



# RoboCupJunior Rescue B Rules (2013)

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*Note: Changes from 2012 rules are highlighted in red.*

*Translated by RoboCupJunior Hong Kong*

## RoboCupJunior Rescue - Technical Committee 2013

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## Preface 前言

Rescue B scenario: An earthquake has struck a city, and the houses became unstable. Rescue personnel needs to go inside of these houses but can spend as little time inside the houses as possible. The condition has become too dangerous for the rescuers to conduct rescue mission themselves. Instead, a robot has been dispatched to find victims inside of the houses and signal their positions to the rescuers.

There are also areas treacherous for the robot (e.g. cracks, ditches, etc., which are symbolized by the black squares in the rescue arena). When the robot has searched through the whole building and found all victims, it should get out of the houses as fast as possible.

拯救B場景：地震襲擊了城市，房子變得不穩固。拯救人員需要走進房子內，並在房子中停留時間盡可能的短。情況變得非常危險，導致拯救人員無法開展拯救使命。相反，機械人可被派遣到房子內找出遇難者，並為拯救人員標記他們位置。有區域是機械人無法勝任的(例如裂縫，壕溝等，這些都在拯救場中用黑色方塊來表示)。當機械人搜索了整棟建築物和找出所有遇難者，它需要以最快的速度離開房子。

## Differences from Rescue A 與拯救A的分別

There is no line on the floors of Rescue B arena. Instead, the robot must search inside of a labyrinth on its own. The paths in the labyrinth may vary between competition rounds (the walls inside will be repositioned each round). Also, there are more than one victim inside of Rescue B arena. The robot needs to signal where they are, but does not have to rescue the victims.

拯救B場沒有軌跡在地板上。相反，機械人必須在迷宮中自己搜索。迷宮中的路徑會隨比賽的回合改變(每回合牆將重新設置)。並且，多於一個遇難者在拯救B場內。機械人需要標記出他們的位置，但不能拯救他們。

## 1. Arena 場地

### 1.1. Description 描述

1.1.1 The arena is modular. Each room can be thought of as a "room" in a building.

賽場為標準組件，每個房間可視為建築物內的房間。

1.1.2 Rooms may be placed adjacent to each other (side by side) or stacked vertically (above/below).

房間可以放置成彼此相鄰的(並排)或堆疊垂直(高於/低於)。

1.1.3 Adjacent rooms will be placed so that the floors are level to each other and the horizontal (plane of the earth).

相鄰的房間可以放置成地板彼此水平(地球的平面)。

1.1.4 Stacked rooms will be connected by a ramp (sloping hallway) with an incline of approximately 25 degrees from the horizontal.

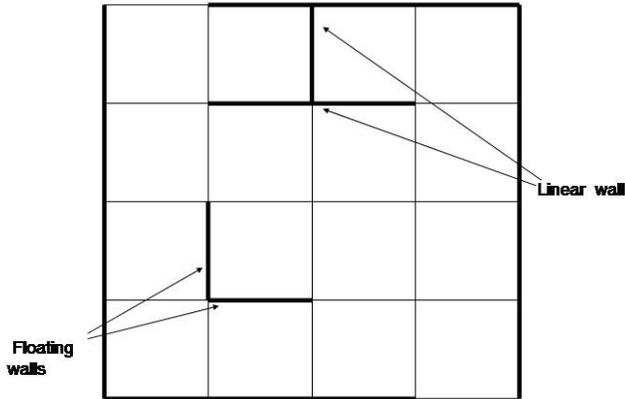
堆砌的房間將連接一條與水平夾角不超出25度的斜坡(傾斜的走廊)。

1.1.5 Rooms and ramps will have walls at least 15 cm high. Walls will be a light color (white, or close to white).

房間和斜坡的牆最少高15cm。牆是淺色的(白色或接近白色)。

1.1.6 Walls may or may not lead to the entrance/exit. Walls that lead to the entrance/exit are called linear walls. The walls that do NOT lead to the entrance/exit are called "Floating Walls".

