

Student Report from Brunei Darussalam



**By Mas Zaki Bin Puncak
National Diploma in Instrument Control Engineering
Jefri Bokiah College of Engineering
or Maktab Kejuruteraan Jefri Bolkihah
Brunei Darussalam**

This is my second time participated the ABU Robocon project. The project is very tough however it is good experience and good opportunity for me and other team members to learn how to design robot to achieve the target. In our college, the Students were selected without any knowledge of making robots. The selection was based on the student's patient, determination and wiling to sacrifice their time for participate the project.

There were many students interested with this project. During the first meeting 30 students attending and the meeting was chaired by our instructor. The instructor briefly explain about the Robocon project and he also explained about the number of student were going to be selected. It will be seven students are going to be selected. The selection was based on the attitude, commitment and willing to learn. Our first task given by the instructor was to find the concept or strategy on the robot operation to achieve the target. During the first meeting we also watched a movie about this year Robocon theme and also previous movie of making of Robocon which done by previous students. The project meeting was done after the college hour to avoid any class

interruption. The team has to work really hard after normal working hours. Discipline and commitment are very important for every team members.

We have to sacrifice our time to work on the project after college hour. It was noticed that because of the time frame some group of students were not able to continue the project. If there were more than seven students, there will be simple competition to see performance and knowledge on group of student.

It took almost 1 month to select the team members. Once the team was formed, the instructor divided the task need to be done by the team members. My task was to learn and write a program, which will control the robot operation. Other task such as design a robot, marking electronic and control circuit were given to other members. I took one month to learn and understand how to program the robot. This year, we don't design a lot of electronic circuit. This is because we use back the circuit from previous team. Most of the time, we spent our time on design and building the robot. Since we are from electrical background, we don't have skill on the design mechanical part for the robot. We always facing problem on movement of mechanical part. Till now, our robot movement was not very smooth. It moved much toward to left or right when it program to move in forward direction. This is because of our mechanical part is not properly fixed such robot tires. We are not using a proper tool to design the mechanical part, we only use a simple to tool that is by our hand to make the part.

This is the fifth time Brunei Darussalam participated for the ABU Robocon contest. Every year, the Step Centre department which is under ministry of education with cooperation from Radio Television Brunei RTB will organised local contest for selecting the Brunei Darussalam's representative. Over the year, there are only two colleges took the challenge to participate this project that is Maktab Teknik Sultan Saiful Rizal and our team from Maktab Kejuruteraan Jefri Bolkiah.

This year our team from Maktab Kejuruteraan Jefri Bolkiah is the only team took up the tough challenge to undertake the ABU Robocon project from absolute scratch. This is no another institution made the attempt to build robots for the contest and therefore we had no local selection contest and MKJB automatically selected to represent Brunei Darussalam for ABU Robocon.

Since there is no local contest, there is no game field provided. We need to build the game field by our self for testing the robots. All the materials used were from previous field game. However, we only able to design the game field half size of the actual field. We used this field and islands with pearls that were purchased by the Step Centre for the testing robots.

During the competition in Hanoi, we notice our game field is bit different with the actual game field. Especially, the paint we used on our game field was not similar to the actual game field. We need to adjust our sensor to response the color of the actual field. And also we notice our tires were not grip with floor of actual game field. The floor of actual game field is very hard compare to our game field. We have to reduce the speed of our robot movement to make it less slippery otherwise our robot will easily move out form line tracing.

Our team name is still using the same team name that is SAMOT. The SAMOT 2007 is being supervised by five instructors and comprises seven main student members.



The Hanoi Robocon was very well organized. The Robocon theme is well design and very interesting. The organizer has provided completed game field at pit area for participants to test their robot. Even though game field need to be share by all the participants, we still manage to test our robot to make it work properly. The organizer gave plenty of time for participant to finally test their robot. We are very appreciated with the organizer.

The accommodation provide by the organizer is very good and comfortable. We will never forget with our trip to Ha long Bay, it is beautiful place. We enjoy the food serve at the boat and visit the caves. The important thing I have notice that, the Hanoi people are very friendly and very helpful especially the team assistance.

From this project, I have learnt a lot especially to discipline myself to work hard to achieve the target. I like to learn more detail on programming the robot. So far I have used low level programming to program the robot. Now I want to upgrade my self to learn more advance language of program and learn more about design robot.

This project is very important for Brunei Darussalam which it encouraged competitiveness of local students as well as increased competitiveness of Brunei Darussalam, internationally, in the field of robotic.

I hope that our junior will work hard and commit them self to the project when there are selected to be the team members. It is the opportunity for them to learn marking of robot. Not just marking robot, they will also learn on teamwork, knowing more about their friendship and also organize the activity by them self. This opportunity also put them self-esteem to represent their country. Thank you ABU Robocon.