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# RoboCup@Home

Forms & Score Sheets

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# Registration Form



**Team name:** \_\_\_\_\_

**Team leader name:** \_\_\_\_\_

## Safety first!

The speed of the robots should ensure safe operation. This means that the robot is not allowed to go faster than the local speed limits. During operation in an environment with humans it may not exceed a walking pace of humans (6 kph, 3.7 mph).

At any time when operating the robot inside and outside the scenario the owners have to stop the robot immediately if there is a remote possibility of dangerous behavior towards people and/or objects. If a referee, member of the Technical or Organizational committee, an Executive or Trustee of the federation tells the team to stop the robot, there will be no discussion and the robot has to be stopped *immediately*.

If the team does not comply, the team and its members can be excluded from the ongoing competition immediately by a decision of the RoboCup@Home Technical Committee. Furthermore, the team and its members can be banned from future competitions for a period not less than a year by a decision of the RoboCup Federation Trustee Board.

	Robot 1	Robot 2
Size of the robot		
Emergency button(s)		
Start button		
Collision avoidance		
Voice of the robot		
Robot speaker system		
Use of external devices		
ASR Bypassing method		
Other safety issues		
Custom containers.		

## External Devices:

I have read and fully understood the “Safety First” statement and agree to it. Furthermore, I agree to obey the rules in the official RoboCup@Home RuleBook.

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Team leader

# Score Sheet



**Test:** Poster Session

**Team name:** \_\_\_\_\_

**Referee name:** \_\_\_\_\_

## Instructions:

1. Please watch all posters carefully.
2. There will be a team member for questions about the poster.
3. After viewing the poster and asking your questions you may have, please fill in the evaluation sheet below.
4. Is not allowed to evaluate your own team.
5. You may use the space below "Remarks:" to take notes for yourself.
6. Enter your team's name ("Team name") and your name ("referee name") on top of the sheet.
7. Sign the form using either "Referee" or "Team leader" slots at the bottom.

## Evaluation sheet

Team	Overall score of poster (0-10)
Chief Scientist Office	
EPFL@Home	
eR@sers	
FBOT@Home	
Gentlebots	
Hibikino-Musashi@Home	
KIARO	
LAR@Home	
LASR	
LCASTOR	
LyonTech	
NimbRo@Home	
Pumas	
PUMAS-DSPL	
RoboCanes-VISAGE	
RoboFEI@Home	
RoBorregos rUNSWEEP	
Serious Cybernetics Corporation (SCC)	
Sinfonia Uniandes	
SKUBA	
SOBITS	
SocRob@Home	
SUTURO-VaB	
Team of Bielefeld (ToBi)	
Tech United Eindhoven	
Tidyboy-DSPL	
Tidyboy-OPL	
Tinker	
TRAIL	
UT Austin Villa@Home	

**Remarks:**

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*Date & time*

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*Referee*

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*Team leader*

# Score Sheet



Test: Help Me Carry

Team name: \_\_\_\_\_

Referee name: \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Main Goal</b>				
Following the person to the car	300	_____	_____	_____
Perceiving the correct beg (visualize on screen or say which one)	15	_____	_____	_____
Picking up the correct bag	100	_____	_____	_____
Avoiding the crowd of people obstructing the path	50	_____	_____	_____
Avoiding the small object on the ground	50	_____	_____	_____
Avoiding the hard-to-see object	50	_____	_____	_____
Avoiding the area blocked with retractable barriers	50	_____	_____	_____
<b>Bonus rewards</b>				
Re-reaching the starting location	200	_____	_____	_____
Joining and staying in the queue on the way to the arena	300	_____	_____	_____
<b>Penalties</b>				
Dropping the bag	-50	_____	_____	_____
<b>Deus Ex Machina Penalties</b>				
Rediscovering the operator by natural interaction	-50	_____	_____	_____
Rediscovering the operator by unnatural interaction	-100	_____	_____	_____
Rediscovering the operator by asking them to come back	-150	_____	_____	_____
Rediscovering the operator by direct contact	-200	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	111	_____	_____	_____
<b>Recordings</b>				
Duration (limit: 5:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____
<hr/>				
Score per try	1115	_____	_____	_____
Total Score	1226	_____		