牆可能或不可能引路至入口/出口。牆可引路至入口/出口稱作線性牆。牆不能引路至入口/出口的稱作“流動牆”。



## 1.2. Dimensions 尺寸

1.2.1. Each room is approximately 120 cm by 120 cm [could be 120 cm by 90 cm], with walls that are at least 15 cm high.

每個房間的尺寸為約120cm x 120cm(可能120cm x 90cm)，牆最少15cm高。

1.2.2 Doorways and ramps are at least 30 cm wide.

門口和斜坡的牆最少闊約30 cm。

## 1.3. Floor 地板

1.3.1 Floors are a light color (white, or close to white). Floors may be either smooth or textured (like linoleum or carpet), and may have steps of up to 3 mm in height at joints between rooms. There may be holes in the floor (about 5mm diameter), for fastening walls.

地板是淺色(白色或接近白色)。地板可能柔軟或粗糙(如油地毯、地毯)，房間之間接合處可能有高至3mm的落差。地板上的洞(直徑5mm)，用以扣住牆。

1.3.2 Through the arena, there may exist black tiles that represent “no go” spaces. Black tiles will be placed randomly at the start of each round (see 3.3.7). **Black tiles may not be completely fixed.**

通過房間時，可能存在黑色階磚塊，這是不可進入的空間。黑色階磚塊將於每回合中隨機擺放。

1.3.3 Rooms are placed in a way that the floors are level.

房間被放置方式在水平的地板上。

## 1.4 Path 路徑

1.4.1 Rooms will be subdivided into paths defined by walls (walls should meet the guidelines as set forth in 1.1.5).

房間將被定義的牆(牆應符合指引目上文 1.1.5)細分出多條路徑。

1.4.2 Paths will be approximately 30cm wide but may open into foyers wider than the path. Foyers may be any size up to the full size of a room.

路徑將闊約30cm，但門廳可能打開而大於路徑。門廳可能是任意大小甚至是整個房門的大小。

1.4.3 A single tile indicates both the entrance to and exit from the arena. This tile is one of the outermost tiles **in the first room.**

僅一個階磚塊表示進入和離開賽場，該階磚塊位於第一間房間最外層的其中一個階磚塊。

**1.4.4 There is only one opening between adjacent rooms.**

相鄰的房間之間只有一個缺口。



## 1.5 Debris and Obstacles 碎片和障礙物

1.5.1 Debris and Obstacles may be located anywhere in the arena (except on the ramp).

碎片和障礙物可放置於賽場任何一部分(斜坡除外)。

1.5.2 Debris may consist of speed bumps (made from 10 mm plastic pipe or wooden dowel painted white) or wooden sticks less than 3 mm in diameter (e.g. cocktail sticks or kebab skewers). Robots may drive over or push aside debris as needed.

碎片可能為減速坡(由10mm的膠管或木釘製、塗成白色)或直徑小於3mm的木棒(如雞尾酒攪棒或烤肉棒)。機械人可能越過碎片或把碎片推至一旁。

1.5.3 Debris may also be attached to or next to walls.

碎片可能觸及旁邊的牆。

1.5.4 Obstacles may consist of bricks, blocks, weights and other large, heavy items. Robots are expected to navigate around Obstacles. Obstacles that are moved/knocked over will remain where they fall and will be reset only once the robot has completed its scoring run.

障礙物可能為磚塊、積木、重物及其他大的、重的物品。預期機械人是繞過障礙物。被移動/打翻的障礙物，將繼續倒下，只有機械人完成得分回合後才會重設。

1.5.5 Obstacles, when used, will never prevent the robot from discovering routes in the maze.

當使用障礙物時，它是不會妨礙機械人在迷宮中發現路線。

1.5.6 The obstacles will have a maximum height of 40 cm and a width of 20 cm. Their shape can be everything from rectangular to cylindrical.

障礙物最高為40cm和最闊20cm。它們可以是任何形狀由長方形至圓柱體。

1.5.7 The obstacles can only be placed in foyers with at least 20 cm to the nearest walls.

障礙物只會放在門廳並與最近的牆最少有20cm的距離。

## 1.6 Victims 遇難者

1.6.1 Victims are heated sources located near the floor of the arena (centered approximately 7 cm above the floor).

遇難者的發熱源放置於接近賽場地板位置(其中心距離地板約7厘米)。

1.6.2 Each victim has a surface area greater than 25 sq cm.

每個遇難者表面面積大於25平方厘米。

1.6.3 The organizers will try to keep enough difference (minimum of 10 degrees) between victims' temperatures and the indoor temperature. The temperature of victim simulates human body temperature between 28C to 40C.

大會將盡量使遇難者的溫度和室內的溫度保持足夠的差異(最少10度) 遇難者的溫度模擬人體溫度在28C至40C之間。

1.6.4 There will be a minimum of five (5) active victims in any round.

任何回合最少有五(5)個起作用的遇難者。

1.6.5 There may be objects that resemble victims in appearance, but are not heated. Such objects are not to be identified as victims by robots.

可能會有外觀類似遇難者的物件，但不是熱的。這些物件不應被機械人識別為遇難者。

1.6.6 Victims will never be located on black tiles or on tiles with obstacles.

遇難者不會放置在黑色的階磚塊或有障礙物的階磚塊。



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### 1.7 Environmental Conditions 環境條件

1.7.1 Teams should expect the environmental conditions at a tournament to be different from the conditions of at their home practice field.

隊伍應預期比賽的環境條件，有別於他們作自家練習場地的條件。

1.7.2 Teams must come prepared to adjust their robots to the lighting conditions at the venue.

隊伍必須有備而來，在會場的照明條件下調整他們的機械人。

1.7.3 Lighting and magnetic conditions may vary along the course in the rescue arena.

在拯救賽場上，照明及磁場情況可隨比賽過程有所變化。

1.7.4 The arena may be affected by magnetic fields (e.g. generated by under floor wiring and metallic objects).

場地可能受磁場影響(如：由地板下的電線和金屬物體產生的)

1.7.5 Teams should prepare their robots to handle unexpected lightning interference. While the organizers and referees will try their best to minimize external lighting interference, it is not possible for them to foresee all unexpected interferences such as camera flash from spectators.

隊伍所準備的機械人應能應付不可預期的照明干擾。雖然大會和裁判將竭盡所能減少外在光線的干擾，但他們不可能預知所有意外的事，如來自觀眾相機的閃光燈。

1.7.6 The OC will try their best to fasten the walls onto the field floor so that the impact from regular robot's contact should not affect it. (Refer to 6.1)

組織委員會將會盡力以固定的牆在地板，所以正常的機械人接觸不應構成影響。(參見 6.1)

## 2. Robot 機械人

### 2.1 Control 控制

2.1.1 Robots must be controlled autonomously (use of a remote control to manually control the robot is not allowed).

機械人必須是自主控制(使用遙控器人為控制機械人是不允許)。

2.1.2 Robots must be started manually by **the team captain**.

機械人必須由隊長以人手啟動。

2.1.3 Robots may utilize various maze navigation algorithm. Pre-mapped type of dead-reckoning is prohibited.

機械人可以利用各種迷宮導航算法，但預先繪製地圖類型的航位推測法是禁止的。

2.1.4 The robot must not damage any part of the arena in any way.

機械人不能以任何方式損壞賽場任何部分。

2.1.5 Robots should include a stop/pause button so they may be easily stopped/paused by humans to avert any potentially damaging or illegal robot actions

機械人應包括停止/暫停按鈕，使人們可以很容易地把它們停止/暫停下來，以避免任何潛在的破壞或違規的機械人行為。

### 2.2. Construction 構造

2.2.1 The height of a robot must not exceed 30 cm.

機械人高度不能超出30cm。

2.2.2 Robots may not have any sensor or other device that enables it to 'see' over the walls.

機械人不可有任何傳感器或其他裝置容許它的視野高於牆壁。



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2.2.3 Robots may be constructed of any robot kit or building blocks (either commercially available or custom built from raw hardware) as long as the robot complies with the above constraints, and its design and construction are primarily and substantially the original work of the students (see section 2.5. below).

機械人可以任何機械人套件或積木構建而成(不管是市場上銷售的，還是用原材料搭建而成) 只要機械人符合上述的約束，其設計和建構，在本質上主要來自學生原創(見以下部分2.5)。

2.2.4 Any commercially produced robot kit that is specifically marketed as a 'maze solver' or 'rescue robot' is likely to be disqualified unless significant modifications have been made to both its mechanical design and software. If there is any doubt as to the acceptability of a particular commercial product, participants must obtain approval from the International RoboCupJunior Rescue Technical Committee several months prior to any competition. Organizers will treat all inquiries with the utmost privacy, and will not release details to any third parties.

任何商業生產的機械人套件，是專門銷售作'迷宮解決者'或'拯救機械人'有可能被取消資格，除非其機械設計和軟件經重大的修改。如果對特別商業產品的可接受性存有任何疑問，參與者在任何比賽的數個月之前，必須獲得國際RoboCupJunior拯救技術委員會的認可。舉辦單位對所有查詢的處理將保持最大的隱私，並不會洩露細節給任何第三方。

2.2.5 **Bluetooth Class 2 and Class 3 communications, and ZigBee (See RoboCupJunior General Rules)** are the only radio type allowed in RoboCupJunior. Teams with robots that have other types of radio communication on board have to remove these radio communication devices or disable them as other types of radio communication can interfere with other leagues competing in RoboCup. **If a robot has a device(s) for other forms of radio communication, the team must prove that device have been disabled.** Robots that do not comply may face immediate disqualification from the tournament.

RoboCupJunior 中，**只有藍芽組別 2 和組別 3，ZigBee 通訊(見 RoboCupJunior 一般賽規)**是允許的。隊伍的機械人電路板上有其他類型的無線電通訊時，需要這些移除或關掉無線電通訊裝備。因其他類型的無線通訊可能干擾到 RoboCup 其他聯盟的賽事。**如機械人已裝設了其他形式的無線通訊，隊伍必須證明它們已關掉。**機械人沒有遵從，可能遭到立即取消比賽資格。

2.2.6 For safety reasons, no lasers are allowed on any robot.

基於安全理由，任何機械人都不允許使用雷射儀。

### 2.3. Team 隊伍

2.3.1 A team is only allowed one robot in the arena.

每隊只允許一台機械人在賽場

2.3.2 **Also refer to 3.2 Humans rules.**

參考規則3.2隊員。

### 2.4. Inspection 檢查

2.5.1 Any violations per the inspection rules will prevent that robot **from** competing until modifications are **made**.

任何違反檢查規則的機械人不得參賽，直至修改妥當。

2.5.2 Modifications must be made within the time schedule of the tournament, and teams must not delay tournament play while making modifications.

修改必須在比賽規定的時間內完成，進行修改的同時，隊伍不得耽誤比賽。

2.5.3 If a robot fails to comply with all constraints (even with modification), it will be disqualified from that round but not from the tournament.

如一台機械人未能符合所有約束(甚至修改)，機械人該論被取消資格，但非整個比賽。

2.5.4 If there is excessive mentor assistance, or the work on the robots is not substantially comprised of original work by the students, the team will be disqualified from the tournament.

如果教練過多協助，或者機械人的組成並非主要由學生完成，該隊伍便會被取消參賽資格。



## 3. Play 比賽

3.1.1 Where possible, competitors will have access to practice arenas for calibration, testing and tuning throughout the competition.

場地可以的話，整個比賽參賽者將於練習場區進行調試。

3.1.2 Where there are dedicated 'competition' and 'practice' arenas it will be at the organizer's discretion if testing is allowed on the competition arenas.

如果有專門的“比賽”及“練習”賽場，將由主辦單位自行決定是否允許在比賽場進行調試。

## 3.2. Humans 隊員

3.2.1 Teams should designate one **of its own team members** as 'captain' and **another one** as 'co-captain'. Only these two team members will be allowed an access to the practice/competition arenas, **unless otherwise directed by the referee.**

隊伍應委派自己隊伍的其中一名成員為‘隊長’和另一成員為副‘隊長’。除非裁判另有指示，否則只允許這兩名成員進入練習/比賽賽場，

3.2.2 All other team members (and any spectators) must stand at least 150 cm away from the arena while their robot is active, unless otherwise directed by the referee.

在機械人運動期間，除非裁判另有指示，否則所有其他隊伍成員(和任何觀眾)需要與場地保持距離最少150cm。

3.2.3 As movement of robots by humans is not acceptable during scoring runs except as instructed to do so by the referee, only the 'captain' will be allowed to interact with the robot during a scoring run.

在得分回合期間，除非裁判另有指示，否則人為干涉機械人的運動都是不能接受的，並且僅允許隊長可與機械人互動。

## 3.3. Start of play 開始比賽

3.3.1 The round begins at the scheduled starting time whether or not the team is present/ready. Start times will be posted prominently around the venue.

不管參賽隊伍是否準備完畢，每輪比賽將按照預先通知的開始。開始時間將張貼在賽場周圍多眼處。

3.3.2 Once the round has begun, robots are not permitted to leave the competition area for any reason. Each round will last a maximum of 8 minutes.

每輪比賽一旦開始，不論任何理由機械人不得離開比賽場區。每輪比賽最多為8分鐘。

3.3.4 Calibration is defined as the taking of sensor readings and modifying of the robot programming to accommodate such sensor readings. Once the clock has started, teams may calibrate their robot in as many locations as desired on the arena, but the clock will continue to count down. Robots are not permitted to move under power while calibrating.

校準的定義是取得傳感器讀數和修改機械人程式以容納這些傳感器的讀數。計時一旦開始，隊伍可能於賽場內多個位置校準他們的機械人，但計時繼續倒數。當校準時，不允許啟動機械人移動。

3.3.4 **Calibration time is not for pre-mapping the arena and/or victim location. Pre-mapping activities will result in immediate disqualification of the robot for the round.**

校準時間不是用作預先繪製賽場地圖或遇難者位置。進行繪製賽場地圖，機械人將立即失去該輪比賽資格。

3.3.5 Before a scoring run is started, a dice will be rolled to determine the location of the black tiles. The position of the black tiles will **NOT** be revealed to the team until after they are ready to start a scoring run (see 3.3.6). Referees will ensure the combination of black tile placement result in a maze that is 'solvable' before a robot begins a scoring run.

得分賽開始前，將擲骰子決定黑色階磚塊位置。黑色階磚塊位置將不會被透露，直至隊伍準備開始得分賽(見3.3.6)。機械人於分賽開始前，裁判確保迷宮中的黑色階磚塊位置組合是‘可解的’。

3.3.6 Once the robot is **started**, the referee will place the black tiles (determined by roll of dice as per 3.3.5).

機械人一旦開始，裁判將放置黑色階磚塊(根據3.3.5，由擲骰子決定)。

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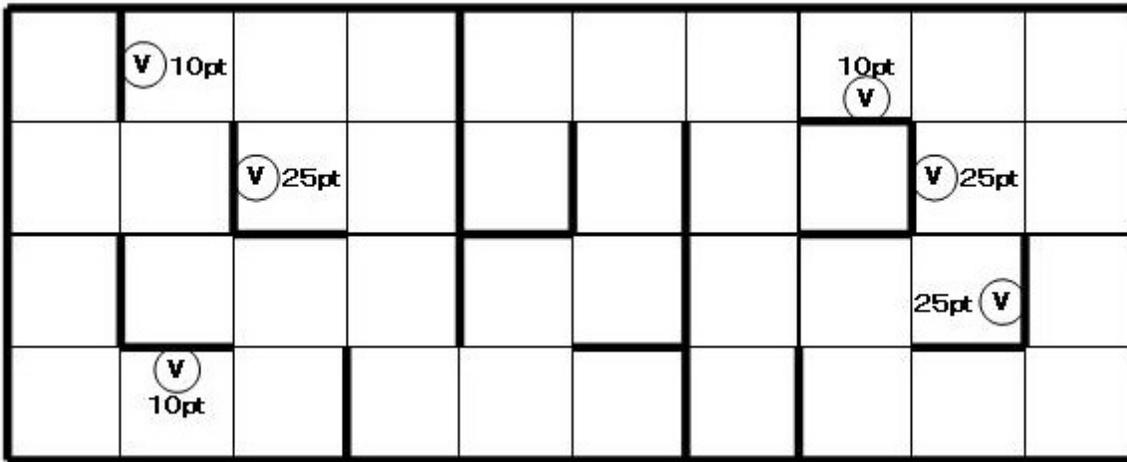
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3.3.7 Once a scoring run has begun, no more calibration is permitted (this includes changing of code/code selection).  
 得分賽一旦開始，不容許再有校準(包括轉換程式或程式選項)。

### 3.4. Scoring 計分

3.4.1 Robots are rewarded points for each "victim" they identify in the arena: 25 points per "victim" on floating wall, 10 points per "victim" on linear wall. A victim on a tile where there is a linear wall on one side of the tile is rewarded 10 points even when the victim is placed on a floating wall. To identify a victim, a robot must stop within 10 cm of the victim, then flash a lamp on and off for two seconds before continuing.

機械人確認賽場上每個遇難者會獲得分數，位於流動牆上的每個遇難者為25分，位於外圍牆上每個遇難者為10分。若遇難者所在的階磚塊只要其中一面為外圍牆，即使遇難者被放置在流動牆上，成功確認時也只獲10分。確認遇難者時，機械人必須停在遇難者的10cm範圍內，接著閃燈兩秒才繼續。



3.4.2 Robots are penalized 10 points for making a false victim identification.

錯誤確認遇難者，機械人會遭扣10點。

3.4.3 Each robot is awarded a Reliability Bonus. This is calculated as follows:

機械人可獲可靠性額外得分。計算如下：

Reliability Bonus Score = The number of victims successfully identified x 10, minus the number of Lack of Progress x 10.

可靠性額外得分 = 成功確認遇難者數目 x 10 減去 進展中斷數目 x 10

3.4.4 Reliability Bonus score can only be reduced down to a minimum of 0 points.

可靠性額外得分只會扣減至最少為0分。

eg: 7 victims correctly identified, 2 lack of progress: Reliability Bonus Score = (7 x 10) - (2 x 10) = 50 points

如：成功確認遇難者7個，2次進展中斷：可靠性額外得分 = (7 x 10) - (2 x 10) = 50分。

5 victims correctly identified, 6 lack of progress: Reliability Bonus Score = (5 x 10) - (6 x 10) = 0 Points (cannot go less than 0)

成功確認遇難者5個，6次進展中斷：可靠性額外得分 = (5 x 10) - (6 x 10) = 0分(不少於0)



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*Note: Changes from 2012 rules are highlighted in red.*

*Translated by RoboCupJunior Hong Kong*

3.4.5 A successful exit bonus will be awarded if the robot successfully finishes the round by being stationary for at least 5 seconds on the start tile. (This is to simulate the retrieval of the robot from the disaster zone.) The points awarded will be 10 per victim successfully identified.

機械人成功完成該輪任務並回到開始的階磚塊上靜止不動最少5秒，視為成功完成了回合，可獲成功離開額外得分。(這是模擬從災區中取回機械人。) 所獲得分為每個成功確認遇難者10分。

3.4.6 Ties in scoring will be resolved on the basis of the time taken by each robot to complete the course.

相同得分時，以每一個機械人完成任務的時間較短的為勝。

3.4.7 A score sheet template is provided on the official RoboCupJunior website.

計分紙可於RoboCupJunior官方網頁找到。

### 3.5. Lack of Progress 進展中斷

3.5.1 A Lack of Progress occurs if 進展中斷定義為

A) The team captain declares a Lack of Progress.

隊長宣佈進展中斷。

B) The robot passes through the black tile and leaves it in another direction.

機械人通過黑色階磚塊，並黑色階磚塊另一方向離開。

C) The robot or a team member injures or breaks the arena.

機械人或隊伍成員損壞了賽場。

D) A team member touches the arena or their robot without permission from the referee.

隊伍未得到裁判同意下，接觸賽場或機械人。

3.5.2 If a Lack of Progress occurs, the robot must be returned to the entry tile (the first visited square in the current room) of the room or ramp where the Lack of Progress occurred. Note that the entry tile is different when going backwards in the maze.

如發生進展中斷，機械人必須返回到發生進展中斷的房間或斜坡的入口處之階磚塊(當前房間的首個進入方格)。注意：入口處是有別的，當機械人截返迷宮起點時。

3.5.3 After a Lack of Progress the team captain may reset (turn on and off) the power supply and program. He is not allowed to change the program or give any information about the maze to the robot. The only exception is information about its re-start coordinate/state, nothing else.

進展中斷後，隊伍可以重新啟動電源及程式，但不允許改變機械人程式或給予機械人有關迷宮的資料。只是重設坐標/狀態是例外，別的不允許。

3.5.4 The team captain may declare an "end of round" if the team wants to stop the round early. The team will be awarded all points achieved up to the call for end of round.

隊長可以宣佈“回合結束”，如隊伍需要提前結束回合。隊伍將獲得於回合結束前，已獲得的分數。

### 3.6 End of Play 比賽結束

3.6.1 The round ends when:

當回合結束時：

A) The time expires.

時間耗盡

B) The team captain calls end of round.

隊長要求回合結束

C) The robot returns to the start tile and gets the exit bonus.

機械人截返起點階磚塊及獲得離開得分



## 4. Conflict resolution 衝突的解決

### 4.1 Referee 裁判

4.1.1 During game play, the referees' decisions are final.

比賽期間，裁判享有最終裁定權。

### 4.2 Rule Clarifications 規則解釋

4.2.1 Rule clarifications may be made by members of the International RoboCupJunior Rescue Technical Committee. RCJ拯救國際技術委員享有規則解釋權。

### 4.3 Special Circumstances 特殊情況

4.3.1 Specific modifications to the rules to allow for special circumstances, such as unforeseen problems and/or capabilities of a team's robot, may be agreed upon at the time of the tournament, provided a majority of the contestants agree.

在大多數參賽隊伍同意的前提下，允許在特殊情況下，具體修改規則，例如無法預料的問題和/或隊伍機械人的性能。

## 5. Documentation 文件

### 5.1. Reporting 報告

5.1.1. Each team must bring an electronic presentation (e.g., in PowerPoint or Flash format) and a poster documenting the design, construction and programming of their robot. (For the details of the presentation contents, refer to 5.1.3.)

每隊需要帶備電子簡報(例如：PowerPoint 或 Flash格式)及海報描述機械人的設計、構造和程式。(簡報內容的詳情，參考5.1.3.)

5.1.2. Presentations and/or posters are to be shown to the judges during the scheduled interview session before being put up for viewing by the judges, other teams and the visiting members of the public.

簡報及/或海報將向評審員展示，並需於預定的訪問環節前提交，以讓評審員、其他隊伍及來賓鑒賞。

5.1.3. The presentation should provide information about the team and how they prepared for RoboCupJunior. The information could include:

展示時需提供有關隊伍的資料及隊員為 RoboCupJunior 作準備的情況。資料包括：

Team name; 隊伍名字；

League and Division (primary or secondary);

聯盟及組別(初級或高級)；

Team members' names and (perhaps) their pictures;

隊員姓名及(可能)隊員照片；

Country and city/town where the team members are from;

隊員來自的國家及城市；

Team's school and district;

隊伍所屬學校及地區；

Pictures of the robot prototypes;

機械人藍本的照片；

Information about the robot, including schematics, mechanical drawings and samples of code (programs);

有關機械人的資料；包括原理圖、機械部分的構圖、程式例子；

Any interesting or unusual features of the robot;

機械人的任何有趣或特別之處；



What the team hopes to achieve in robotics.

