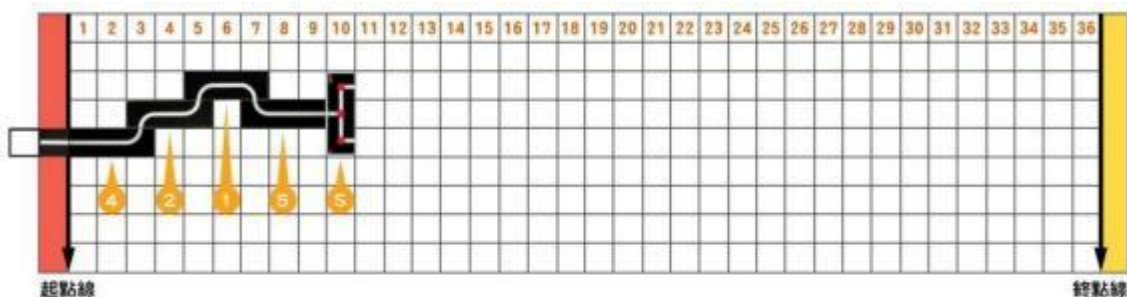


1. Robotic regulations

1. The robot must be wheel type, the length and height shall not exceed 20 cm, and the weight shall not exceed 1 kg.
2. The robot must use the battery as the power supply, and shall not be supplied externally.
3. The robot must move along the orbital white line, and its speed can be controlled by infrared or blue bud.
4. 3DP column prints can be used for modification.

2. Match diagram (Matchchart)

In the race, the track can be long (36) x (9) and 324, plus the end area and the extension of the back end.



3. Competition equipment and use rules

1. The wooden track block used in the competition is an elevated structure about 14.5 cm wide, the height of the track surface is about 6 cm from the floor, and the width of the white line on the track is about 2 cm.
2. The track block is divided into two lengths: length (about 43.5 cm) (No. 1-5, S board) and short (about 29 cm) (No. 6-9), as shown in the figure below.



3. The track surface is made of black and white line stickers from a large picture and pasted flat on the surface of the upper end of the track.

4. The starting point board is placed in the starting point area, only for the robot before the race timing, and not for the competition process.
5. S board is a long plate, with 1 or 2 entrances and exits on the long side, and red dots on the nodes, as shown in the figure.
6. Set up the supply station area on lines 9, 18 and 27. The conference draws lots to select the supply stations in each supply area, and additional points will be obtained through the supply stations.

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
B																													
C																													
D																													
E																													
F																													
G																													
H																													
I																													

▲ (Take the selection of 9F, 18D, 27E as examples, the actual position is mainly drawn on the day)

4. game

1. From the published track patterns, the conference randomly selects the topic boards and bonus points of each group for the competition time. Each group of players need to complete the track path planning, program modification, robot field test practice and inspection, practice and inspection of the time announcement on the day of the competition.
2. Track construction principle: When the player plans the track path, the four track boards of the title should form a "track turn" (according to the S board). The path of the robot from the starting point to the end point is composed of several "track turns"

Combined, the track round must fully use the four track boards of the title, but do not limit the order of the tracks within each track round.
3. Each team can have up to three players off the match, and up to two players can operate the track construction together. The plan designed according to the topic of the day can be used by themselves.
4. The player should place the starting point board in the starting point area, and place the robot on the track of the starting point board. Arrange the first "track turn" designed by the track according to the route planning chart, and connect it to the end of the track of the

starting point board. The "track turn" cannot be planned in the starting point area.

