BREACH WARS

—Face the worst enemy you can ever face; YOURSELF

A long time ago, in a galaxy cluster far, far away….

Two galaxies collided forming a wormhole which leads to the existence of two alternate realities in the same universe, the past and present collided in Sparta. One of the realities was that in of the great king of Sparta, Menelaus was betrayed and the other in which his mirror was yet to be betrayed by his wife, Helen. He was longing to get Helen back. Seizing this opportunity, the king Menelaus of future under the influence of the God of death Hades, decided to steal Helen from the king of present. He stole and trapped her. When king Menelaus of the present came to know about this, he waged a war on his future self and sought help from Zeus. This war was the fiercest of wars that ever took place. Both empires fighting neck to neck to get Helen back, each of them trying to kill each other. Since both were actually the same person, both had the same strategies and there was an equal chance of both of them winning. Both of the kings knew everything the opponent might do to win. They couldn't force themselves into the others castle. So, both of them planned to breach into fortress. They planned to use an invisible ship code named Trojan Horse to sneak the greatest weapon of all time Achilles into the enemy's castle. But anything having an energy source could be detected and would not be able to get into the war zone. Achilles could only be detonated and diffused by Menelaus.

This is war with your greatest enemy, yourself. Only the one who has the force by his side would win. You are the player in this raging war, can you take your revenge. Destruction is your only option. Do you have what it takes to beat yourself, the greatest enemy one can face? Only the worthy shall win.

May the Force be with you while you stand, where troy once stood!!

TASK DESCRIPTION

You as God Zeus/Hades have to control Menelaus (*robot 1*) and lead him to win this battle. You have to cross the forest of doom which has traps and if any wall is touched you will be cursed. To heal yourself you will lose points. You will find an ancient weapon named Achilles in a village inside the forest. Then you will have to get out of the forest. You will find the Trojan Horse (*robot 2*) at the end of the forest. You have to place Achilles on the Trojan Horse and have to send it into the river. You will have two choices, either to ensure that the horse passes the river, you will have to pass through the desert of death but you will lose precious points or you can use the force to push it off the hill and can cross through the forest and over the galactic bridge to reach the war zone at the cost of time. You will then have to get Achilles back from Trojan horse once you reach the war zone and deploy it into the opponent's area somehow. You also have to save yourself and get back Helen. If ever you get caught in the enemy's zone of war, you can teleport yourself back to your temple marked by the circle in your area. But remember if you have Achilles with you, it will teleport back with you. But a weapon of such intensity is too dangerous of course for your opponent but can create havoc for you as well if improperly handled and thus if left alone can detonate your part too unless reactivated by Menelaus within time. At the end of time (3 min) both bombs will detonate wherever they are.

1) TROJAN HORSE

-Transfer Achilles to the War Zone

-Secure Helen from War Zone after the war.

2.) MENELAUS

-Find Achilles and direct him to the Trojan Horse.

-Push Trojan Horse to the start of slope.

-Smuggle Achilles to the opponent's zone after getting it from Trojan horse.

-Take Helen and keep her on Trojan Horse.

RULES AND REGULATION

1.) Opponents will keep the block (Achilles) (*see fig-11/12*) given by the referee in opponents arena in the village (*see fig-2*).Three other hollow blocks (*see fig-13*) will be given to hide the block(Achilles). Separate time (20-seconds) will be given to both teams at the start of the game to do this.

2.) If Achilles falls in the river zone (*see fig-2*), it will be considered as damaged until it is retrieved by Menelaus.

3.) The time required for detonation of Achilles will depend on the place where it is placed
> War zone - 15 sec
> Bridge/desert - 15 sec
> Village/forest - 20 sec

4.) There are two Achilles (one for each team). Once Achilles reaches war zone any Achilles can be used by either teams.

5.) Achilles will reactivate when picked by Menelaus.

6.) There are Block holes before the desert of death and to enter the desert of death, the teams have to fill them with blocks provided in the quicksand zone . At least one block has to be placed before passing through the desert.

8.) Trojan Horse must not have any powered actuators and it must obtain its motion through Menelaus (e.g. pushing). Contact between Menelaus and Trojan Horse is allowed.

9.) Menelaus will be declared as caught if it gets touched by the opponent Menelaus inside the opponent's part.

10.) There are points for keeping Melanus and Trojan Horse alive at the end of the game.

11.) Trojan horse is declared destroyed if any of the bombs detonate in the corresponding arena.

12.) The game will end if either of the teams successfully acquires Helen i.e. puts her on the Trojan Horse.

