

2009 Student Design Competition Questions & Answers (Q&A)

ANTENNAS/CORDS

9/26/2008 2:15:11 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: Can an umbilical cord controller be home built or must it be a commercially manufactured model?

A: It can be homemade provided all other rules are satisfied.

ANTENNAS/CORDS

9/26/2008 2:25:47 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: Can a microprocessor or microcontroller be used for encoding the control signals into a serial input line, so long as a DB-9, DB-15, or DB-25 is still used for all connections between the control box and the vehicle?

A: Yes, provided all other rules are satisfied.

ANTENNAS/CORDS

10/22/2008 4:33:51 PM

Jennifer Mayhew (jmayhew@oru.edu)

Q: Does a CAT6 connector qualify as a commercial multi-pin connector, or must a DB9, DB15 or DB25 connector be used?

A: A CAT6 connector would suffice.

ANTENNAS/CORDS

10/25/2008 1:29:22 PM

Jeremy Wade (spudmanj@gmail.com)

Q: In the rules it states that a commercial multi-pin connector is required. Is this connector required if the team is using a wireless remote control?

A: No.

ANTENNAS/CORDS

10/27/2008 2:35:21 PM

Guillermo Varela (varg0001@unf.edu)

Q: If a wireless remote controller is used, would its wireless receiver be sufficient to satisfy the multi-pin connector requirement?

A: See Q and A item 851.

2009 Student Design Competition Questions & Answers (Q&A)

ANTENNAS/CORDS

11/20/2008 11:31:16 AM

Frank M. Fields Jr (fieldsf@enr.sc.edu)

Q: There are two major types of radio controllers: 75 MHz and the 2.4 GHz. Is the 2.4 GHz system allowed or is the competition limited to the 75 MHz frequency only?

A: Either band should be acceptable.

ANTENNAS/CORDS

1/11/2009 12:28:16 PM

Joshua Miller (joshuamiller@utk.edu)

Q: Would a combination of a wireless controller and a wired controller be acceptable?

A: No.

ANTENNAS/CORDS

1/28/2009 8:42:18 PM

Markus Atmanto (mga5010@psu.edu)

Q: In the rules, it states 'The transmitter/receiver radio link may be any commercially available model controller.' Does this imply that only the transmitting 'link' part of the wireless controller must be commercially available or would a custom joystick be allowed if it was attached to an otherwise commercially available controller?

A: Please see Q and A item 843.

ANTENNAS/CORDS

2/8/2009 1:30:32 PM

Twishansh Mehta (twish.mehta@gmail.com)

Q: If the device is radio controlled, is there still a requirement for a multi-pin connector to interface between the vehicle and the controller?

A: No.

ENERGY

9/10/2008 12:45:08 PM

Guillermo Varela (varg0001@unf.edu)

2009 Student Design Competition Questions & Answers (Q&A)

Q: In the contest Rules it reads 'The vehicle must be powered by readily available, over-the-counter rechargeable batteries'. Could you provide clarification on what 'over-the-counter' means?

A: The batteries should be available at a local retailer or a national electronics supplier.

ENERGY

9/21/2008 1:07:59 PM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: Can the rules be revised? I think the current points equation rewards students for buying lithium polymer batteries and penalizes those with lead acid batteries (huge price difference), instead of rewarding electrically efficient design.

A: The current scoring formula will stand. Please note that battery capacity is a scoring metric and that the batteries must be "readily available".

ENERGY

9/21/2008 1:49:21 PM

Enrique Irigoyen (eirigoyen@gmail.com)

Q: To make sure that we satisfy the 'readily available' battery requirement, will it suffice for us to provide receipts showing that anyone with internet access and the funds to purchase the battery pack could have utilized the same parts that we use?

A: Yes.

ENERGY

9/23/2008 6:53:04 PM

Andy Kerr (kerrj5@asme.org)

Q: How is 'A' in the scoring equation calculated? For example, are the ratings from each battery summed or is the rating from one battery sufficient?

A: "A" is the total battery capacity "available to the device according to the battery labels" (in mAh). If this information is not on the battery label, documentation of the battery capacity must be provided.

ENERGY

10/11/2008 6:57:27 PM

Jag Badh (badh_js@hotmail.com)

Q: The requirements specify that we must use 'over-the-counter' batteries. Can we use a battery from a hobby shop (e.g. the type typically used to power RC cars), or are we required to use AA/AAA batteries, etc?

2009 Student Design Competition Questions & Answers (Q&A)

A: Please see Q and A items 783 and 791.

ENERGY

11/19/2008 11:06:01 PM

Daman Bareiss (daman.bareiss@okstate.edu)

Q: In the scoring section of the rules it states that "A" is the 'milliamp-hours available to the device according to the battery labels'. Does this metric include any batteries that power a receiver, or does the metric only include batteries that power motors or other components?