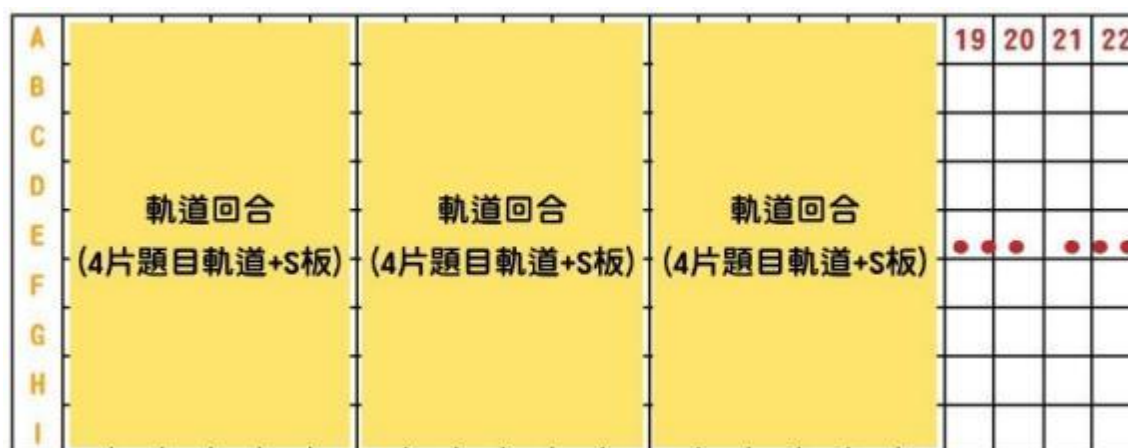
5. When the player starts the robot, the rear of the machine passes through the starting line (between the starting point and the first line) and starts the time.
6. During the timing of the race, the same player can only pick up one track board of the robot at the same time, the first track board should be followed to the end of the built track; if the same player holds two tracks at the same time, it will be judged to violate the track construction principle-double lifting board.
7. Once the track is placed (the operator has left the board), the position, order and direction of the arrangement shall not be changed unless the robot passes through the track again.
8. Each group shall use the S board for several times according to the regulations.

Country group: you can decide whether to choose S board. If you choose to use S board, the rules will be compared to the middle group.



▲ National group track round signal

Middle group: S board should be used once per round in each round, such as 12S34, 2S431... °



▲ Middle group track round signal

High school group: S board is used at the end of each turn, such as 1234S, 2134S... °



▲ High school vocational group track turn signal

9. "error" if the competition includes the following:

(1) bound: the track swing is beyond the range of the site map (the end area is not in this limit).

(2) Cheating: do not follow the white line of the track surface walking (the white line is not between the two power wheels).

(3) Falling track: midway off the track.

(4) Stagnation: in the track to produce back, turn in place or other discontinuous forward action.

(5) Interference: the players obviously touch the robot and affect the autonomous movement of the robot.

(6) Reuse: in violation of the track cloth construction principle, the S board is not correctly used according to the provisions, double lifting board.

(7) Timeout: the total time exceeds 2 minutes, and the finish line is not reached within the limited time.

10. Supply station bonus points: When the robot travels on the track board, the positive projection is completely through any supply station, and the bonus points can be accumulated. Each supply station can only be counted once; if the error starts from scratch, the round will be recalculated.

Number of stations through supply	Through 1 supply station	Through 2 supply stations	Through the 3 supply stations
Add points content	Plus 8 points	Add 18 points	Add 33 points

11. S Board specification: if the S board covers more than 1 / 2 of the plus point grid area, when the robot completely passes through the board (no cheating state), it is considered to pass through the plus point.

12. Competition details

(1) Limited time: the competition time is limited to 2 minutes. For those who still fail to reach the array, the judge will determine the current rear position of the robot as the result.

(2) The rear of the car starts timing through the starting line, and the rear of the car ends timing through the finish line. If the rear does not pass the finish line, if there is a "error", the timing will be suspended.

(3) Score: the score of the race is the distance reached within 2 minutes (the number of the corresponding field is the score, the robot passes the finish line of the field, enters the finish area, and gets 37 points), plus the road

After the total score of the "supply station", the full score of a single game is 70.

(4) The organizer reserves the right to modify and interpret the rules if there are anything not mentioned. If there is any dispute over the rules of the competition, the referee is still based on the judgment. If the rematch is adopted, it mainly depends on the results after the rematch.

