

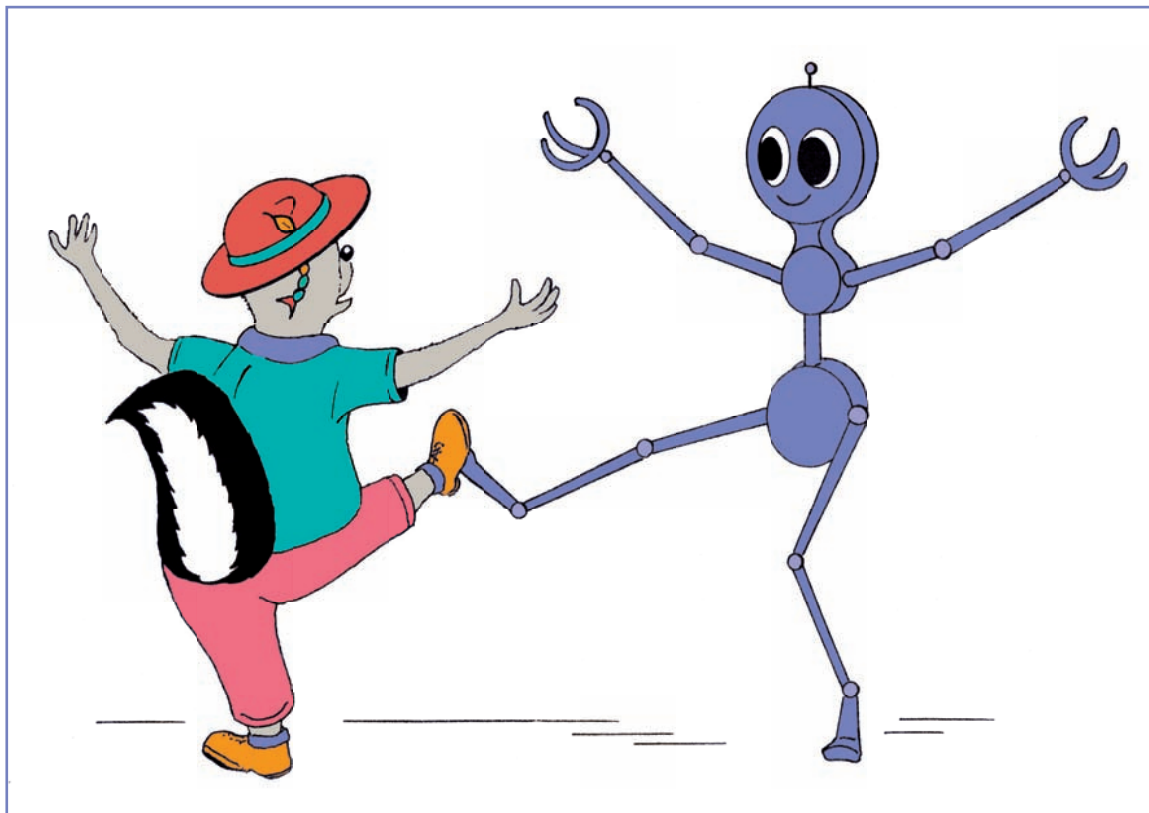


Odyssey of the Mind™

2016-2017

Problem No. 2:

ODD-A-BOT



Odd-a-Bot

Problem No. 2: Divisions I, II & III

Introduction

Not too long ago the idea of an actual robot was beyond the wildest imagination. As technology entered the human world it became futuristic fodder for sci-fi enthusiasts. Current technology advances at a pace far beyond that thought possible by science fiction dreamers of the past and robots are no longer theoretical, they are real. The limits to what a robot might look like and how it behaves evolve daily. In this problem, teams will explore what might happen when a robot is able to learn by watching. Will it take a robot to teach us what we sometimes forget? Sometimes, not every action is appropriate for every situation!