A: "A" incorporates the entire battery capacity "available to the device" and thus includes any batteries required to power a receiver.

ENERGY

11/25/2008 8:40:05 AM

David Ullman (ullman@robustdecisions.com)

Q: At our school, we have developed the following procedure regarding the 'A' scoring metric. Is this what you intended? Excerpt: 'You need to supply written documentation that shows the AmpHrs for your battery pack (as if it were a black box) normalized as if it were a 12 V system. The documentation must include 1. AmpHrs at 12 V. 2. A summary of all of the manufacturing data that you have about the batteries presented in a convincing, brief and understandable manner. 3. A description of how you normalized your actual batteries to 12 V, if necessary. Note that we still want to be able to see and inspect the batteries.'

A: The procedure detailed above is more complex than that intended by the contest organizers. The 'A' metric will be taken from battery labels and/or provided documentation. Likewise, the noted values will be taken at the voltage rating of the battery. The organizers are aware that there is not a one-to-one correlation between consumed power and the 'A' metric.

ENERGY

12/1/2008 2:18:07 PM

Jordon Walsworth (jordon.walsworth@gmail.com)

Q: If two batteries are wired in series to provide a larger voltage to the device, will the mAh ratings from each battery be added together?

A: The sum of each battery's mAh rating will be used regardless of the wiring configuration.

ENERGY

1/9/2009 12:37:03 PM

Andy Kerr (kerrj5@asme.org)

2009 Student Design Competition Questions & Answers (Q&A)

Q: Please clarify the definition of “battery” referenced in question #873, so there will be no ambiguity amongst the judges or teams. Specifically, could you address whether “battery” refers to an individual cell or an assembly of cells grouped to make a pack?

A: Individual cells, individually labeled with a mAh rating, will be treated as distinct “batteries”. Factory-packaged groups of cells, labeled with a collective mAh rating, will be treated as a distinct “battery”.

ENERGY

1/19/2009 2:27:34 PM

Anthony McNally (amcn007@odu.edu)

Q: Can part of the vehicle be powered by a pre-charged compressed air/hydraulic cylinder or an on-board electric compressor? These power sources would be in addition to the rechargeable over the counter batteries described in the rules.

A: Pre-charged compressed air/hydraulic cylinders are not allowed. An on-board electric compressor, purged prior to competition and powered solely by rechargeable batteries, would be allowed.

PROCEDURE

9/6/2008 3:32:31 PM

Guillermo Varela (varg0001@unf.edu)

Q: In the rules it reads 'Teams or contest organizers will need to find or provide their own rocks for testing'. My question is if the team provides its own rocks are they going to be allowed in the competition regardless of whether or not the organizers also provide them?

A: The contest organizers will supply the rocks that will be used in the actual competition(s).

PROCEDURE

9/9/2008 11:58:27 AM

David Ullman (ullman@robustdecisions.com)

Q: I assume that the course is 2290 mm x 3660 mm. The units are not given in the rules. If this is true, then an autonomous playing field is too large to fit through a doorway and demands so much space that we will be hard pressed to leave a course up for the entire time our students are designing their Rovers.

A: As stated in the rules, all dimensions are in mm unless otherwise noted. With regard to the concerns related to the test course's size, since all of the boundaries are designated by masking tape, the course (or more accurately its constituent components, namely the barriers) should easily fit through a doorway.

PROCEDURE

9/17/2008 6:16:09 PM

Enrique Irigoyen (eirigoyen@gmail.com)

2009 Student Design Competition Questions & Answers (Q&A)

Q: When will the dates for the Student Professional Development Conference (SPDC) be posted? I think the national conference date and location have already been set.

A: Information related to the Student Professional Development Conferences (SPDCs) will be posted, as it becomes available, at <http://districts.asme.org/spdc/>.

PROCEDURE

9/21/2008 1:01:13 PM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: Do you offer a package of materials that teams could use to make their device?

A: No.

PROCEDURE

9/21/2008 1:04:23 PM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: Do the barriers have different slopes or are they just constructed from different materials?

A: Please see the Course Description section of the rules.

PROCEDURE

9/25/2008 7:01:39 PM

Darren Nelson (d-nelson.2@onu.edu)

Q: What happens to the rocks once they are placed in the receiving area?

A: Rocks will remain in the receiving area until time stops.

PROCEDURE

9/25/2008 7:32:33 PM

Daman Bareiss (daman.bareiss@okstate.edu)

Q: Is the controller included in the vehicle weight metric "W"?

A: Yes.