Remarks:

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



Test: General Purpose Service Robot

Team name: \_\_\_\_\_

Referee name: \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Main Goal</b>				
Executing the task associated with each command	3×400	_____	_____	_____
<b>Bonus Rewards</b>				
Understanding a command given by a non-expert operator	3×100	_____	_____	_____
<b>Deus Ex Machina Penalties</b>				
Using a custom operator	3×-50	_____	_____	_____
Bypassing speech recognition	3×-50	_____	_____	_____
Instructing a human to perform parts of the task will apply a percentage penalty according to similar penalties in other Stage I tests.	3×-400	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	150	_____	_____	_____
<b>Recordings</b>				
Duration (limit: 5:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____
<b>Score per try</b>	1500	_____	_____	_____
<b>Total Score</b>	1650	_____		
<b>Remarks:</b>				

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



Test: Receptionist

Team name: \_\_\_\_\_

Referee name: \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Main Goal</b>				
Offer a free seat to the new guest	2×100	_____	_____	_____
Show the guest around (navigate to the beverage area and living room)	2×30	_____	_____	_____
Look in the direction of navigation or at the navigation goal	2×15	_____	_____	_____
Tell position of favorite drink	2×20	_____	_____	_____
Look at the person talking	2×75	_____	_____	_____
Introduce both guests to each other	180	_____	_____	_____
<b>Bonus Rewards</b>				
Open the entrance door for a guest	2×200	_____	_____	_____
State a similarity between an interest between two or more persons	50	_____	_____	_____
Describe the first guest to the second guest before reaching the living room (per correct visual attribute)	4×30	_____	_____	_____
<b>Penalties</b>				
Wrong guest information was memorized (continue with wrong name, drink or interest)	6×-20	_____	_____	_____
Describe the first guest to the second guest before reaching the living room (per incorrect visual attribute)	4×-30	_____	_____	_____
Introduce the wrong persons	-120	_____	_____	_____
<b>Deus Ex Machina</b>				
Alternative HRI	2×-75	_____	_____	_____
Not recognizing people	2×-200	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Outstanding performance	123	_____	_____	_____
<b>Recordings</b>				
Duration (limit: 6:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____

Score per try	1230	_____	_____	_____
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Total Score	1353	_____
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Remarks:

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



**Test:** Storing Groceries

**Team name:** \_\_\_\_\_

**Referee name:** \_\_\_\_\_



Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Main Goal</b>				
Navigating to the table	15	_____	_____	_____
Perceiving object and categorizing it correctly	5×15	_____	_____	_____
Picking up an object for transportation to the cabinet	5×50	_____	_____	_____
Perceiving objects in shelf and saying on which layer the currently handled object should be placed	5×15	_____	_____	_____
Placing an object in the cabinet	5×15	_____	_____	_____
Placing an object next to similar objects on the cabinet	5×50	_____	_____	_____
Opening the first cabinet door	200	_____	_____	_____
Opening the second cabinet door	100	_____	_____	_____
Pouring cereal into the container	300	_____	_____	_____
<b>Bonus Rewards</b>				
Picking up an object from the shopping bag	5×50	_____	_____	_____
Picking up a tiny object	70	_____	_____	_____
Placing a tiny object	30	_____	_____	_____
Picking up a heavy object	70	_____	_____	_____
Placing a heavy object	30	_____	_____	_____
Autonomously Picking any Object	50	_____	_____	_____
Autonomously Placing any Object	50	_____	_____	_____
<b>Deus Ex Machina Penalties</b>				
Perceiving object and categorizing it wrongly	10×-15	_____	_____	_____
A human handing an object over to the robot	5×-50	_____	_____	_____
A human placing an object in the cabinet	5×-15	_____	_____	_____
A human placing an object in the cabinet next to similar objects	5×-50	_____	_____	_____
A human pointing at a target location	5×-25	_____	_____	_____
A human opening the first cabinet door	-200	_____	_____	_____
A human opening the second cabinet door	-100	_____	_____	_____
Spilling cereal while pouring	-100	_____	_____	_____
Leaving cereal in the box	-100	_____	_____	_____
A human pouring cereal in the bowl	-300	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	189	_____	_____	_____
<b>Recordings</b>				
Duration (limit: <b>7:00</b> minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____
<hr/>				
<b>Score per try</b>	1890	_____	_____	_____
<b>Total Score</b>	2079	_____		
<b>Remarks:</b>				