13.) At the end of the game/time, both bombs (if still active) will detonate irrespective of their position with the exception of river and thus half of the arena that they are in also gets destroyed along with the bots in that half. Thus teams must try to get rid of their bomb before the time ends.

14.) The pentagonal base on which Helen is standing is shielded from any blasts thus Helen will remain safe till she is on it. But once she leaves the base, she is also vulnerable to blasts. If Helen dies, the points associated with it also are lost.

RESTART/RETRY POSITIONS

In case of any problem or violation teams can take retry or can be asked to take a retry. The retry positions for the bots are:

1) Trojan Horse
- Trojan Horse Start Position

2) Menelaus
- Temple   (before getting Achilles)
- Village   (after getting Achilles)
- Quicksand (after keeping at least a block)
- Temple in the war zone (After reaching the war zone or if it gets caught opponent in opponent arena)

CAUTIONS IN ROBOT DESIGN AND DEVELOPMENT

1. While starting at manual start zone the manual must fit in a box of 300*300*500mm (L*B*H) and for auto-bot its 200*200*200mm.
2. If any of the machines uses an externally placed power supply, the external power supply is not included in the size constraint. However in case of on-board power supply, the machine along with the power supply should fit in the above mentioned dimension box.
3. The machine must use only mechanical power or mechanical power converted from a source of electrical energy.
4. In case of electric power supply, the voltage at any point must be lower or equal to 24V DC during the game.
5. The organizers will provide a standard 230V/50Hz AC power supply. Any eliminator, adaptor, etc. required will have to be arranged by participants themselves. No special demand will be entertained.
6. The manual robot must be controlled by wired remote control mechanism at all stages of game. In case of wired mechanism the wire must be bundled and it must come from a height of 250 mm from ground at all point of time during the game.
7. The machine should not leave spare parts in the arena at any stage. This can lead to a time penalty or may even lead to disqualification.
8. Devices like hot air balloons/rockets which assist the machine in movement in any way are not permitted. Although air pressure up to 6 bars can be pre stored for use.
9. The max weight of manual bot can be 10 kg and that of autonomous bot can be 5kg.

DECISIONS AND DISCREPANCIES

1.) If referee sees any intention or action to cause damage to the opponent a warning will be given, points will be detected, a restart can be given to either team, a rematch might be conducted; match can be stopped and may even lead to disqualification.

2.) All decisions made by the referee will be final.

3.) Unintentional temporary damage to a bot might be considered and rematch can be conducted based on what the referee decides.

4.) Any permanent damage caused unintentionally during the match will not be entertained, the robots must be robust.

5.) In case of a tie, a tie breaker will be revealed on the spot by the referee.

VIOLATIONS AND PENALTIES

1. 5 Points will be deducted if Menelaus touches any tree (wall) in the forest or takes a retry.

2. A team can take a retry if Achilles falls in the river during transportation from the Trojan Horse without any points deduction.