PROCEDURE

9/25/2008 7:37:26 PM

Daman Bareiss (daman.bareiss@okstate.edu)

2009 Student Design Competition Questions & Answers (Q&A)

Q: If the vehicle does not return to the starting configuration and/or the starting area, does the time continue until the four (4) minutes is over or is there a penalty such as disqualification?

A: Vehicles which do not return to the parking area prior to the four (4) minute time limit will be awarded the maximum value of "s".

PROCEDURE

9/25/2008 7:59:50 PM

Daman Bareiss (daman.bareiss@okstate.edu)

Q: Do you remove the rocks once they are in the receiving area or do we need to place them in the area together?

A: See Q and A items 798 and 830.

PROCEDURE

9/26/2008 2:16:15 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: Is carpet considered a standard flooring type?

A: Yes.

PROCEDURE

9/26/2008 2:18:45 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: During a team's contest run, is a rock, once deposited at the receiving area, removed from the course so that further rocks can be placed in the higher scoring target receiving areas?

A: See Q and A items 798 and 830.

PROCEDURE

9/28/2008 9:19:57 AM

David Ullman (ullman@robustdecisions.com)

Q: In the rules the terms "device" and "vehicle" are both used. Do they mean the same thing? Is it necessary that the device be a vehicle?

A: The words are used interchangeably in the rules and the Q and A. If a "device" could satisfactorily complete the task within the boundaries set by the rules, Q and A, and personal safety it would be deemed acceptable.

2009 Student Design Competition Questions & Answers (Q&A)

PROCEDURE

9/28/2008 6:19:08 PM

lisa robinson (lisa.robinson@mines.sdsmt.edu)

Q: Are the barriers attached to the course floor or are they free moving?

A: See Q and A item 832.

PROCEDURE

9/29/2008 4:30:47 PM

Gregory Lang (lang0005@hotmail.com)

Q: Will the barriers be fastened to the floor, or will they be left with only their weight holding them in place?

A: See Q and A item 832.

PROCEDURE

9/29/2008 4:32:27 PM

Gregory Lang (lang0005@hotmail.com)

Q: Just to clarify, will the weight of the controller and a possible tether be included in the weight of the vehicle?

A: See Q and A item 799.

PROCEDURE

9/30/2008 4:04:07 AM

Shahsavari (behrooz.shahsavari@yahoo.com)

Q: Where and when will the competition take place?

A: Competition details will be posted to this site, amongst others, closer to the competition date.

PROCEDURE

9/30/2008 3:33:53 PM

Dale Burnham (dburnham@lssu.edu)

Q: If all rocks are picked up at the same time, must rocks placed in the receiving area remain for the entire run or will they be removed as they are placed in the receiving area?

A: See Q and A item 798.

PROCEDURE

2009 Student Design Competition Questions & Answers (Q&A)

9/30/2008 3:49:19 PM

Mohamed Awwad (questioneg@yahoo.com)

Q: Can international students participate in this contest or not??

A: Yes. Please see http://www.asme.org/Events/Contests/DesignContest/Special_Arrangements.cfm for additional details.

PROCEDURE

10/2/2008 3:49:12 PM

Brinden McGowan (brinden@aol.com)

Q: Will there be a physical extruded barrier at the receiving area, or will the area be taped off?

A: The receiving area will be designated using a thin paper or cardboard target.

PROCEDURE

10/8/2008 9:42:16 AM

Mark Kikta (kiktame@students.udmercy.edu)

Q: Will there be a single rock or multiple rocks placed at the locations designated in the rules?

A: A single rock will be placed at each location.

PROCEDURE

10/10/2008 12:16:44 AM

Wing Kit Lin (linwingkit@gmail.com)

Q: Are the barriers fixed to the floor?

A: See Q and A item 832.

PROCEDURE

10/10/2008 12:18:34 PM

David Ullman (ullman@robustdecisions.com)

Q: I submitted some questions about a week ago. Answers have not appeared on Qand A. We are in the middle of the project and students need some feedback or I will have to make a decision on these (especially #3). They are:FAQs submitted to ASME1. In the rules the terms "device" and "vehicle" are both used. Do they mean the same thing? Is it necessary that the device be a vehicle?2. The flooring type is unspecified. Can it be any solid surface or might it be carpeted?3. How are the barriers fastened down? Can the vehicles push them out of the way if they are not fastened down? What if a vehicle moves one accidentally. Is this damage to the course?4. In the Vehicle Requirements section, item #3, what is the "Control Box"? 5.

2009 Student Design Competition Questions & Answers (Q&A)

Why can't we test our devices (with radio remote control) before our time comes up? That's an unfair advantage for people with tethers.6. What defines a readily accessible cutoff switch? (OSU answer: You must be able to turn the device off with one finger making a motion in one direction without damage to the finger.)

