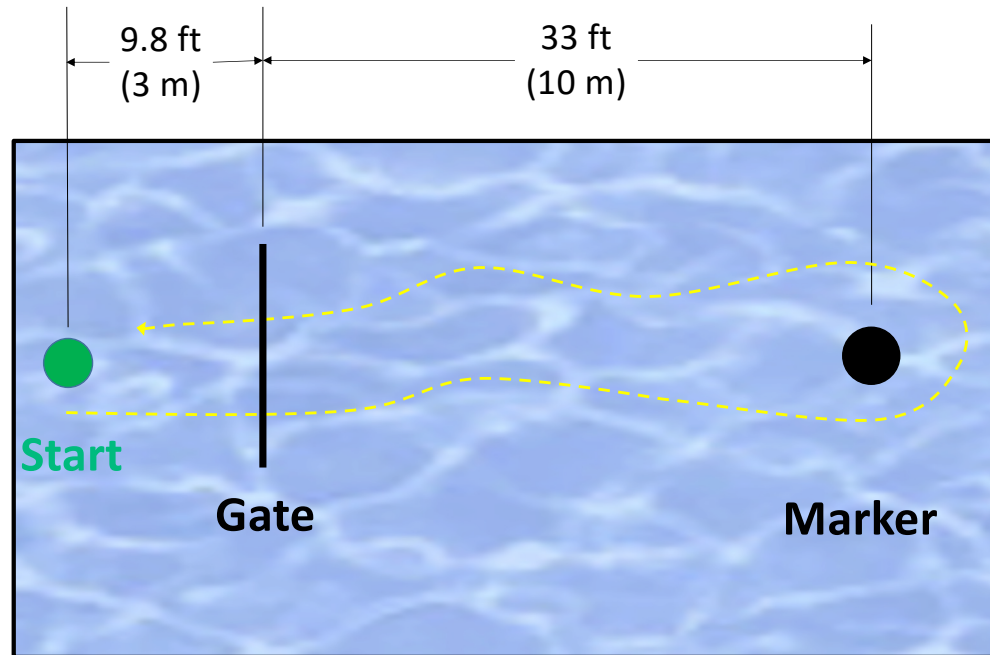
- Location (Bins)
- Goa'uld Attack (Torpedoes)

🚢 Second path will point toward the other task



Pre-qualification

-  Optional
-  Must be submitted before being on-site at competition
-  Directions on how to do this will be available in the Team Handbook



(drawing **not** to scale)



Get Started

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How to Get Started:

- ☐ Task Ideas
- ☐ Registration
- ☐ AUV Design Process
- ☐ TeamTime Meetings



Registration

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Registration

Closes April 15

Fee is \$1,250 USD

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TeamTime

 RoboSub.org/2023

RoboSub 2023 TeamTime Meetings

- #1 17 March | Open to All
- #2 TBD Late April | Registered Teams
- #3 TBD July | Registered Teams





Timeline

 RoboSub.org/2023

Date/Deadline	Event
March 2 – April 15, 2023	Registration
June 9, 2023	Event Submissions Deadline: <ul style="list-style-type: none"> • Team Information • On-Site Requirements • Merchandise Order
June 11, 2023	Full 100% Refund Cancellation Deadline
June 16, 2023	Design Documentation Deadline: <ul style="list-style-type: none"> • Technical Design Report • Team Introduction Video • Team Website • Optional Pre-Qualification • Optional Community & Outreach
July 25, 2023	50% Refund Cancellation Deadline
July 31 – August 6, 2023	<u>RoboSub 2023</u>





Stay in Touch

 RoboSub.org/2023

RoboSub 2023 Discord



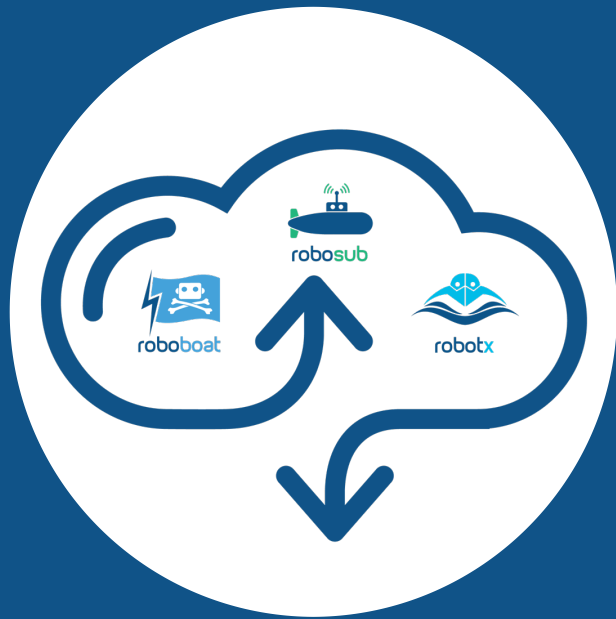
Discord

Replacing BAND and
Forum. All on-site
communications will be
posted on Discord.

JOIN TODAY!

- Scan the QR Code
- Select the RoboSub23 role
- Turn on notifications





Data Sharing

 RoboSub.org/data-sharing

What is Data Sharing?



Centralized Repository



Community Driven



Competition
focused

Vision
Acoustics
Mechanical Designs
Electrical Designs



DATA FOR ALL
TEAMS



LARGE DOMAIN
OF DATASETS



BETTER PLATFORM
FOR NEW TEAMS



???

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GOT QUESTIONS?





robonation



seaperch



seaglide



gosense



roboboat



robosub



robotx



RoboNation is a 501c3 nonprofit organization whose mission is to provide a pathway of hands-on educational experiences that empower students to find innovative solutions to global challenges. Working together with the industry, research and educators, we have grown to include over nine student competitions and programs and engage more than 250,000 students per year.

For more information contact university-competitions@robonation.org