3. Other than that the teams can take a retry at any point in game at the cost of 5 points.

POINTS

1. First part of Forest Crossing by Menelaus - 20
2. Achilles extraction by Menelaus from Village- 30
3. Achilles placing on Trojan Horse by Menelaus - 10
4. Second part of Forest crossing by Menelaus after placing Achilles - 10
5. Trojan Horse crossing the Scamander river- 30
6. Menelaus crossing via Desert of death/Bridge of Time- 20
7. Achilles retrieval from Trojan Horse - 10
8. Helen - 50
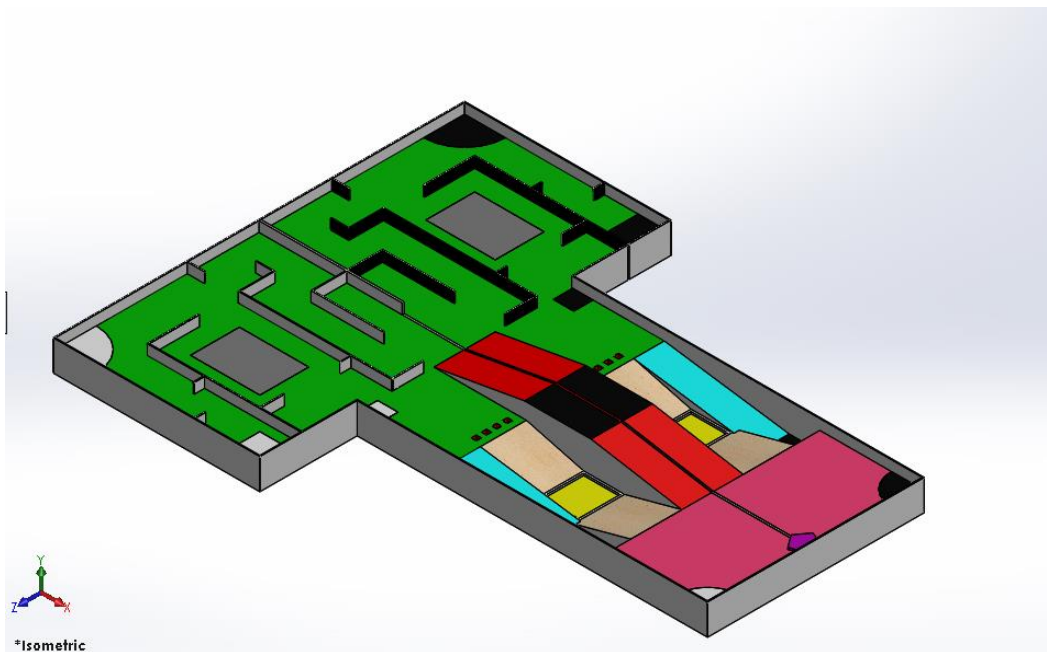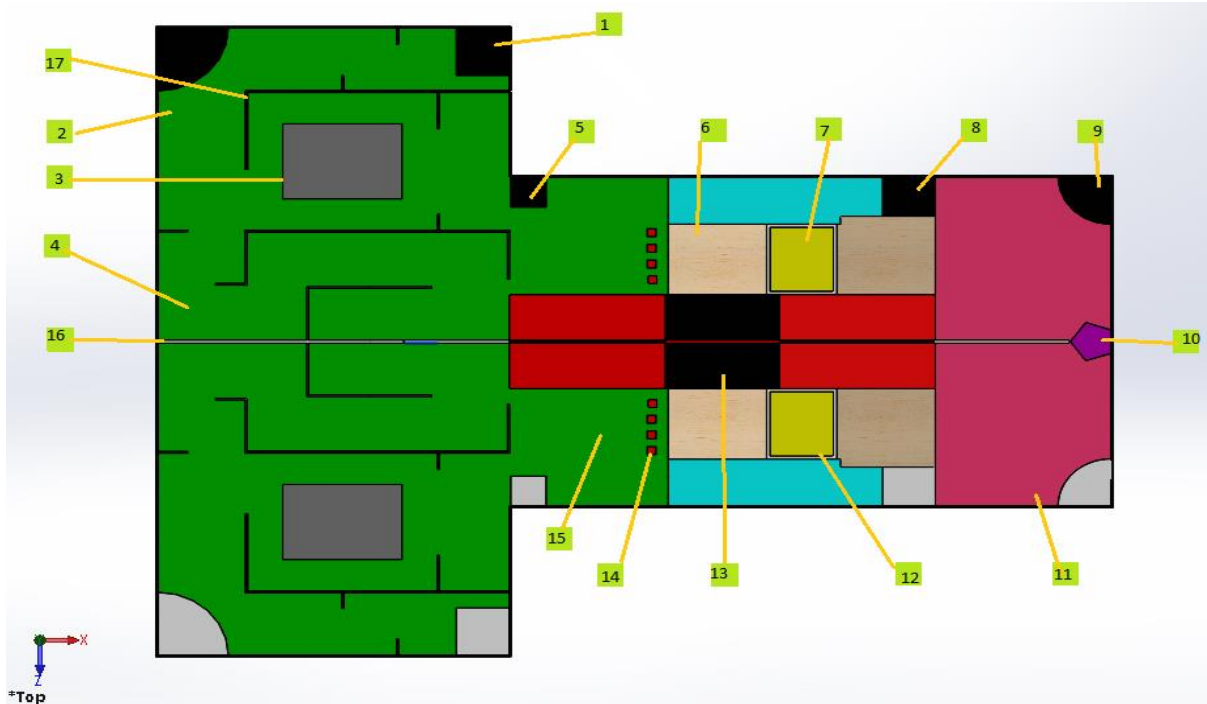9. Trojan Horse life POINTS - 30
10. Menelaus life POINTS – 50