A:

PROCEDURE

10/10/2008 12:20:01 PM

David Ullman (ullman@robustdecisions.com)

Q: If you need another person to help with the contest rules next year, let me know. I will not be associated with any school and have develop over 25 contests in the past.

A:

PROCEDURE

10/11/2008 10:37:51 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: Can more than one rock be placed in the receiving area at a time?

A: Yes.

PROCEDURE

10/11/2008 11:03:58 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: The flooring type is unspecified. Can it be any solid surface or might it be carpeted?

A: Any solid flooring surface (carpeted or non-carpeted) is acceptable.

PROCEDURE

10/11/2008 11:06:38 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: How are the barriers fastened down?

A: The barriers will be fastened to the floor using adhesive tapes and/or mechanical supports which lie outside the boundaries of the course.

PROCEDURE

10/11/2008 11:09:16 AM

2009 Student Design Competition Questions & Answers (Q&A)

Jeff Rhoads (jfrhoads@purdue.edu)

Q: What happens if a vehicle accidentally moves a barrier? Is this damage to the course?

A: If deemed by the judges to be an accident, it would not be considered damage to the course.

PROCEDURE

10/11/2008 11:10:48 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: In the Vehicle Requirements section, item #3, what is the "Control Box"?

A: "Control box" refers to the hand control umbilically-connected to a given vehicle.

PROCEDURE

10/11/2008 11:11:56 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: Why can't we test our devices (with radio remote control) before our competition run?

A: This rule is put in place to ensure that one team's remote control does not interfere with another team's trial.

PROCEDURE

10/11/2008 11:12:47 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: What defines a readily-accessible master shut-off switch?

A: An easily-accessible switch capable of severing the flow of energy between the power source and the device.

PROCEDURE

10/11/2008 11:13:31 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: What constitutes damage to the course?

A: In general, any event which physically alters the course or any of its constituent components. This, however, is left to the adjudicator's discretion.

PROCEDURE

10/14/2008 1:01:56 PM

2009 Student Design Competition Questions & Answers (Q&A)

Michelle Wright (mdwright1@go.wtamu.edu)

Q: Can students who will graduate in December still participate in the design process and the competition?

A: Yes.

PROCEDURE

10/17/2008 4:03:05 PM

Seth Sperry (ssperry@vt.edu)

Q: Can more than one team from each school's ASME section enter the competition?

A: Multiple teams from each school may enter the design competitions held at the Student Professional Development Conferences (SPDCs).

PROCEDURE

10/23/2008 9:28:36 AM

John Kennedy (email_jfk@yahoo.com)

Q: How much is the multiplier for each concentric circle? Although the rules indicate the value for each rock, it does not indicate the multipliers for the target area.

A: Please see the eighth paragraph of the contest rules.

PROCEDURE

10/27/2008 1:31:28 AM

Lin Wing Kit (linwingkit@gmail.com)

Q: How many times will the devices be demonstrated?

A: Each team will participate in a single test run at their Student Professional Development Conference (SPDC).

PROCEDURE

10/27/2008 6:15:55 PM

Jose M Otano Gracia (jose.otano@gmail.com)

Q: In Q and A item 799 it states that the controller weight will be included in the weight metric. I think this should be revised. It is analogous to saying that the weight of a communications device used on Earth to communicate with a rover on Mars counts towards the weight of the actual rover.

A: The answer provided in Q and A item 799 will stand.

2009 Student Design Competition Questions & Answers (Q&A)

PROCEDURE

11/4/2008 10:53:58 AM

Michael Maurer (maurerm2@msu.edu)

Q: Can a single student be on two different teams?

A: No.

PROCEDURE

11/7/2008 12:13:07 AM

WING KIT LIN (linwingkit@gmail.com)

Q: How many times will the device be demonstrated in the video?

A: Once. Please see http://www.asme.org/Events/Contests/DesignContest/Special_Arrangements.cfm for additional details. (Please note that this Q and A item applies to students outside North America, as detailed on the aforementioned site.)

PROCEDURE

11/8/2008 10:46:42 PM

Patrick Durnan (durnanpe@gmail.com)

Q: The rules state that the rocks 'must range in size up to 40 mm across the widest dimension and at least 20 mm across any other 'major' dimension'. Can it be assumed that the most basic physical shape of the rock will be a cylinder of 40 mm height and 20 mm diameter?

A: No.

PROCEDURE

11/25/2008 8:42:04 AM

David Ullman (ullman@robustdecisions.com)

Q: How to I join the committee that develops the rules for this contest? Who should I be talking to?

A: Greetings David, Wendy Reffeor (reffeorw@gvsu.edu) should be able to address your questions regarding the committee. Regards, The SDC Team

PROCEDURE

11/25/2008 11:39:55 AM

Michael Maurer (maurerm2@msu.edu)

2009 Student Design Competition Questions & Answers (Q&A)

Q: The project description states: 'In addition, any vehicle that leaves the course must re-enter the course at the point of departure without being intentionally repositioned by anyone.' Please define 'point of departure.'