13. Precautions

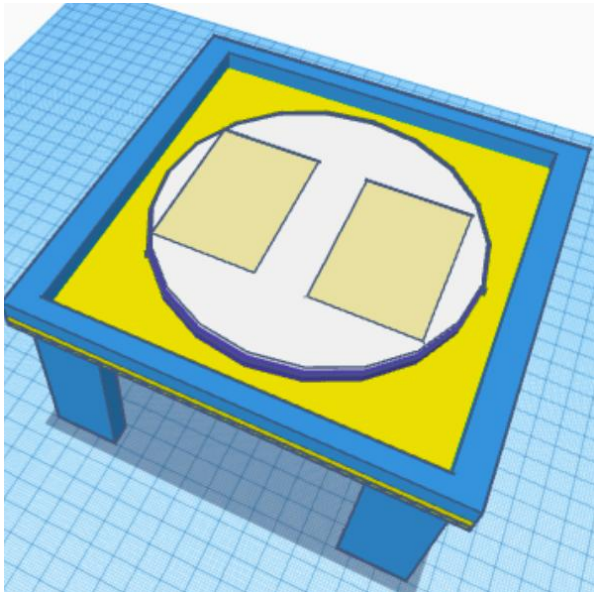
- (1) Please avoid any form of communication between the instructor and the contestants during the competition.
- (2) It is forbidden to carry and use any communication equipment, and the competition will be disqualified after seizure.
- (3) During the epidemic prevention period, the coaches should bring their own epidemic prevention equipment, masks, pencils, drinking water, etc.
- (4) The official does not provide the standard drawing paper, each team has their own use.
- (5) Operating equipment and computers need to prepare sufficient power supply by themselves.
- (6) Each team can bring its own map for practice. Each team is limited to one group, and must apply at the time of registration. The conference will allocate the time and practice area by drawing lots according to the situation of the venue.
- (7) Those who affect the order of the meeting place will be given a warning, and those who fail to listen to the meeting will be disqualified.
- (8) Non not on the spot are not allowed to enter the forbidden area of the competition site, and any unofficial photography will not be the basis of the referee.
- (9) The referee will record the result of the match, and the team shall sign it. If there is any objection, please raise it now.
- (10) If there is any doubt, it should be submitted to the referee on the spot before the match, and the judge will handle and judge it. Once the match begins, it will not be accepted. If there is any disagreement, the chief judge will be taken as the final competition result.

2024 UASACT International competition, robot sumo competition method

1. Robotic regulations

1. The robot must be wheel type (belt type), and the total weight of the machine must not exceed 2 Kg (including battery).
2. The robot must take the battery as the power supply, which shall not be supplied externally, the battery supply rated voltage shall be limited below DC9V, the referee shall have the right to check the battery during the inspection time, and does not meet the standards.
3. Before the inspection and competition, the overall length and width of the robot is 15cm (L, W) 30cm, and the height is 6cm (H) 30cm. The car body should not have deformation or extension structure. Except that the tire can contact the ground, other structures must keep more than 2mm from the ground. (2 mm plastic plate in and out)
4. The wireless remote control used by the robot shall be recorded together with the robot.
5. The robot should be designed to meet the specifications of the competition field. Please refer to the side size of the competition field.

2. arena



1. The competition site is with a diameter of about 120cm, canvas printed output, and placed on a rectangular race platform long and a width of 15cm, the boundary line is about 5cm wide, the boundary is obviously marked in red, the site may be uneven, the machine needs to overcome by itself.

2. The site is drawn with a blue prompt line.

3. The format description

1. The player shall draw the battle number during the registration. If the registration, registration or competition title fails for 1 minute, it will be regarded as abstention.
2. Each group will win double defeats, and two best of three matches will be selected in each competition. The first and second rounds of optional competition systems are divided into remote control competition and programming competition.

3. In the first round, the party with the lighter model will choose the competition system, and the second round will choose another one. If the third round enters, the party with the heavier model will choose the competition system.
4. In the remote control round, players can choose not to use the remote control.