隊伍希望從機械人學中得到甚麼。

**(Additional guidelines may be provided at the International RCJ Community Forum.)**

附加指引於國家RCJ委員會論壇提供。

5.1.4. Judges will review the presentation and discuss the contents with team members.

裁判將察看展示而且可能與隊伍成員進行交流。

5.1.5. Competitors are requested to provide digital versions of their presentation and poster.

參賽者需要提供數碼版本的描述及海報。

5.1.6. Prizes may be awarded to teams with outstanding presentations.

展示整體表現最傑出的隊伍將獲得獎項。

## 5.2. Sharing 分享

5.2.1. Teams are encouraged to view one another's posters and presentations.

鼓勵各隊參觀其他參賽隊伍的海報及展示。

## 6. Code of Conduct 操行

### 6.1. Fair Play 公平比賽

6.1.1. Robots that cause deliberate or repeated damage to the arena will be disqualified.

機械人故意或重複損壞比賽場地的，取消其比賽資格。

6.1.2. Humans that cause deliberate interference with robots or damage to the arena will be disqualified.

人為地故意干擾其他機械人或是故意損壞比賽場地的，取消肇事者比賽資格。

6.1.3. It is expected that the aim of all teams is to participate fairly.

期望所有參賽隊伍的目標皆為公平的比賽。

### 6.2. Behavior 行爲

6.2.1. Participants should be mindful of other people and their robots when moving around the tournament venue.

參加者應注意其他人及他們的機械人當在比賽場館活動時

6.2.2. Participants are not to enter setup areas of other leagues or other teams, unless expressly invited to do so by team members.

參賽者不可進入其他同盟或其他隊伍的設置區域，除非明確地得到其他隊伍成員的邀請。

6.2.3. Participants who misbehave may be asked to leave the building and risk being disqualified from the tournament.

行爲不端的參賽隊員將被驅逐出場，還將可能被取消比賽資格。

6.2.4. These rules will be enforced at the discretion of the referees, officials, tournament organizers and local law enforcement authorities.

以上規則由裁判、工作人員、比賽主辦方和當地執法機構強制執行。

### 6.3. Mentors 教練

6.3.1. Mentors (teachers, parents, chaperones, **translators** and other adult team members) are not allowed in the student work area.

教練(教師、父母、同伴、**翻譯員**和其他的成人成員)不允許駐足於學生工作區域。



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**6.3.2 The organizers will try to provide** sufficient seating for mentors to remain in a supervisory capacity close to the student work area.

於學生工作區附近，大會將嘗試提供足夠座位給教練，以起監護作用。

**6.3.3. Mentors are not permitted to repair robots or be involved in programming of their team's robots.**

不允許教練修復機械人或是參與編寫程式。

**6.3.4. Mentor interference with robots or referee decisions will result in a warning in the first instance. If this recurs, the team will risk being disqualified.**

教練干擾機械人或裁判的決定，首犯給予警告處分，再犯則可取消該隊比賽資格。

### **6.4. Sharing** 分享

**6.4.1** The understanding that any technological and curricular developments should be shared among the RoboCup and RoboCupJunior participants after the tournament has been a part of world RoboCup competitions.

作為世界 RoboCup 比賽的一部分，大家已達成共識，即賽後參賽者共享技術進步和課程開展情況。

**6.4.2.** Any developments may be published on the RoboCupJunior website after the event.

所有的進展情況賽後均可公佈於 RoboCup Junior 的網站上。

**6.4.3.** This furthers the mission of RoboCupJunior as an educational initiative.

提倡分享的做法進一步加強了 RoboCupJunior 作為一項具有教育意義的公開化活動。

### **6.5. Spirit** 精神

**6.5.1.** It is expected that all participants (students and mentors alike) will respect the RoboCupJunior mission.

期望所有的參與者、學生和教練能尊重 RoboCupJunior 的宗旨。

**6.5.2.** The referees and officials will act within the spirit of the event.

裁判和工作人員的行為應遵守活動精神。

**6.5.3.** It is not whether you win or lose, but how much you learn that counts!

比賽意義不在輸贏，重在學習！

**Note: The English version of these rules shall prevail wherever there is a discrepancy between the English and the Chinese versions.**

注意：本賽規的中英文本如有歧義，概以英文本為準。