A: The term "point of departure" refers to the portion of the course boundary which the vehicle passes through while travelling out of bounds.

PROCEDURE

11/25/2008 11:49:35 AM

Michael Maurer (maurerm2@msu.edu)

Q: Can a team's composition change after the district competition yet before the international competition?

A: No.

PROCEDURE

11/25/2008 11:51:16 AM

Logan Beam (beamloga@msu.edu)

Q: If a rock ends up out of bounds, is there an 'out of bounds' penalty?

A: There will be no penalty assessed, but the rock in question can no longer yield points.

PROCEDURE

12/8/2008 11:42:02 AM

Liesbet Michiels (michielk@email.uc.edu)

Q: If there is a possibility that I may not be able to make the scheduled conference date, can I still help my team with the design and have them attend the competition without me? Or must all team members be in attendance during the competition?

A: A team may participate in the design competition without all of its team members being present.

PROCEDURE

12/23/2008 7:48:33 PM

Michael Maurer (maurerm2@msu.edu)

Q: With regard to question 872, it would now seem that if a vehicle drove out of bounds all of the rocks it was carrying would become unplayable. Are rocks that leave the playing field actually unplayable or would they just incur the penalty to bring them back in bounds?

A: Q and A item 872, which pertains to the rocks, will stand. The penalty associated with scoring metric T applies to the devices.

2009 Student Design Competition Questions & Answers (Q&A)

PROCEDURE

12/23/2008 7:58:12 PM

Michael Maurer (maurerm2@msu.edu)

Q: Can you please give a numerical definition for 'point of departure', describing tolerances in which the device must re-enter the playing field?

A: The qualitative description provided in Q and A item 870 will be used to determine the “point of departure”.

PROCEDURE

1/14/2009 2:02:23 PM

Luis Dominguez (digglywood@hotmail.com)

Q: Will the weight of battery chargers be included in the weight metric?

A: No.

PROCEDURE

1/16/2009 10:42:05 AM

Joe Betcher (jwbetcher@lssu.edu)

Q: What kind of project documentation is required for each team (i.e. is a design report required)?

A: For this year’s competition no documentation is required. However, teams may be asked to verbally describe their devices to the competition’s adjudicators.

PROCEDURE

1/19/2009 12:09:30 AM

Bryant Nelson (bryant.p.nelson@drexel.edu)

Q: When will the competition be held? Where will it be located?

A: As noted above, and on the SDC homepage, details on the competitions’ locations and times can be found at http://www.asme.org/Events/Contests/DesignContest/2009_Student_Design_2.cfm and <http://districts.asme.org:80/spdc/>.

PROCEDURE

1/22/2009 10:56:36 AM

John Barricella (Jbarricella@si.rr.com)

Q: Is the weight of the sizing box mentioned in Vehicle Requirements #5 included in the weight metric “W”?

2009 Student Design Competition Questions & Answers (Q&A)

A: No.

PROCEDURE

2/3/2009 2:18:37 PM

Scott Dickerson (scottad73@yahoo.com)

Q: Could you quantify the softest of the materials the device needs to retrieve on the course (i.e. quantify the hardness of the rocks)?

A: As stated in the problem description, the rocks will be actual rocks or composed of plaster of paris (or a similar material). The hardness of these objects will not be quantified in this Q and A forum.

PROCEDURE

2/3/2009 10:35:22 PM

Ryan Bowlds (bowld003@d.umn.edu)

Q: Is the operator of the device allowed to move around the perimeter of the course during the competition or must the operator remain in a designated area?

A: The operator may move around the perimeter of the course.

PROCEDURE

2/7/2009 10:02:48 PM

Nate Webster (webster_nathaniel@hotmail.com)

Q: It seems as though this year's competition borrowed heavily from the 1999 SDC. Although the competition is similar in many ways, the 2009 competition's goal is to retrieve seven rocks instead of the one rock used in 1999. The time limit of 400 seconds was also carried over from the 1999 competition, even though the goal is to retrieve seven times as many rocks. Is it possible the ruling body would consider a longer time limit given the number of rocks to be collected?

A: No.

PROCEDURE

2/10/2009 10:23:38 AM

gregory lang (lang0005@hotmail.com)

Q: Will a sizing box be provided at the contest or do teams need to bring the vehicle in their own pre-sized container?

A: Teams are expected to bring their own pre-sized containers.

2009 Student Design Competition Questions & Answers (Q&A)

PROCEDURE

2/11/2009 9:04:51 PM

Doug Jahnke (dougmjahnke@gmail.com)

Q: Are logos/stickers from sponsors allowed on our vehicle?

