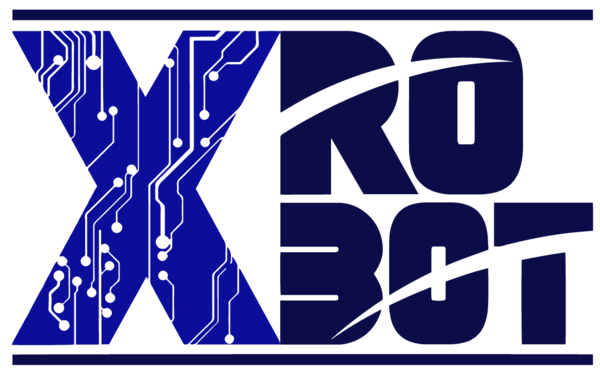
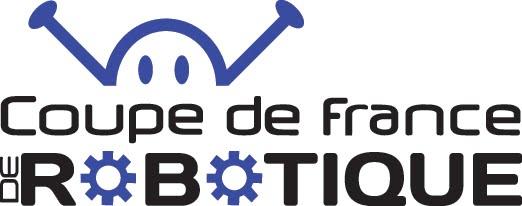
**System requirement specification R3**

**Robot**

**deadline 15th May**

****

****

**1 – Design**

|  |  |
| --- | --- |
| REQU 1 | The robot shell shall have covers |
| REQU 2 | The robot shall not have any exposed electronic boards |
| REQU 3 | The robot shall not have any exposed internal wire |
| REQU 4 | The robot shall have the logo of Exotech on one of the covers |
| REQU 5 | The robot shall have a 100\*70mm free space on one of the covers (logo of the cup) |
| REQU 6 | The robot shall have a screen to display the score |
| REQU 7 | The robot shall have an elegant design |

**2 – Acting on the goldenium**

|  |  |
| --- | --- |
| REQU 8 | The robot shall have an actuator to push the blueium into the “particle accelerator” |
| REQU 9 | The robot shall have a mechanism to grab the goldenium from his mount. |
| REQU 10 | The robot shall be able to hold the goldenium during a movement |
| REQU 11 | The robot shall have a mechanism to release the goldenium on the weighing scale |

**3 – Acting on other atoms**

|  |  |
| --- | --- |
| REQU 12 | The robot shall be able to start the movement on a horizontal plane of any atom that is 350mm away from any edge. |
| REQU 13 | The movement of the atom shall be straight or along curves with a radius or curvature more than 150mm |
| REQU 14 | The robot shall be able to finish the movement on a horizontal plane of any atom to a destination that is 100mm away from any corner. |
| REQU 15 | The robot shall be able to move up to 3 blueium atoms (3\*170=510g) or any combination of atoms that is less than 500g |
| REQU 16 | The atoms being moved shall be brought inside a precise box, at least partially. |

**4 – Making an experiment**

|  |  |
| --- | --- |
| REQU 17 | The experiment area shall fits within the maximal dimensions (222\*450mm and 200mm high) |
| REQU 18 | The experiment shall not weigh more than 2,5kg |
| REQU 19 | The electron shall be maximum 120\*120\*120mm |
| REQU 20 | The electron, the string and the binding shall weigh less than 600g |
| REQU 21 | The electron shall be initially fully vertically above the experiment area. |
| REQU 22 | The electron shall be in the end of the experiment less than 50mm away from the mast. |
| REQU 23 | The robot shall be able to position for the experiment |
| REQU 24 | The experiment shall be launched by the robot during the match. |
| REQU 25 | The activated experiment shall be visible for the public. |
| REQU 26 | The robot shall be able to position for the experiment |