4. game

1. In the competition process, the non-player team needs to leave the competition venue. If they are repeatedly persuaded, the relevant team will be judged to lose the competition qualification.
2. During the recording time, the team shall place the sumo car and remote control equipment in the recording area for inspection. After the recording, the team shall not add, modify, remove or change the sumo car state.
3. Each team should bring its own one sumo wrestling car. It is strictly prohibited to exchange equipment or parts between teams. If the relevant teams will be disqualified.
4. At to one player is play in each competition, and the preparation time is 1 minute. The equipment and the battery can be adjusted during this time, but the program or changing the machine is not downloaded.
5. Complete the selection of competition system before the start of the competition, the robots of both sides shall be placed on the preparatory line, and the forward projection of the machine shall not exceed, without limited face.
6. The referee announces the start. After the players start the sumo, the players from both sides must quickly retreat to the position designated by the referee to avoid human interference in the competition.
7. After the sumo car of both sides starts, they must retreat and touch their own black border line successively. If there is any violation, this round will be judged as failure and the opponent will win.
8. If the robot produces a situation, it is considered as a failure (the other side wins):
 - A. The robot is pushed off the site (any part of the car body is projected to meet the boundary of the red outer edge of the site).
 - B. The robot leaves the field on its own.
 - C. The robot does not comply with the competition regulations after maintenance.
 - D The unilateral robot stops still for five seconds.
 - E. The robot overturned, fell, and knocked down (the judgment method is that the power wheel has been unable to return to the original moving state).

F. The machine parts fall off and fall off the field (the judge determines that the object is more than 3 cm long or enough to affect the competition).

9. The time limit of each round is 1 minute, and the referee will end the moment with the time limit.
10. During the competition, if the parties is in confrontation (not moving), the referee has the right to decide the stalemate. The judge will read the seconds. After 5 seconds, the time will be suspended.
11. After the start of each round, no reassembly or replacement of all the components of sumo. At the end of each round, if one of them proposes the maintenance requirements, both parties can conduct maintenance at the same time, the referee announces the maintenance for 1 minute, only the competition players can repair, and the team members can not enter the field to assist the maintenance.
12. After the maintenance, both parties can organize the sumo or reorganize the fallen parts in place, but can not add or reduce any parts, or download the program or replace the battery.
13. The referee will record the result of the match, and the team should sign it. If there is any objection, please raise it immediately.
14. If there is any doubt, it should be submitted to the referee on the spot before the game, and the judge will handle and judge it. Once the game begins, it will not be accepted. If there is any disagreement, the ruling of the chief judge shall be the final resolution and shall not be disputed.
15. The conference shall provide the competition venue for the pre-competition test. The test time shall be mainly according to the time announced by the conference. Line up at the competition venue for sumo test.

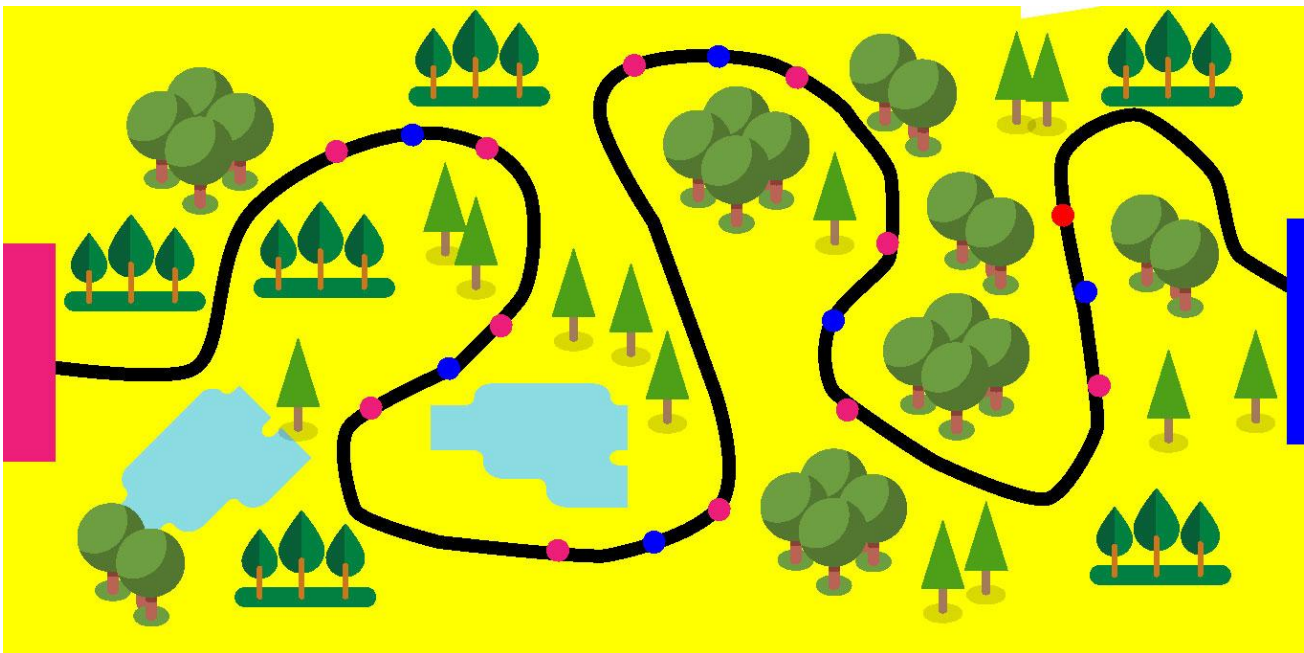
If the competition field is damaged or defaced during the competition, the competition shall be stopped immediately and the competition shall be won by the opponent.