A: Yes.

SIZE CONSTRAINTS

9/20/2008 6:46:49 PM

Jonathan Brighton (larry-b@juno.com)

Q: The specifications state 'The vehicle and all control equipment must fit within a box...'. Does this mean the transmitter and the vehicle have to fit in the box, or does just the vehicle with its receiver and associated components?

A: All device components, including the vehicle itself, transmitter/radio controller, and receiver must fit within the specified box.

SIZE CONSTRAINTS

9/23/2008 5:09:10 PM

Dylan (desylves@uncc.edu)

Q: 'The vehicle and all control equipment must fit within a box measuring, on the inside, 370x165x165 mm'. Does this mean that the hand-held controller must fit in this 'box'?

A: Please see Q and A item 787.

SIZE CONSTRAINTS

9/26/2008 2:07:40 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: 'The barriers may be constructed from two 2x4s nailed wide sides together and standing with the 3.5 in direction up...' Does this mean that wide sides are facing each other and forming a 4x4 or that the wide sides are aligned vertically forming a 2x8?

A: The approximate 3.5 in dimension will be the vertical height.

SIZE CONSTRAINTS

9/26/2008 2:22:52 AM

Nicholas Halsmer (yahoo135@oru.edu)

2009 Student Design Competition Questions & Answers (Q&A)

Q: Does the pole or rod used to guide the umbilical cord during the contest need to be able to fit within the size requirements for the vehicle and control equipment (370x165x165 mm)?

A: No.

SIZE CONSTRAINTS

9/30/2008 3:42:32 PM

Dale Burnham (dburnham@lssu.edu)

Q: There are discrepancies between the diagram and description of the receiving area. The radius and diameter are the same number in these two locations. Could you verify which one is correct?

A: The drawing is incorrect, the receiving area “will consist of three concentric circles with radii ranging from 50 mm to 200 mm in 75 mm increments”. The drawing will be updated shortly.

SIZE CONSTRAINTS

10/3/2008 4:03:48 PM

Dustin Harvey (harveydy@rose-hulman.edu)

Q: If an umbilical cord type controller is used, will the weight of the umbilical cord and/or controller count towards the weight component of the scoring equation?

A: See Q and A item 799.

SIZE CONSTRAINTS

10/6/2008 5:29:57 PM

Jason Kent (jakent@uno.edu)

Q: Does a radio controller count towards the size and weight of the 'vehicle'? If an umbilical mounted control system is used, is the satellite controller also included in these two categories (weight and size)?

A: See Q and A items 787 and 799.

SIZE CONSTRAINTS

10/6/2008 5:36:09 PM

Jason Kent (jakent@uno.edu)

Q: In the text of the problem statement, the receiving area dimensions are said to be radii. However the scale drawing of the field indicates that the target circle dimensions given are actually diameters. Can you please clarify the target circle dimension specifications?

A: See Q and A item 820.

2009 Student Design Competition Questions & Answers (Q&A)

SIZE CONSTRAINTS

11/12/2008 9:52:22 AM

Anthony McNally (amcna007@odu.edu)

Q: Does the vehicle have to fit within the box at the end of the run?

A: No.

SIZE CONSTRAINTS

11/19/2008 11:07:50 PM

Daman Bareiss (daman.bareiss@okstate.edu)

Q: The rules state that the controller and vehicle must fit within the box. This provides an unfair advantage for those teams who are using an umbilical since many of the standard model RC receivers are too large in their major dimensions to fit within the required box. Can the rules be revised?

A: The current rules will stand.

SIZE CONSTRAINTS

2/14/2009 4:10:15 PM

Doug Jahnke (gromitnyc@earthlink.net)

Q: Can anything other than the antenna 'spring' up? For example a flexible loop bumper?

A:

SIZE CONSTRAINTS

2/19/2009 2:46:29 PM

Martha Ruiz (marthis_333@hotmail.com)

Q: I would like to know the height of the obstacles?, If there are different sizes could you please mention them all! Thanks!

A:

STRATEGY

9/8/2008 2:45:01 PM

Amir Mirzaei (mirzaeamir@yahoo.com)

Q: Are there restrictions on the materials/components students may use to construct their device?

A: Materials/components are limited only by the official rules, clarifications made in this Question and Answer forum, and personal safety.

2009 Student Design Competition Questions & Answers (Q&A)

STRATEGY

9/8/2008 3:03:27 PM

Amir Mirzaei (mirzaieamir@yahoo.com)

Q: At the time of competition, is the vehicle self-controlled or controlled by the student?

A: Please see the Vehicle Requirements section of the rules (2).

