Dance Rules (2009)

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by Ian Maud (chair), Amy Eguchi, Martin Bader, Nicola Hughes, Eli Kolberg, Eduardo Pinto, and Li Shi.

Changes from 2008 rules are highlighted in red.

The most important rule for RoboCupJunior Dance is 7.5.3!

These rules to be read in conjunction with Appendix 1: RoboCupJunior (International) Dance – Graz, 2009.

Preface -- RoboCupJunior Dance performance and two categories:

RoboCupJunior Dance encourages teams to create a stage performance with which a robot(s) performs to or with music (1 to 2 min). We have recognized two types within the dance performance -- **Dance** and **Theatre Performance**. The Dance includes performances with which a robot(s) dances to music. Teams are encouraged to synchronize a robot(s) to music. The Theatre Performance includes performances with which a robot(s) acts with music. This also includes a robot(s) playing (i.e., acting or pretending to play) the instruments or singing. In order to accomodate the difference types of performance, we will have two different score sheets for 2009. The score sheets are available here. Teams are encouraged to use the score sheets when preparing their dance or theatre performance.

1. STAGE.

1.1. Size.

1.1.1. See also Appendix 1. When the whole body (main body itself, not including any huge extention from the body) of a robot moves outside the marked boundary of the performance area, it will not disqualified, but receive a score penalty. Human performers may be outside this marked area. Any performance involving a height greater than 4m vertically from the stage floor must be discussed with the judges and permission sought. The boundary of the performance area will be marked with a 50mm black tape line, surrounded by a 20mm red tape line. This will enable programming to be used to identify which side of the boundary a robot finds itself. The floor provided shall be made of flat (non-glossy) white painted MDF (compressed wood fibre). Teams are encouraged to practice on the same flooring type to reduce set-up time at the International competition. While floor joints will be taped to make them as smooth as possible, robots must be prepared for irregularities of up to 3 mm in the floor.

1.1.2. The dance stage will be made available for teams to practice on. In fairness to all teams who may wish to practice, a booking sheet will be used to reserve the stage for short periods of time. Last team practice on stage before performance time starts must fully clean up the stage and clear the stage area at least 3 minutes before the performance start time.

1.2. Lighting.

1.2.1. The organizers may make variable lighting including spotlights available, but teams should not expect the performance area to always be able to be darkened, with direct, intense spotlights available. (Hint: It is recommended that teams design their robots to cope with variations in lighting conditions, as lighting naturally varies from venue to venue. I f necessary, teams should come prepared to calibrate their robots based on the lighting conditions at the venue.)

1.3. Scenery.

1.3.1. Teams are encouraged to provide their own scenery. Organizers will endeavour to provide a projection screen and projector for teams wishing to use images from a digital source (e.g., computer) at the rear of the performance area as part of their performance.

2. ROBOTS.

2.1. Size.

2.1.1. Robots may be of any size.

2.2. Team.

2.2.1. There may be any number of robots on a team.

2.2.2. Each team may perform one and only one routine. The performance of that same routine will be repeated if they proceed to the finals for their division. Some modifications (improvements) of the performance using the same music may be accepted. Please consult with judges if you have any questions regarding performance modications.

2.3. Control.

2.3.1. Robots must be controlled autonomously. No member of the team may make physical contact with the robot while it performs, unless this forms part of the performance and has been discussed and approved by the judges PRIOR to the performance. Robots must also be 'wirefree' in that they must not be connected to a computer or other management device, including power sources, while performing.

2.3.2. Robots may be started by humans, either manually or with remote control. See also 7.1.3.

2.4. Costumes.

2.4.1. Costumes for robots and/or human performers are encouraged, and will be awarded points.

3. ROUTINE.

3.1. Duration.

3.1.1. Each team will have a total of 5 minutes for their presentation. NOTE that this time includes the time for set-up, a possible and encouraged introduction and the performance, including any re-starts due to factors under the team's control. It does not include time needed for packing up and clearing the stage.
3.1.2. The duration of a performance routine is no more than 2 minutes and no less than 1 minute.

3.1.3. If a team exceeds the time limits explained in 3.1.1 and 3.1.2 in any way by reasons that are their only fault, it will be penalized in assessment. The judges will start one clock at the moment a team member steps on the stage for the 5 minutes period, and another clock at the beginning of the music for the 2 minutes performance period.

3.2. Music.

3.2.1. Teams must provide their own audio source (music) in a Compact Disc (CD-R, CD-RW) in one of the following formats: Audio track; MP3 file. These should be the only accepted audio sources with one (and only one!) file or audio track for the entire routine. Music should be given to the sound technicians during a team's practice period. Teams are encouraged to bring more than 2 copies of the CD. Each CD should contain only one copy of the music that the team uses for their performance.

3.2.2. Teams are strongly encouraged to bring a good quality audio source (music) , since their evaluation depends also on the music quality.

3.2.3. The music should commence at the beginning of the audio source (music) , after a silent leader of a few seconds.

3.2.4. The audio source (music) should be clearly labelled with the team's name.

3.3. Humans.

3.3.1. Human team members may perform along with their robots, and will be considered a 'prop.' There is no penalty for humans not performing with their robots.

3.3.2. However, human team members must not touch the robots (except to start them). See 2.3.1.

3.3.3. Human team members may touch a sensor(s) during a performance as a routine of the performance. The team HAS TO indicate and explain the routine to the judges during the interview.

3.4. Start of Routine.

3.4.1. An official will start the music for the routine.

3.4.2. One human team member (or several members if a team uses multiple robots and props) will start each robot, either by hand or remote control. (Hint: Teams are very strongly encouraged to program their robot to begin the routine a few seconds after the music starts. This is because it is extremely difficult to judge precisely when the music will sound after the audio source is started, and it is hard to time the robot's choreography without knowing exactly when the music will begin. Also, depending on the configuration of the dance stage and the sound system at the venue, it is possible that the human starting the robot will not be able to see the official starting the audio source; and vice versa. Teams should come prepared for these conditions.)

3.5. Re-starts and repeats.

3.5.1. Teams are allowed to restart their routine if necessary, at the discretion of the officials. Any re-start, unless due to a problem which is not the fault of the team, will result in a score penalty. A maximum of two re-starts will be allowed. After two re-starts, the team must continue with the penalty or leave the stage.

3.5.2. Teams are allowed to repeat their routine, at the discretion of the officials.

3.6. Security.

3.6.1. In order to avoid hazardous situations such as routines including explosions, smoke or flame, use of water, or other substances that could lead to dangerous situations, each team whose routine includes any situation that could be deemed hazardous, including a situation that damages the stage, must submit a report to the chief judge BEFORE the competition, outlining the content of their dance routine. At his/her discretion, the Chief Judge could request a demonstration of the activity. Teams not conforming to this request may not be allowed to present their routine, at the discretion of the Chief Judge. Wherever possible teams shall avoid the use of mains electricity for any aspect of their performance. If necessary, teams may apply to the Chief Judge PRIOR to performance for exemption from this rule.

4. COMMUNICATION BETWEEN ROBOTS

4.1 Communication between robots is encouraged however only if the source of communication is IR or

BlueTooth. WLAN wireless communication is strongly prohibited with Junior teams since it might interfere with other leagues. Teams with robot communication MUST explain the device as well as program to the judges at the interview. The teams might want to contact the Dance Technical Committee Chairperson, Ian Maud (Australia), at: *icmaud @ stpaulsags.vic.edu.au*. More detailed information regarding BlueTooth communication will be published in the near future.

5. JUDGING. *(previously section 4)*
(Refer also to Appendix 2.)

5.1. Authenticity and Originality.

5.1.1. All teams will be assessed through an interview, and performance of a dance routine. Each team's overall score will be decided by the total of their (best) performance and their interview.

5.1.2. The performance is to be unique. Teams who, in the opinion of the judges, have knowingly produced duplicate robots, costume or performance movement (duplicate music is allowed) will be interviewed by a panel of 3 Dance officials. Penalties for close duplication of another team or reuse of previous year's robots for the same team range from a possible 10% score penalty to a maximum penalty of exclusion from the competition.

5.2. Officials.

Refer to Appendix 1.

5.3. Categories.

5.3.1 Performances will be judged according to the following categories:

- Programming (e.g., use of loops, jumps, sub-routines, type of programming language used, etc)
- Construction (e.g., robots should be of sound construction, components should not fall off, appropriate use of gearing, smooth and reliable operation, interesting movements, effective use of mechanics to achieve a purpose, designing own electronics, etc)
- Using Sensors effectively (e.g., to trigger different parts of the program, for detection of boundary line, etc. This category also includes 'other technologies' apart from sensors. Teams can earn more points for eomplexity and creativity of the sensor use.)
- Choreography (e.g., robots to move in time with music, and change actions as music changes tempo or rhythm. Choreography of humans and robots will be scored separately, etc.)
- Costume (Costume of humans and robots will be scored)
- Entertainment Value (e.g., How much does the performance entertain or delight the audience? Originality and creativity of the presentation, etc.)

5.3.2 Each section might be weighted differently. Teams are encouraged to study the score sheets during their preparation of the performance.

5.3.3 A standard scoresheet will be used for judging the interviews and dance performances: see Appendix 2 for score sheets.

5.4. Awards

5.4.1. Awards will be made to individual teams that achieve the highest total score in the respective categories for:

- Programming;
- Construction;

- Using sensors;
- Choreography;
- Costume; and
- Entertainment Value.

There will be also some special awards for the following categories:

- Collegiality award (the team who, by popular vote, has given the greatest support to other teams) –– this support can be in a number of ways, such as assistance with components, or friendship and encouragement). See 5.5.
- Best poster or best electronic demonstration
- Novice team award –– the primary and the secondary team who place highest in the competition overall, and where ALL members of the team are competing at RCJI for the first time (this does not include a team having team member(s) who has (have) competed in other challenges).

5.4.2. There will be three RCJI Dance Champion teams for the primary section, and three RCJI Dance Champion teams for the secondary section. The winners of each of these two sections are the teams (or group) that achieves the highest total score summing performance in all categories: (Programming, Construction, Using sensors, Choreography, Costume and Entertainment Value, as determined by combining the interview and their best performance score).

5.4.3. Recipients of all awards will be presented with a trophy for their team. Any further awards are at the discretion of the organising committee.

5.4.4. Ties are allowed.

5.4.5. RoboCupJunior is an educational project. In keeping with this, it is important that team members learn from their experiences with RCJI, and have the opportunity to improve for later years if they so choose. The organizers will provide feedback on each team's performance by providing a modified score sheet to each team Captain after presentations are made at the conclusion of competition. This sheet will indicate to the team their areas of strength and also possible improvement, as rated by the event judges. It is important to note that these sheets are not to be used to debate positions, decisions or competition scores with the judges.

5.5. Collegiality.

5.5.1. Each participating team will have one vote to nominate the team that displayed the greatest cooperative interaction with other teams. The score will be calculated by the following equation:

    score = 10 x (number of votes received)/(number of participating teams)

5.5.2. In keeping with the spirit and collegiality aspects of RCJI, a party will be provided by the organizers for all team members, mentors and supporters. It is strongly requested that all such individuals delay their departure sufficiently to attend, even if the party is held after the finals and presentations. The organizers request all team members bring business-sized cards to share with other teams at the party: these cards could include the team's name, the team members' name(s) and contact details, so students can remain in contact with each other after the event. This is optional, but encouraged. It is also requested, but not compulsory, for team members to wear either national dress, or some icon that identifies them with their country. This can be done in a humorous manner, such as an animal mascot from their country or other creative idea.

6. CREATIVITY. *(previously section 5)*

6.1. The Dance challenge is intended to be very open-ended! Teams are encouraged to be as creative and entertaining as they can. Teams who show creativity and innovation will be rewarded by the judges with high point scores in the relevant sections.

7. CODE OF CONDUCT. *(previously section 6)*

7.1. Fair Play.

7.1.1. Humans that in any way cause deliberate interference with robots or damage to the stage will be disqualified, if part of a team. If not part of a team they will be ask to leave the venue.

7.1.2. The team is responsible for removing all debris left from their routine that may interfere with the performance of subsequent activities.

7.1.3. While performing, any robot on stage may communicate with another robot from the same team that is also on stage. Teams should take great care that their use of devices with infrared (IR) or BlueTooth communication does not affect other teams. An exception to this rule is if the communication involves radio frequencies. (No team is permitted to use radio signals as part of their performance or preparation, as this may interfere with robots in other leagues.)

7.1.4. It is expected that the aim of all teams is to participate in a fair and clean competition.

7.1.5. Remember: "Help those in need, demonstrate friendship and cooperation as the spirit of RoboCupJunior and for a better world."

7.2. Behavior.

7.2.1. All movement and behavior is to be of a subdued nature within the tournament venue.

7.2.2. Competitors are not to enter set-up areas of other leagues or other teams, unless expressly invited to do so by team members.

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

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

7.3. Mentors.

Refer to Appendix 1.

7.4. Sharing.

7.4.1. An understanding that has been a part of World RoboCup Competitions is that any technological and curricular developments should be shared with other participants after the competition.

7.4.2. Any developments may be published on the RoboCupJunior Web site after the event.

7.4.3. This furthers the mission of RoboCupJunior as an educational initiative.

7.5. Spirit.

7.5.1. It is expected that all participants, students and mentors, will respect the RoboCupJunior mission. In addition, participants should keep in mind the values and goals of RoboCupJunior. Any presentations that include violent, military, threatening or criminal elements will be excluded. Any team using an inappropriate

name or logo will also be excluded. Participants are asked to carefully consider the wording and messages communicated in their presentations: what seems acceptable to them may be offensive to friends from a different country or culture.

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

7.5.3. It is not whether you win or lose, but how much you learn that counts. You will really lose if you don't take this opportunity to fraternize with students and mentors from all over the world. Remember this is a unique moment!

8. DOCUMENTATION. *(previously section 7)*

8.1.
Refer to Appendix 1.

Queries regarding these rules or their interpretation may be sent to the Chairman of the Technical Committee for Dance, Ian Maud (Australia), at: *icmaud @ stpaulsags.vic.edu.au*.