

5.2 Speech Recognition & Audio Detection

Description

The robot must answer a set of questions to an operator at the first attempt without asking for confirmation. The operator is not allowed to move to the robot or shout to the robot. The questions will be related to the context of two different topics. Both contexts will be informed during the warm up.

Main goal: The robot must be able to recognize and answer to a set of questions without ask for confirmation.

Focus

This task focuses on *voice recognition*.

Setup

- **Locations:**
 - This task takes place inside the *Arena*.
 - The robot will start at a predefined location.
 - All doors of the apartment are open.
- **People:**
 - Two "professional" operators are selected by the TC to test the robot.
 - Operators must be fluent in English
- **Furniture:**
 - All furniture are in their predefined locations.
- **Objects:**
 - All objects are in their predefined locations.

Procedure

1. The referee requests the team to move the robot to the start location.
2. The referee gives the start signal and starts the timer.
3. The team leaves the area after the start signal.
4. The operator will ask 6 questions related to the selected contexts in front of the robot.
5. The robot should answer the question without asking confirmation.
6. A question will only be asked once; there are no repetitions of a question.
 - The operator shall be standing still and facing to the robot.
 - The operator shall be between 0.75 and 1.0 meters away from the robot position.
 - The operator shall be between -60° and 60° from the robot's center (front range).

Additional rules and remarks

- **Continue rule:** Continue rule can not be used during this test.

- **Question timeout:** If the robot does not answer within 10 seconds, the question is considered as missing, and the referee will proceed with the next question.
- **Understanding the answer:** If the robot's answer is not understood by the operator, it is considered as incorrect, and the referee will proceed with the next question. It is thus advised that the robot provide answers such that it is clear that the robot understood the question. For example, if the question is "What is the capital of Germany?", instead of just answering "Berlin", it is advised that the robot answers something to the effect of "The capital of Germany is Berlin".
- **Log:** It is mandatory to store the recognition logs for later verification.

Instructions:

To Referee

The referee needs to:

- Avoid shouting to the robot.
- Avoid getting closer to the robot.
- Speak to the robot loud and clear with plain standard English.
- Avoid repeating questions for the same robot.
- Acronyms must be pronounced letter by letter.

To OC

The OC needs to:

- **2 hours before the test:** Select and announce the robot start location.
- **2 hours before the test:** Select and announce two "professional" operators.
- **2 hours before the test:** Draw the set of questions for each team

Score sheet**Maximum time:**

5 minutes

Action	Score	1st try	2nd try	3rd try
<i>Regular Rewards</i>				
Answer the question correctly	6×100	_____	_____	_____
<i>Score per try</i>	<i>600</i>	_____	_____	_____
Total Score	<i>600</i>	_____		