STRATEGY

9/16/2008 11:16:01 AM

Enrique (eirigoyen@gmail.com)

Q: Can a robot leave pieces of itself (like a ramp) on the course?

A: All components of the vehicle must return to and be completely within the parking area to stop time and recover a parking bonus.

STRATEGY

9/17/2008 6:03:41 PM

Enrique Irigoyen (eirigoyen@gmail.com)

Q: Can the device use a dump truck style mechanism to quickly empty all the rocks into the delivery circle and then use an arm to push any rocks that rolled out of the circle back into it?

A: Yes.

STRATEGY

9/22/2008 11:48:20 PM

gisela (gisela_haro@yahoo.com.mx)

Q: How many motors can be used on a given device?

A: There are no constraints on the maximum number of motors that can be used on a given vehicle.

STRATEGY

9/23/2008 6:41:08 PM

Andy Kerr (kerrj5@asme.org)

Q: Are there penalties for pushing a rock outside of its circle?

A: As scoring will be completed after the competition run, they can be pushed into and out of the receiving area.

2009 Student Design Competition Questions & Answers (Q&A)

STRATEGY

9/24/2008 6:26:10 PM

Jordon Walsworth (jordon.walsworth@gmail.com)

Q: If a rock is dropped en route to the receiving area, is it possible to manipulate the dropped rock by either picking it back up or pushing it a little bit?

A: Yes.

STRATEGY

9/25/2008 6:59:02 PM

Darren Nelson (d-nelson.2@onu.edu)

Q: Will a team be penalized if they pick up a rock (or move it) and either drop it or move it to a location that isn't the target?

A: No. See Q and A item 796.

STRATEGY

9/25/2008 7:38:59 PM

Daman Bareiss (daman.bareiss@okstate.edu)

Q: Are you able to go down the course, retrieve only a few rocks, return to the parking area, and end your run early?

A: Please see the first paragraph of the "Contest Operation".

STRATEGY

9/25/2008 9:38:18 PM

CARLOS A. ANGULO-MARTINEZ (LAGORIOPACTS@HOTMAIL.COM)

Q: Is there a restriction on the number of rocks carried by the device at the same time?

A: No.

STRATEGY

9/26/2008 2:20:15 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: Can a rock be nudged several times across the receiving area to a higher scoring position?

A: See Q and A item 785.

2009 Student Design Competition Questions & Answers (Q&A)

STRATEGY

9/26/2008 2:27:16 AM

Nicholas Halsmer (yahoo135@oru.edu)

Q: Can a memory device, either a RAM or ROM card, be included in the design of the vehicle?

A: Yes, provided all other rules are satisfied.

STRATEGY

9/27/2008 4:11:19 PM

Matthew Bont (sailcampdrum@comcast.net)

Q: Do the rocks have to be put into target zone individually or can they be collected and then delivered together?

A: See Q and A items 803 and 830.

STRATEGY

9/28/2008 12:28:21 AM

Ben Teplitzky (ben.a.teplitzky@asu.edu)

Q: I did not see anything in the rules about flying vehicles, would a flying vehicle be allowed?

A: No.

STRATEGY

10/11/2008 11:08:09 AM

Jeff Rhoads (jfrhoads@purdue.edu)

Q: Can the vehicles push the barrier out of the way?

A: No.

STRATEGY

10/13/2008 12:48:00 AM

Robert Chu (robert.chu@asu.edu)

Q: Must the rocks directly touch the surface of the receiving area to score points, or can they be in some sort of containment device?

A: The rocks must be placed on the scoring surface.

2009 Student Design Competition Questions & Answers (Q&A)

STRATEGY

10/13/2008 7:46:15 PM

Luke Petree (lapetree@ncsu.edu)

Q: If we stack the rocks in the receiving area, would the rocks on top get the same multiplier as the rocks below?

A: Please see Q and A item 840.

STRATEGY

10/14/2008 8:50:15 PM

Daniel Shope (dshope@andrew.cmu.edu)

Q: The problem definition requires the use of a 'commercially available' remote control unit. Since the constituent parts of a remote control can be readily purchased from a number of commercial providers, can a custom wireless remote control unit be constructed?

A: Yes, provided the constituent parts are "commercially available".

STRATEGY

10/16/2008 1:52:56 PM

Eddie Sheehan (sheehane@enr.orst.edu)

Q: Quoting the answer given in Q and A item 784: 'All components of the vehicle must return to and be completely within the parking area to stop time and recover a parking bonus.' Does this mean that if we do leave a piece behind then time will be counted to the maximum and we will not receive a parking bonus?

A: After retrieving all of the rocks, the entirety of the vehicle must return to the parking area to stop time and receive the parking bonus.