A. The Problem

A family brings home an Odd-a-Bot robot that is able to learn by watching the actions of humans. As it sees human activity, the Odd-a-Bot is able to move in a new way. The team will present its original, team-created Odd-a-Bot in a performance where it learns four new ways to move like a human. During the performance, the Odd-a-Bot will move to duplicate the four activities it watched. Later, it will use the same movements in different circumstances that produce humorous results. When these movements are used in a new way, they will be indicated by a change in the membership sign.

The **creative emphases** of this problem are on the performance, the engineering of the Odd-a-Bot and how it is depicted as learning the human movements, and the signal.

The **Spirit of the Problem** is for the team to create and present a performance that includes a team-designed, built, and operated Odd-a-Bot robot that learns and duplicates human movements to perform a task. Characters in the performance will perform activities to demonstrate the movements. After the Odd-a-Bot witnesses the activities and learns to accurately duplicate them, it will perform the activity. Later in the performance, it will use the same movements it learned in a new way where they will produce humorous results. When the Odd-a-Bot applies the movements in a new way the membership sign will signal the judges and audience.

B. Limitations (Italicized words/terms are defined on Page 5 in the Problem Glossary or in the *2016-2017 Odyssey of the Mind Program Guide*.)

1. **General Rules:** Read the *2016-2017 Odyssey of the Mind Program Guide*. This manual includes basic limitations for this problem and the forms required for competition. This problem cannot be solved without referring to the Program Rules section of the guide.
2. **Problem Clarifications:** The *Odyssey of the Mind Program Guide* explains the types of questions about the rules that will be clarified and the ways to submit those questions. General problem clarifications can be accessed at odysseyofthemind.com/clarifications. Problem clarifications improperly submitted after February 15, 2017, will not be answered. CCI may find it necessary to issue clarifications after that date, so continue to check for them after February 15 and before each competition.
3. The time limit for this problem is 8 minutes. This starts when the Timekeeper says, "Team begin" and includes setup, Style, and presentation of the problem solution.
4. The cost limit for this problem is \$145 (U.S.). The combined value of the materials used during the demonstration of the team's solution, including Style, cannot exceed this amount. The *Odyssey of the Mind Program Guide* explains the cost limit and lists items that are exempt from cost.
5. The team will create an original humorous performance that includes:
 - a. a family that brings home an "Odd-a-Bot" robot.
 - b. human characters performing activities.

- c. an Odd-a-Bot that witnesses four activities and learns to duplicate the human movements that make them possible.
 - d. the Odd-a-Bot applying the movements to perform the activity.
 - e. the Odd-a-Bot applying the movements in a new way that produces humorous results.
 - f. the membership sign signaling when the Odd-a-Bot applies the movements in a new way.
6. The **Family**:
- a. must be portrayed as being human. It is allowed to be portrayed in any way by the team.
 - b. must consist of separate *characters* representing two or more generations of a family living in one home. (A home is considered a single dwelling.) The performance may include additional family members who live outside of the home.
 - c. will “bring home” an Odd-a-Bot in the performance. The team does not have to physically portray the Odd-a-Bot being brought into the home, but it must be new to the family.
 - d. will interact with the Odd-a-Bot during the performance.
7. The **Odd-a-Bot**:
- a. will be designed and made by the team. Only one Odd-a-Bot is allowed to perform the required actions for score.
 - b. is not allowed to include team members.
 - c. will be mechanical/technical. It will duplicate human movement without team member involvement. Team members are allowed to *activate* the Odd-a-Bot to enable it to function, but the robot must perform the movements on its own. The team is allowed to move and manipulate the Odd-a-Bot any other time.
 - d. will learn human movements by watching human characters perform four different activities.
 - e. will perform the same four activities to demonstrate it has learned the movements.
 - f. is allowed to move in any way before it learns how to perform the activities.
8. The four **activities** learned by the Odd-a-Bot:
- a. will be *common human actions* performed by one or more human characters in the performance.
 - b. will be witnessed by the Odd-a-Bot. When they are performed they must be viewable to the judges, audience, and Odd-a-Bot.
 - c. must be performed the same way as when performed by humans.
 - d. must include two of the following activities:
 - (1) Clapping (a sequence where two body parts are repeatedly brought together and separated in a way that produces sound).
 - (2) Kick a ball (have an extension/limb move backward and then forward to impact a ball in order to move it across the floor/ground toward a target/goal).
 - (3) Play the drums (directly [by hand] or indirectly [using drumstick] hitting one or more drums in a pattern).
 - (4) Sweep the floor with a broom (use a broom to gather scattered items into a pile).
 - (5) Singing (sound and movements that correspond to changes in sounds).
 - e. include two team-determined human activities. These are not allowed to be performed using the same human movements as any other required activity. One or both are allowed to be selected from the list.
9. The Odd-a-Bot **duplicating the human movements**:
- a. may be performed in any order, but must be performed one at a time.
 - b. must include any items the human used when it performed the activity. For example, if a human sweeps a floor with a broom, the Odd-a-Bot must also use the same broom to sweep a floor.

