RoboCup EINDHOVEN 2013

CoSpace Theatre and Dance Interview

Team Name: _____ Country: _____	Judge Initial:

SECTION 1: ROBOT DESIGN, CONSTRUCTION AND PROGRAMMING		POINTS
1.1	**Real robot(s) design, construction**	
	▪ *Type of robots:* ✦ Pre-constructed robot = 0; ✦ Robot with a set of building instructions = 1; ✦ Commercial kit or Lego with creative construction = 1 - 2; ✦ Own design and hand-built = 2;	**/2**
	▪ *Mechanical construction and robot reliability:* ✦ Reward design for complexity if it aids robot movement, such as gearing, linkages, pivots, motors are used in design and drive mechanisms ✦ Reward for mechanism designed for robot reliability (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**
1.2	**Electronic hardware, sensors and other technologies**	
	▪ *Electronic hardware* ✦ Use of commercial kit, such as Lego NXT, but understanding of its operation (eg. Input, output, power, memory, processor, etc) ✦ Home built circuitry and able to describe their operation (eg. Functions of each board, voltage regulatory, motor speed adjustment, etc)	**/2**
	▪ *Effective use of sensors* ✦ Able to install sensors on the robot and understand their function and operation (eg. Type of sensors used, Working principal, etc.) ✦ Able to use sensors creatively and effectively (eg. Use sensor to detect boundary, to avoid obstacles, etc)	**/3**
1.3	**Programming**	
	▪ *Complex, innovative or original programming used appropriate to age and level of expertise* ✦ Using loops, interrupt, etc…	**/3**
	▪ *Students can explain, describe and understand their program thoroughly* ✦ Able to describe what this section of program tells the robot to do and modify it as per request.	**/2**
1.4	**Innovation**	
	▪ *Reward any innovation in real robot design such as structure, and Innovative use of other technologies to aid performance*	**/2**
	Sub-total	**/17**

SECTION 2: VIRTUAL ROBOT DESIGN AND PROGRAMMING		POINTS
2.1	**Virtual Robot(s) Design**	
	▪ *Type of virtual robot* ✦ How many different types of robots, Wheeled robot?, Humanoid Robot ?, Both ? ✦ Was the design original and innovative? Does it fit into the theatre performance creatively?	**/3**
2.2	**Programming**	
	▪ *Program each robot to fit in the theatre performance.* ✦ How do you program each robot according to its role in the Theatre performance? How do you solve the problems encountered?	**/5**
	▪ *Complex, innovative or original programming used appropriate to age group* ✦ Create innovative movement of both wheeled and humanoid robots. ✦ Address the robot balancing, especially humanoid robot dancing.	
	▪ *Students can explain, describe and understand their program thoroughly* ✦ Able to describe what this section of program tells the robot to do and modify it as per request.	**/2**
	Sub-total	**/10**
SECTION 3: VIRTUAL ENVIRONMENT DESIGN		**POINTS**
3.1	**3D virtual environment design**	
	✦ The 3D props are original and creative (eg. Teams developed 3D models instead of taking from library) ✦ The 3D environment include 3D models, audio, video, They are creatively embedded into the virtual world. ✦ The virtual environment matches the theme of the performance. The overall layout presents a piece of artwork	**/5**
3.2	**Drama Editor**	
	✦ How scenes were shot and composed. Reward to the creative use of camera and lighting (eg. use disco light creatively, zoom-in, zoom-out to realize the scene in accordance with the theatre performance.) ✦ How scenes were edited? Reward to the complex sequence designed. Eg. creative use of music, video, virtual/virtual communication, virtual/real communication, real robots, virtual robots, etc)	**/5**
	Sub-total	**/10**
SECTION 4: COMMUNICATION		**POINTS**
4.1	✦ Understand and able to configure the communication ✦ Able to establish the communicate between virtual robots/real robots/virtual objects	
	Sub-total	**/4**
SECTION 5: EVIDENCE OF AUTHENTICITY		**POINTS**
5.1	✦ Photographs of different stages of development; Logbook; journal; photographic record or similar documents ✦ Students successfully address problems they have faced (eg. How did you stop x from becoming loose during the performance? What have you done to prevent your robot(s) from falling over, or breaking if they fall?, how did you design the virtual robot, etc.) ✦ Mentor involvement (Max points will be deducted)	
	Sub-total	**/4**

Total Score: /45