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



**Test:** Clean the Table

**Team name:** \_\_\_\_\_

**Referee name:** \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Main Goal</b>				
Navigate to the table to pick up items	15	_____	_____	_____
Picking up the cup, bowl and drinks for transportation	4×50	_____	_____	_____
Picking up cutlery (spoon, fork) for transportation	2×80	_____	_____	_____
Picking up the plate for transportation	100	_____	_____	_____
Placing the tableware and cutlery inside the dishwasher	5×50	_____	_____	_____
Placing an item correctly (cleanable, convenient like a human would) in the dishwasher	5×75	_____	_____	_____
Placing a drink inside the trash bin	2×50	_____	_____	_____
<b>Bonus Rewards</b>				
Pulling and pushing the dishwasher rack	2×100	_____	_____	_____
Opening and closing the dishwasher door	2×200	_____	_____	_____
Picking up the dishwasher tab for transportation to the dishwasher	100	_____	_____	_____
Placing the dishwasher tab inside the dishwasher's hatch intended for the tab	200	_____	_____	_____
Wiping the area where the drink was	2×50	_____	_____	_____
Autonomously Picking any Object	50	_____	_____	_____
Autonomously Placing any Object	50	_____	_____	_____
<b>Deus Ex Machina Penalties</b>				
Handing cup, bowl and drinks over to the robot	3×-50	_____	_____	_____
Handing cutlery over to the robot	2×-80	_____	_____	_____
Handing the plate over to the robot	-100	_____	_____	_____
Having a human place an object in the dishwasher	5×-50	_____	_____	_____
Having a human place a drink inside the trash bin	2×-50	_____	_____	_____
A human pointing at the trash bin	2×-25	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	230	_____	_____	_____
<b>Recordings</b>				
Duration (limit: 10:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____

**Score per try** 2300 \_\_\_\_\_

**Total Score** 2530 \_\_\_\_\_

**Remarks:**

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



**Test:** Enhanced General Purpose Service Robot

**Team name:** \_\_\_\_\_

**Referee name:** \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b><i>Main Goal (can be repeated unlimited times)</i></b>				
Find and clearly state an encountered problem	3×150	_____	_____	_____
Solve a problem	3×650	_____	_____	_____
<b><i>Penalties</i></b>				
Find repeated problem category	-100	_____	_____	_____
Solving repeated problem category for the 2nd time	-300	_____	_____	_____
Solving repeated problem category for the 3rd (or more) time	-500	_____	_____	_____
<i>These Penalties are applied before any percentage based Deus Ex Machina Penalties</i>		_____	_____	_____
<b><i>Deus Ex Machina Penalties</i></b>				
Asking for location of a problem	3×-150	_____	_____	_____
Instructing a human to perform parts of the task will apply a percentage penalty according to similar penalties in other Stage II tests.	3×-650	_____	_____	_____
<b><i>Special Penalties &amp; Bonuses</i></b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	240	_____	_____	_____
<b><i>Recordings</i></b>				
Duration (limit: 10:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____
<b><i>Score per try</i></b>	2400	_____	_____	_____
<b>Total Score</b>	2640	_____		

**Referee Information:** Note each problem (category, item, location) and mark if they are stated by the robot in remarks