STRATEGY

10/16/2008 4:17:24 PM

Guillermo Varela (varg0001@unf.edu)

Q: Following up from Q and A item 801, the paragraph reads 'Time stops when the vehicle is once again stationary inside the parking area and in its starting configuration after depositing all of the rocks'. Does 'all of the rocks' mean that disqualification will occur if all of the rocks are not picked up?

A: Failure to collect all of the rocks will not result in disqualification, but rather maximum time "s" and no parking bonus.

STRATEGY

10/21/2008 9:26:19 AM

2009 Student Design Competition Questions & Answers (Q&A)

wing kit lin (linwingkit@gmail.com)

Q: If five rocks are already in the receiving area, can a sixth rock be placed on the five rocks without touching the ground if all are within the receiving area?

A: Please see Q and A item 840.

STRATEGY

10/24/2008 4:29:47 PM

Gina Teofilak (gmt04@fsu.edu)

Q: I understand that the device may NOT fly. Is that to say that it may not have 'legs'? In other words, must there be wheels attached?

A: The device is allowed to move via "legs".

STRATEGY

10/25/2008 1:31:36 PM

Jeremy Wade (spudmanj@gmail.com)

Q: How hard are the rocks? If our vehicle chips the rocks or alters the surface finish would that be considered damage to the course?

A: The rocks may be fabricated from a wide variety of materials, and thus may feature a wide variety of hardnesses. The vehicle should not noticeably alter the rocks in any way.

STRATEGY

10/25/2008 1:36:47 PM

Jeremy Wade (spudmanj@gmail.com)

Q: Can teams use preassembled parts from other products that have been taken apart or must their components be specifically bought/manufactured for their vehicle?

A: Prefabricated components and subassemblies can be used at the team's discretion; however, teams are expected to create their own solution to the problem. Teams attempting to use a premade solution will be disqualified. Judges will determine if a solution is predominantly premade and their decision will be final. Please note that if you are concerned that your solution will not pass the judges, you should consider changing it.

STRATEGY

10/28/2008 6:03:06 PM

Guillermo Varela (varg0001@unf.edu)

2009 Student Design Competition Questions & Answers (Q&A)

Q: Is the competition limited the use of one robot per trial run or are multiple robots allowed to be used at one time, given that all other rules are adhered to?

A: Provided all other rules are adhered to, multiple robots would be allowed.

STRATEGY

11/4/2008 10:54:46 AM

Michael Maurer (maurerm2@msu.edu)

Q: It is obvious that the obstacles are three-dimensional objects. Is the rest of the playing field considered three-dimensional as well? In other words, if an arm on the device swings outside of the boundaries but does not touch the ground, is it considered out of bounds?

A: No, per the "Scoring and Penalties" portion of the project description, penalties are accrued when a vehicle "touches the tape or the floor outside the course boundary".

STRATEGY

11/11/2008 12:35:34 AM

Myra Cavazos (myracavazos@gmail.com)

Q: What restrictions hold for the fabrication of an umbilical cord controller?

A: Only those listed in the original problem description and the Q and A forum.

STRATEGY

11/21/2008 9:10:29 PM

Thomas Trask (trask.thomas@gmail.com)

Q: Is the device allowed to make autonomous actions?

A: Autonomous actions are allowed.

STRATEGY

12/9/2008 5:19:51 PM

Daniel Lindsay (dsl013@latech.edu)

Q: Are students allowed to purchase a commercially-available, remote-controlled car and make any necessary modifications in order to be successful at the competition?

A: See Q and A item 853.

STRATEGY

1/24/2009 7:27:15 PM

2009 Student Design Competition Questions & Answers (Q&A)

Tim (twrose@bama.ua.edu)

Q: If I read the directions correctly, only a single person can operate the controls for the vehicle. Can the operator use two separate controls (e.g. one for moving the device, and a second for rock retrieval), if all other rules are met?

A: No.

STRATEGY

2/11/2009 10:58:06 PM

Aaron Roberts (aaron.roberts@oit.edu)

Q: Can we change device configurations based on what we see at the competition? Basically, we would like to show up at the competition, survey the competition, and potentially replace pieces of our device with different ones that were pre-made.

A: Teams may have some opportunity to review the designs submitted by other competitors during check-in and within the setting of a formal peer review session. The time available for any design modifications prior to the peer review is entirely up to the SDC judges. Absolutely no modifications may be made once the peer review has begun, except when required by the judges due to minor rules infractions. Note that it may be challenging for teams to make anything but minor changes at the SDC on the day of the competition.

STRATEGY

2/22/2009 9:05:52 PM

Todd McDevitt (toddjmcdevitt@gmail.com)

Q: Since the rover has to traverse 'rough' terrain, is it allowable for a circuit board to be made with readily available parts, so that wires don't become disconnected?

A:
