



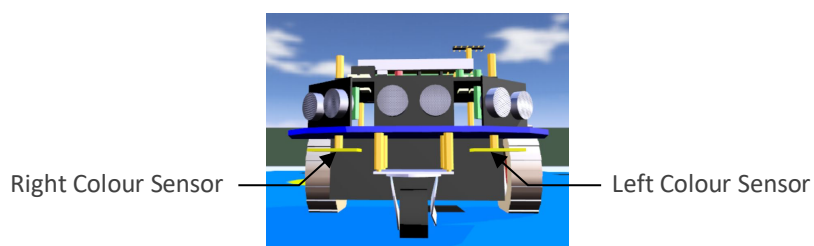
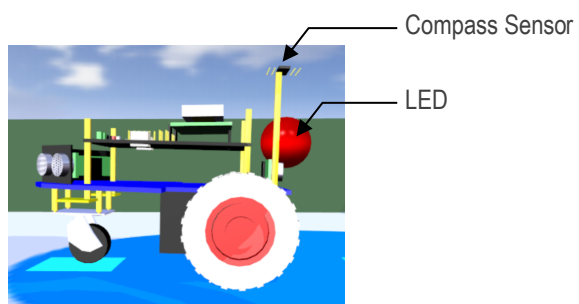
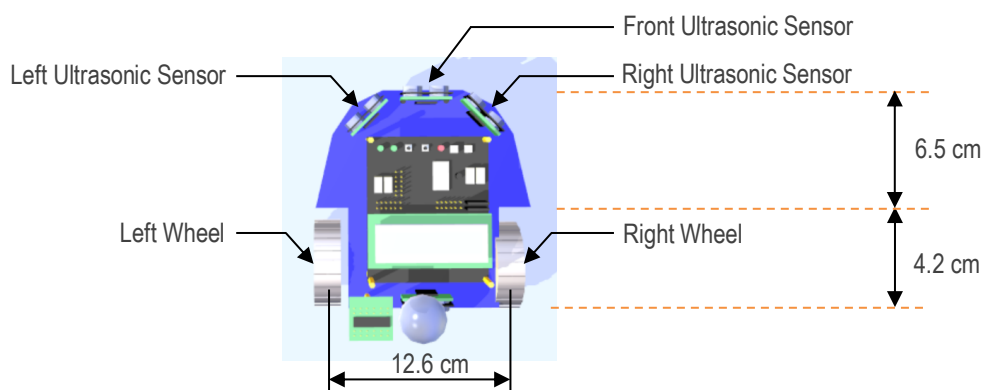
RoboCupJunior 2020 Rescue Simulation Rules 2020– Appendices (former CoSpace)

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APPENDIX A: Virtual Robot Configuration



APPENDIX B: Competition Setup

1. Preliminary Level



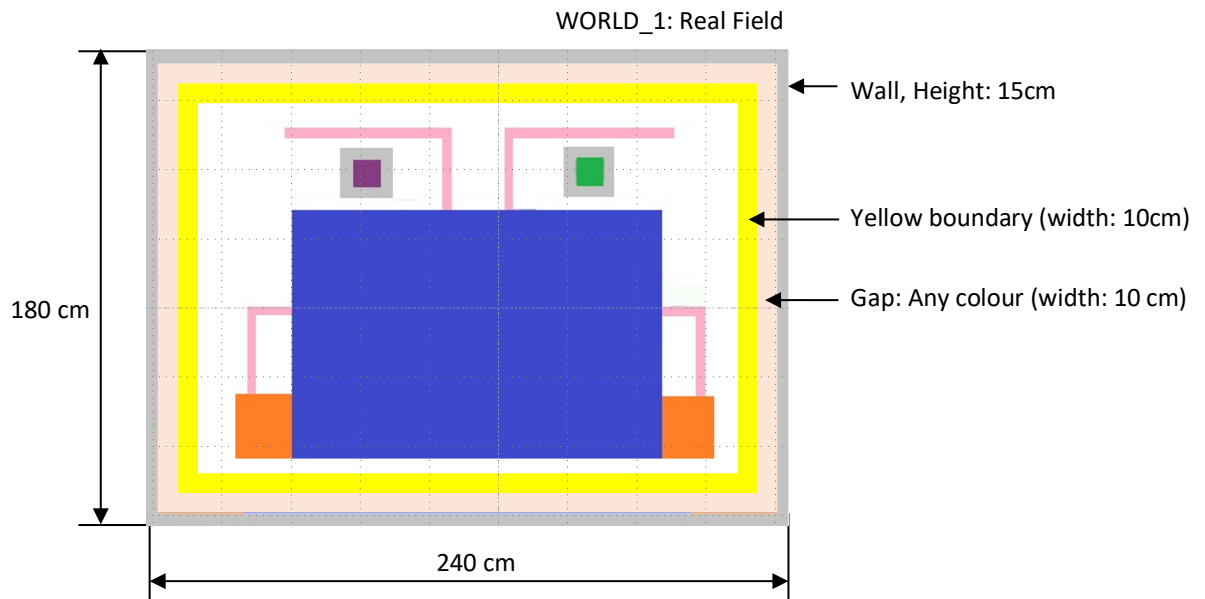
- The SUPER and SUPER+ objects will be placed 15cm away from the wall (indicated by the dash-lines in the diagram; however, the dash-line will not be shown in the WORLD_2) upon generation.

2 Advanced Level



- The coordinates of virtual robots, special zones, collection boxes, traps, signal block zones will be provided to teams.
- The coordinates of SUPER and SUPER+ objects will be sent to team that generates the objects.

3 SuperTeam Challenge



- The size of the Real field is the same as the soccer field. The location (X & Y coordinates) of any objects including real robot, real objects, special zones, traps, marker, collection boxes, and obstacles will not be disclosed to teams.



- The coordinates of virtual robots, special zones, collection boxes, traps, signal block zones will be provided to teams.
- The coordinates of SUPER and SUPER+ objects will be sent to team that generates the objects.

APPENDIX C: Map used in World Championship (Advanced Level)

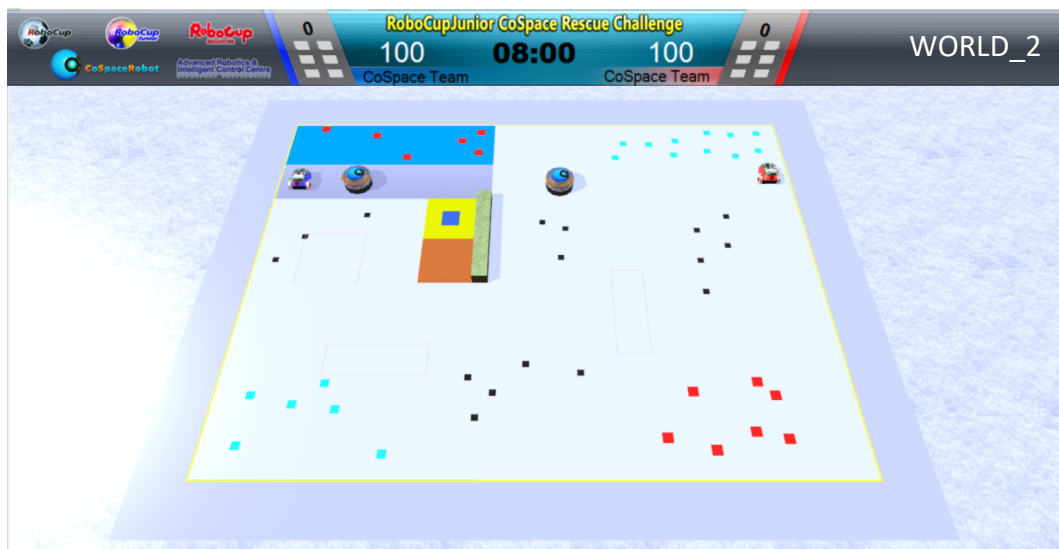
1 Full Map

The FULL Map will only be installed on the game station. It will not be copied to participants' station throughout the whole challenge.



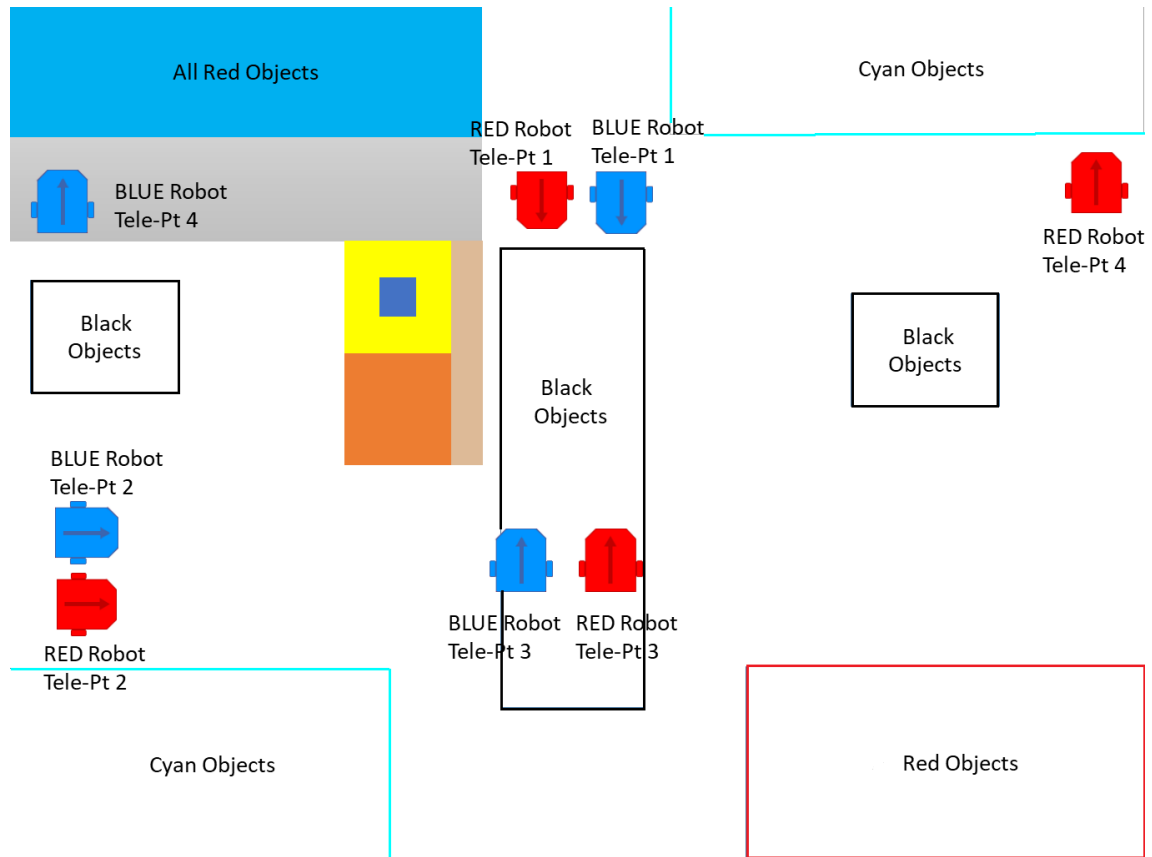
2 Partial Map

The PARTIAL Map will be released to teams. This map is incomplete. Teams need to combine the information given in the layout of WORLD_2 and the element map of WORLD_2 to work out the best AI strategy to accomplish the mission.



3 Layout of WORLD_2

The layout below shows the objects distribution and teleportation locations. The other elements, such as special zones, swamplands, etc are extracted from the PARTIAL Map of the WORLD_2.



4 Element Table of WORLD_2

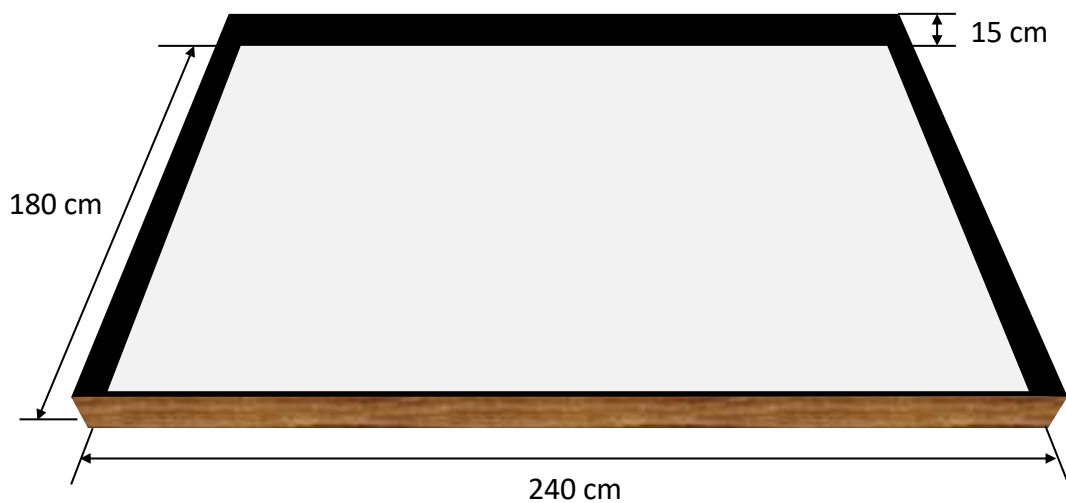
The WORLD_2 is divided into 8 x 6 small segments. The table below shows the elements appears on each segment. These elements are extracted from the FULL Map of the WORLD_2.

Special Zone	Special Zone	Special Zone	Regular Zone	Regular Zone	Special Zone	Special Zone	Special Zone
Swampland	Swampland	Swampland	Special Zone	Special Zone	Swampland	Swampland	Swampland
Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone
Swampland	Swampland	Swampland	Swampland	Swampland	Swampland	Swampland	Swampland
		Trap			Trap		
			Obstacle		Obstacle		
Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone
Swampland							Swampland
		Trap			Trap		
		Collection Box	Collection Box	Collection Box	Collection Box	Collection Box	
			Obstacle		Obstacle		
Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone
Swampland							Swampland
		Collection Box	Collection Box	Collection Box	Trap		
			Obstacle		Collection Box	Obstacle	
Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone
Special Zone	Special Zone	Special Zone			Special Zone	Special Zone	Special Zone
Swampland							Swampland
	Obstacle	Obstacle		Obstacle	Obstacle	Obstacle	Obstacle
Special Zone	Special Zone	Regular Zone	Regular Zone	Regular Zone	Regular Zone	Special Zone	Special Zone
		Special Zone			Special Zone		
			Trap	Trap			
		Obstacle		Obstacle	Obstacle		

APPENDIX D: Real Arena Suggested Building Instructions

The size of the real arena is the same as the RCJ soccer field. The following is the suggested instruction for building the real arena for Rescue Simulation (former CoSpace) Open sub league. These instructions are applicable only for the World Championship organizers.

- 1) Cut a piece of 243 cm x 182 cm plywood or fiberboard (about 1.5cm thickness is adequate). The surface of the board may be either smooth or textured. You may also join a few small ones together. Please make sure the joint is smooth. It should not affect the real robot movement.
- 2) Lay the board on the floor. The floor should be level.
- 3) Paint the surface to white colour.
- 4) A simple frame should be added at the edge to prevent the robot from falling if the arena is not placed on the floor.



APPENDIX E: Learning Journal Template

Cover page:

RoboCupJunior 2020 Rescue Simulation (former CoSpace) Learning Journal

Team Name: _____

Participants Name: Student 1, email

Student 2, email

Student 3, email

....

Mentor Name: Mentor name, email

Institution: _____

Country: _____

Contact Person: _____

Date: _____

RoboCupJunior 2020

Learning Journal

Rescue Simulation (former CoSpace)

Student 1, Student 2

Team Name, Country

Website

1. Reflection and significant experience

2. Introduction

Team Background

Team photo (optional)

Previous RoboCup track record

3. Strategy

What are the mini-tasks you need to complete in order to solve the Rescue mission?

State the methods you have used to complete the task. You can use photos, flowcharts to enhance the explanation.

How do you evaluate different approaches?

How do you feel about the methods used so far? Can they be further improved? If yes, how to improve?

What resources have helped you to understand and/or been interesting to use?

4. Discussion and Conclusion

What new knowledge, skills or understanding have you gained during the process of preparing for the RoboCupJunior Rescue Simulation Challenge?

Highlight collaboration with other teams if any

5. Acknowledgements

APPENDIX F: Team Description Paper (TDP) Template

Cover page:

RoboCupJunior 2020 Rescue Simulation (former CoSpace) Team Description Paper

Team Name: _____

Participants Name: Student 1, email

Student 2, email

Student 3, email

....

Mentor Name: Mentor name, email

Institution: _____

Country: _____

Contact Person: _____

Date: _____

RoboCupJunior 2020
Team Description Paper
Rescue Simulation (former CoSpace)

Student 1, Student 2
Team Name, Country
Website

1. Abstract
2. Introduction
 - a. Team Background
 - b. Team website (if you have one)
 - c. Team photo (optional)
 - d. Provide a video of your Rescue Simulation (former CoSpace)
(URL)
 - e. Previous RoboCup or CoSpace experience
3. Strategy
 - a. Description of your strategy for CoSpace search and rescue
 - b. Include flowcharts or pseudo code if appropriate
 - c. Describe and highlight innovative search and rescue algorithms
in any
4. Discussion and Conclusion
 - a. Share your team's CoSpace learning experience
 - b. Highlight collaboration with other teams if any
 - c. Description of future work
5. Acknowledgements
6. References