**Remarks:**

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



Test: Restaurant

Team name: \_\_\_\_\_

Referee name: \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Regular Rewards</b>				
Detect calling or waving customer	2×100	_____	_____	_____
Reach a customer's table without prior guidance/training	2×100	_____	_____	_____
Understand and confirm the order received to the customer	2×200	_____	_____	_____
Communicate the order to the barman	2×100	_____	_____	_____
Return to the customer table with the order	2×100	_____	_____	_____
Serve the order to the customer	2×200	_____	_____	_____
<b>Bonus Rewards</b>				
Use an unattached tray to transport	2×200	_____	_____	_____
<b>Regular Penalties</b>				
Being guided to a table	2×-200	_____	_____	_____
Not making eye-contact when taking an order	2×-80	_____	_____	_____
Not reaching the bar (barman has to move from behind the bar to interact with the robot)	2×-80	_____	_____	_____
<b>Deus ex Machina Penalties</b>				
Asking the Barman to handover object to the robot	4×-50	_____	_____	_____
Guest needing to take the object from a tray or the robot's hand	4×-50	_____	_____	_____
Being told/pointed where is a table/Kitchen-bar	2×-100	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	200	_____	_____	_____
<b>Recordings</b>				
Duration (limit: 15:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____
<hr/>				
Score per try	2000	_____	_____	_____
Total Score	2200	_____		

Remarks:

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



Test: New HRI

Team name: \_\_\_\_\_

Referee name: \_\_\_\_\_

Action	Score	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
<b>Regular Rewards</b>				
Approach a calling operator	100	_____	_____	_____
Approach the human's hand without contact	5×50	_____	_____	_____
Receive an object from the operator	5×100	_____	_____	_____
Use natural interaction to clarify ambiguous delivery locations	5×50	_____	_____	_____
Place an object at the correct location	5×100	_____	_____	_____
<b>Penalties</b>				
Initiating unattended interaction (e.g., talking to the open air)	5×-50	_____	_____	_____
Place an object at the wrong location or by guessing the intended location	5×-75	_____	_____	_____
<b>Deus Ex Machina Penalties</b>				
Instruct the user how to hand over an object	5×-75	_____	_____	_____
<b>Special Penalties &amp; Bonuses</b>				
Not attending	-500	_____	_____	_____
Using alternative start signal	-100	_____	_____	_____
Outstanding performance	160	_____	_____	_____
<b>Recordings</b>				
Duration (limit: 10:00 minutes)		_____	_____	_____
Restart after (sec)		_____	_____	_____
<hr/>				
Score per try	1600	_____	_____	_____
Total Score	1760	_____		

Remarks:

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader

# Score Sheet



Test: Final Demonstration

Team name: \_\_\_\_\_

Referee name: \_\_\_\_\_

Action	Score	Single try
<b><i>Main Goal (can be repeated unlimited times)</i></b>		
Find and clearly state an encountered EGPSR problem	3× 150	_____
Solve a EGPSR problem	3× 650	_____
Opening the Door of the Apartment	600	_____
Closing the Dishwasher	600	_____
Closing a Cabinet Door	300	_____
Custom Task		_____
Custom Task		_____
Custom Task		_____
<b><i>Penalties</i></b>		
Find repeated EGPSR problem category	-100	_____
Solving repeated EGPSR problem category for the 2nd time	-300	_____
Solving repeated EGPSR problem category for the 3rd (or more) time	-500	_____
<b><i>Deus Ex Machina Penalties</i></b>		
Asking for location of a problem	3× -150	_____
Restart (only applies if the robot continues scoring afterwards)	-50	_____
Instructing a human to perform parts of the task will apply a percentage penalty according to similar penalties in other Stage II tests.	3× -650	_____
<b><i>Recordings</i></b>		
Duration (limit: 10:00 minutes)		_____
Restart after (sec)		_____

Total Score 3900 \_\_\_\_\_

**Referee Information:** Note each problem (category, item, location) and mark if they are stated by the robot in remarks

**Remarks:**

\_\_\_\_\_  
Date & time

\_\_\_\_\_  
Referee

\_\_\_\_\_  
Team leader