- c. will each occur two different times in the performance:
 - (1) The first time it uses the human movement will be to perform the same activity as the human character. It does not have to be at the same location or in the same setting.
 - (2) The second time it uses the human movement will be in a new way that does not include performing the same activity – just the human movement it learned. The Odd-a-Bot's movements will noticeably impact the performance in a humorous way.
- 10. The membership sign **signal**:
 - a. will indicate when the Odd-a-Bot starts to apply each of the movements in a new way. It may continue to signal while the movement continues.
 - b. will be different for each of the four required human movements.
 - c. must include a change in the *appearance* of the membership sign.
 - d. is allowed to include sound.
 - e. is not allowed to change the required information on the membership sign.
- 11. The team should present the Staging Area Judge with four copies of the Required Team List Form found in the forms section at www.odysseyofthemind.com/members/ or four copies of a list on one side of one or two sheets of 8 1/2" x 11" or A4 paper. This list can be hand-printed, typed, or computer generated. It is for reference only. The list must include:
 - a. the team's membership name and number, the problem and division.
 - b. the two selected activities and the human characters performing them.
 - c. the two team-determined activities, the human characters performing them, and the human movements the Odd-a-Bot learns by watching each of them.
 - d. the situation where the Odd-a-Bot displays the movements in a new way and the order they will be performed.
 - e. a brief description of the family members living in the home.
 - f. the four signals the membership sign will display when the Odd-a-Bot performs each of the required human movements in a new way.
 - g. the signal the team will use to indicate it has finished its performance.

C. Site Setup and Competition

- 1. A stage or floor area a minimum of 10' x 15' (3 m x 4.6 m) will be used, but a larger area is desirable. This will not be marked. Teams must be prepared to perform in a 10' x 15' area. If space permits, the team may perform and/or place equipment, props, etc. outside the 10' x 15' area. If a drop-off exists beyond the 10' x 15' dimensions, a caution line may be taped 30" (76.2 cm) from the edge of the drop-off. This will serve as a warning, not a boundary. Teams can use the entire space as it wishes for the performance.
- 2. A three-prong electrical outlet will be available. Teams must bring their own extension cords and adapters, if needed.
- 3. The team members should report to the competition site with all items for the presentation of their solution at least 15 minutes before they are scheduled to compete.
- 4. At the end of the 8-minute time period, the Timekeeper will call "Time" and all activity must stop. The team may end before the 8 minutes, but must signal the judges when it is finished.
- 5. Teams should bring cleaning utensils to clean up any mess. Should a team take an unreasonable amount of time to clean the site, or leave a mess, the judges will assess an Unsportsmanlike Conduct penalty. Others not on the team's roster can help the team clear the site and remove the team's props. The competition area must be left clean and dry for the next competing team.

