RoboCupJunior 2012 Dance Interview Score Sheet

Team name…….. Secondary/Primary Judges Initials……

Robot Design & Construction: The appearance and construction of the robot shows… (13 marks)	
Robots are designed and constructed by the students as opposed to using standard kits Commercial robot (eg. AIBO) = 0; Commercial kit (eg. LEGO) = 1-2; Using existing instructions = 3; Own design and hand-built = 4-5. *Note: Significant mentor involvement will cause points reduction.*	/5
Gearing, linkages, pivots, motors (other non-basic features) are used in design and drive mechanisms Reward design for complexity IF it aids robot movement.	/5
Reliable and robust construction and problems of robot balance have been addressed (eg. What have you done to prevent your robot(s) from falling over or breaking if they fall?, How did you stop x from becoming loose during the performance? Have you taken risks with the construction? etc.)	/3
Sub-Total	**/13**
Programming (12 marks) ***Teams must bring a printed copy of all programs used to the technical interview***	
Students can explain, describe and understand their program thoroughly (eg. What does this section of program tell the robot to do? If I changed this part/instruction to become x, what effect would that have on the robot?)	/4
They are able to explain connections between the program and music selected (eg: How do you get your robot to synchronize to music ? If your robot(s) performs in a Theatre style, how is the robot programming related to the music? Limited programming so that robot is vaguely in time with music = 1; Robot programmed in full sync. with the music/performance = 3.)	/3
Complex, innovative or original programming used appropriate to age and level of expertise (eg. Simple commands = 1; Use of jumps/lands, loops, nested sections, creation of own icons or sequences = 2-3; Use of multiple languages/assembler and use of interrupts = 4, innovative programming = 5)	/5
Sub-Total	**/12**
Electronics Hardware & Devices: Boards, Sensors & Other Technologies… (14 marks)	
Understanding of electronics used and design and construction of own electronics Use of kits such as NXT but understanding of its operation (inputs, outputs, power, memory and processor etc.) = 1-2; Some home built circuitry used alongside kits = 2; Teams build owns board and can describe their operation = 3**.** What is the function of each board? How are the voltages regulated? How are motor speed/direction controlled (hardware)? What type of batteries are used?	/3
Effective use of sensors that aid the performance (eg. What types of sensors are on the robot? How do they function? How does the robot know its direction? Is the robot programmed to respond to sensors? Are sensors used to trigger next part of performance. How is the robot programmed to keep within the stage boundaries? How did the robot avoid obstacles or another robot? How effective are the sensors used? How did you place your sensors? Did you encounter interference when the sensors were used? etc.)	/5
Innovative use of other technologies to aid performance (e.g. communication between robots (using IR, Ultrasonic waves or other means) to trigger events, keeping in sync with other robots, novel use of technologies such as RFID, digital camera, built-in timer to monitor duration of performance, construction and control of non-kit servo motors/sensors, etc.)	/6
Sub-Total	**/14**
Team Work and Evidence of Authenticity (6 marks)	
Evidence of authenticity and evolution Teams should bring the A4 summary sheet to the interview to provide a general summary of their robots plus documentation including photographs of different stages of development. Logbook, journal, photographic record or similar documents should be presented to convey ideas tried and discarded, progressive evolution of students' design and original ideas.	/3
They shared the work and collaborated as a team (eg: How did you work as a team? Share the tasks? How did you make decisions? How many were really active in building/programming the robot? How did they solve problems as a team? Did they have sub-teams? Ask how the team has managed to complete multiple tasks. Did they get any help/support from adults or/and friends? If yes, ask what/how.)	/3
Sub-Total	**/6**

Note: Significant mentor involvement will cause points reduction.

TOTALSCORE /45

Keep this team in mind for an award for:

☐ Programming ☐ Construction ☐ Use of Sensors

☐ Choreography ☐ Costume ☐ Entertainment Value ☐ Electronics

Judges Notes