2024 UASACT AI Robot forest adventure Competition regulations

1. The robot must be wheel type, the length and height shall not exceed 25 cm, and the weight shall not exceed 1 kg.
2. The robot must use the battery as the power supply, and shall not be supplied externally.
3. The robot must be able to move along the line section.
4. 3DP column prints can be used for modification.

2. site layout

1. The site is made of canvas surface, with 2 cm wide black as the track line of the forest lane, and the field map has different difficulty arc and broken lines are connected to each other (please refer to the figure below). Because the characteristics of the material may be uneven to some extent, the participating robot must be able to overcome such obstacles.
2. In the forest lane, there are four lane obstacles on the track line (middle round green; the capacity of the bottle is about 0.6 liters, cylindrical, no bottle cap, bottle mouth on the ground, the appearance may have a product label).
3. There are two warnings on the forest lane track line of about 30 cm in front and back. The red dots are made of red electrical tape.



▲ Site schematic diagram, the actual size is mainly provided on site

3. game

1. Inspection time, the teams must place the required machines in the designated inspection area.
2. During the game, the operator places the robot at the starting point. When the referee makes a whistle, the operator can start the robot to follow the black to the other point. Each team is limited to walking once.
3. Barrier avoidance stage: When the robot walks to the front of the Bote bottle, it must bypass the Bote bottle and the machine touches the bottle without touch, and complete in the red dot range, otherwise it is regarded as out of the black track line, and the distance between the red dot is about from the Bote bottle 30cm .
4. The competition time is 2 minutes.
5. Score table:

assignment	score
The robot walks from the starting point to the first bottle	10
The robot bypassed the first bottle to complete the obstacle avoidance phase	10
The robot walks from the starting point to the second bottle	10
The robot bypassed the second bottle to complete the obstacle avoidance phase	10
The robot walks from the starting point to the third bottle	10
The robot bypassed the third bottle to complete the obstacle avoidance phase	10
The robot walks from the starting point to the fourth bottle	10
The robot bypassed the fourth bottle to complete the obstacle avoidance phase	10
The robot bypassed the fourth bottle and successfully went to the end	20

6. The robot in the game, in addition to avoid treasure bottle and interference animals, cannot walk from black track line (i. e., the car body is projection is not all covered on the track line, in addition to the obstacle avoidance phase), also cannot reverse walking toward (starting direction), repeated walk has passed the track line, stop and spinning more than 5 seconds. When the car leaves the black track line, walks in reverse, walks repeatedly, stops still, turns in place or knocks down the

Bote bottle, the race is stopped and the task result is calculated at the current position.

7. When walking around the Treasure bottle, do not cross the past or adjacent track line.

8. At the end point, when the machine is projected into the black circle or causes a violation, that is, stop the timing and retrieve the machine at the signal of the referee.

10. After the race starts, the players shall not adjust or replace all the components of the walking car (including program, battery and circuit board, etc.), or require suspension.

11. The ranking will be ranked according to the sum of the competition scores. If the same score exists, the one with less team time will be ranked higher.12. Matters not mentioned in these rules shall be decided by the referee on the spot according to the actual situation.