D. Scoring

1. Creativity of the overall performance (originality, effectiveness).....1 to 20 points
2. Quality of the performance (audibility, movement, stage presence).....1 to 15 points
3. The family 0, 5 or 10 points
 - a. Is depicted within limitations 0 or 5 points
 - b. Interacts with the Odd-a-Bot in the home 0 or 5 points
4. The Odd-a-Bot..... 5 to 30 points
 - a. *Creativity of overall engineering*3 to 20 points
 - b. Creativity of how it is depicted as learning movements.....2 to 10 points
5. Movement 1 (depicted in activity selected from the list) 2 to 25 points
 - a. Is demonstrated by a human character in the performance 0 or 3 points
 - b. Odd-a-Bot successfully performs the activity the same way 0 or 9 points
 - c. Movement is used in a new way..... 0 or 5 points
 - d. Humor created by the new use.....2 to 8 points
6. Movement 2 (depicted in activity selected from the list) 2 to 25 points
 - a. Is demonstrated by a human character in the performance 0 or 3 points
 - b. Odd-a-Bot successfully performs the activity the same way 0 or 9 points
 - c. Movement is used in a new way..... 0 or 5 points
 - d. Humor created by the new use.....2 to 8 points
7. Movement 3 (depicted in team-determined activity)..... 2 to 25 points
 - a. Is demonstrated by a human character in the performance 0 or 3 points
 - b. Odd-a-Bot successfully performs the activity the same way 0 or 9 points
 - c. Movement is used in a new way..... 0 or 5 points
 - d. Humor created by the new use.....2 to 8 points
8. Movement 4 (depicted in team-determined activity)..... 2 to 25 points
 - a. Is demonstrated by a human character in the performance 0 or 3 points
 - b. Odd-a-Bot successfully performs the activity the same way 0 or 9 points
 - c. Movement is used in a new way..... 0 or 5 points
 - d. Humor created by the new use.....2 to 8 points
9. Membership sign signals start of movements used in a new way..... 2 to 25 points
 - a. Displays four different signals..... 0 or 5 points
 - b. Creativity of the signal1 to 10 points
 - c. Effectiveness in the performance 1 to 10 points

Maximum possible: 200 points

E. Penalties (Deducted from percentaged scores.)

1. "Spirit of the Problem" violation (each offense)-1 to -100 points
2. Unsportsmanlike conduct (each offense) -1 to -100 points
3. Incorrect or missing membership sign.....-1 to -15 points
4. Outside assistance (each offense)-1 to -100 points
5. Over cost limit.....-1 to -100 points
6. Odd-a-Bot uses the same movements to perform more than one scored activity..... zero score for performing additional movements (e.g. 7b&c)

Omission of scored problem requirements carries no penalty except loss of score.

F. Style (Elaboration of the problem solution; use four copies of the Style Form from the *Odyssey of the Mind Program Guide*.)

1. Creativity of the home setting 1 to 10 points
2. *Artistic Quality* of a family member's costume 1 to 10 points
3. (Free choice of team) 1 to 10 points
4. (Free choice of team) 1 to 10 points
5. Overall effect of the four Style elements in the performance..... 1 to 10 points

Maximum possible: 50 points

G. Tournament Director Will Provide

1. A 10' x 15' (3 m x 4.5 m) presentation area (larger, if possible).
2. A three-prong electrical outlet.
3. A judging team and materials necessary to judge this problem.

***NOTE:** Contact your Tournament Director regarding competition site specifications such as actual dimensions, registration procedures, floor surface, etc. Do not submit a clarification request for this information.

H. The Team Must Provide

1. Four copies of its Style Form, one Cost Form, one Outside Assistance Form, and all team-specific clarifications.
2. Four copies of its list as stated in B11. This list is to assist the judges. If the team fails to provide the list, there will be no penalty.
3. Any necessary extension cords or outlet adapters.
4. Cleanup materials as needed.

I. Problem Glossary (Italicized terms that are not in this Glossary can be found in the *2016-2017 Odyssey of the Mind Program Guide*.)

Activate— any trigger (such as flipping a switch or releasing a spring) that starts the mechanisms of the Odd-a-Bot to perform the human movements. Team member involvement must end as the action is initiated.

Common human action – Anything that is a routine activity that is performed by the majority of people in ordinary circumstances. For example, combing one's hair is common and performed by many people; using a lasso to rope a bull is not performed by a majority of people. There is no penalty if a team-determined activity does not meet this criteria, but it will impact the overall performance.

Problem by Samuel W. Micklus and Dr. C. Samuel Micklus.

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