ARENA

ISOMETRIC VIEW

Fig 1

Fig 2

FEATURES MARKED

1. Melenus start zone
2. First part of the forest
3. Village of Achilles
4. Second part of the forest
5. Trojan horse start zone
6. The desert valley
7. Desert of Death
8. Trojan horse destination
9. Temple in the warzone
10. Helen's prison
11. Warzone
12. Desert of death
13. Intergalactic Bridge
14. Block holes
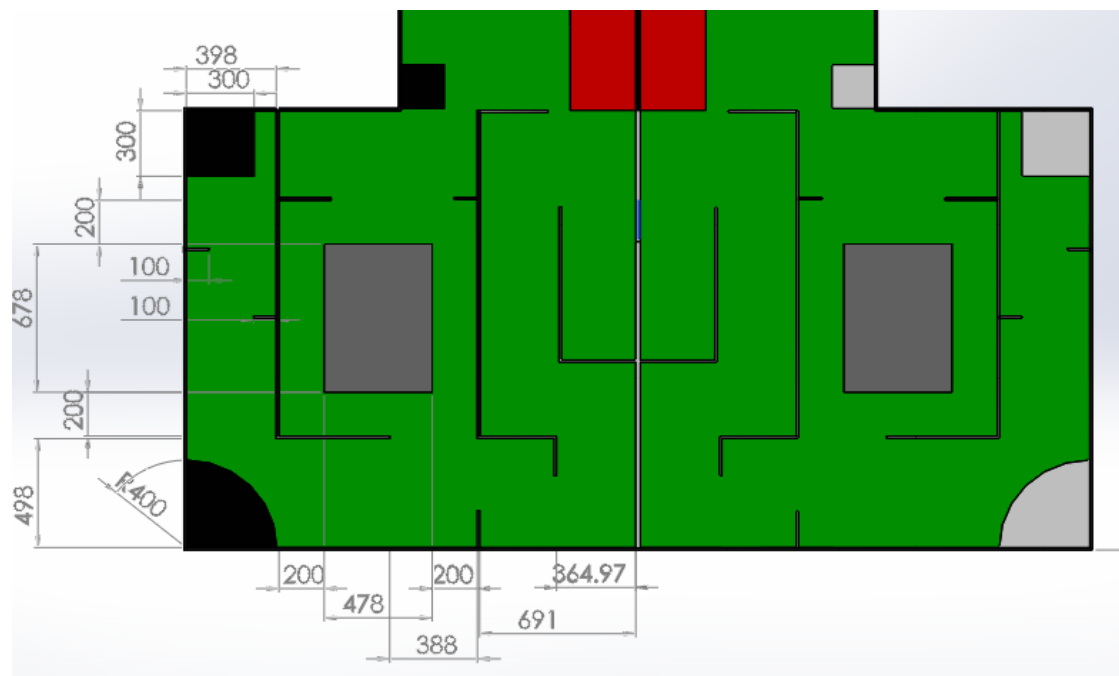15. Quicksand zone
16. Parting wall
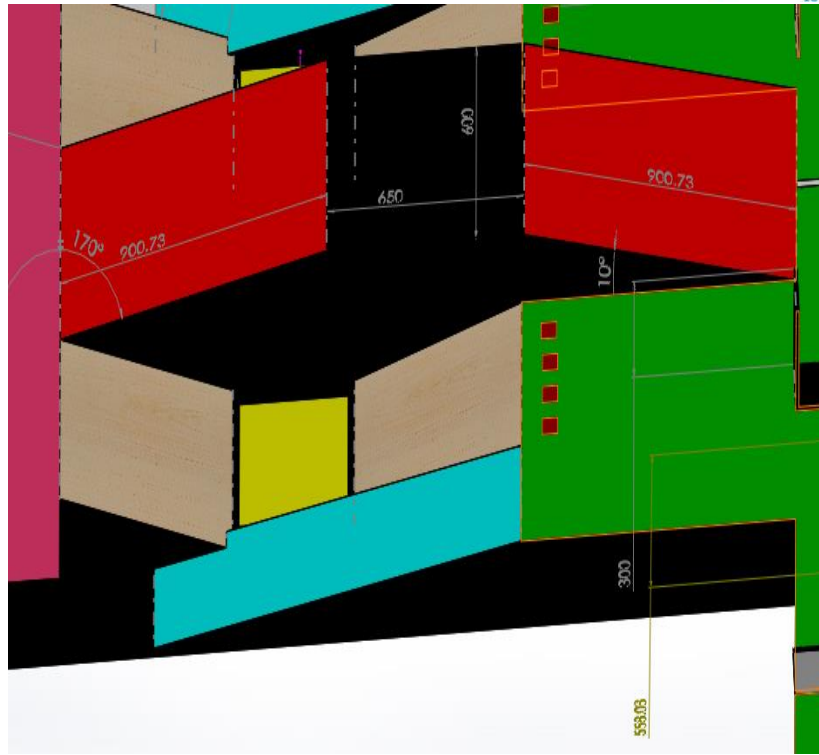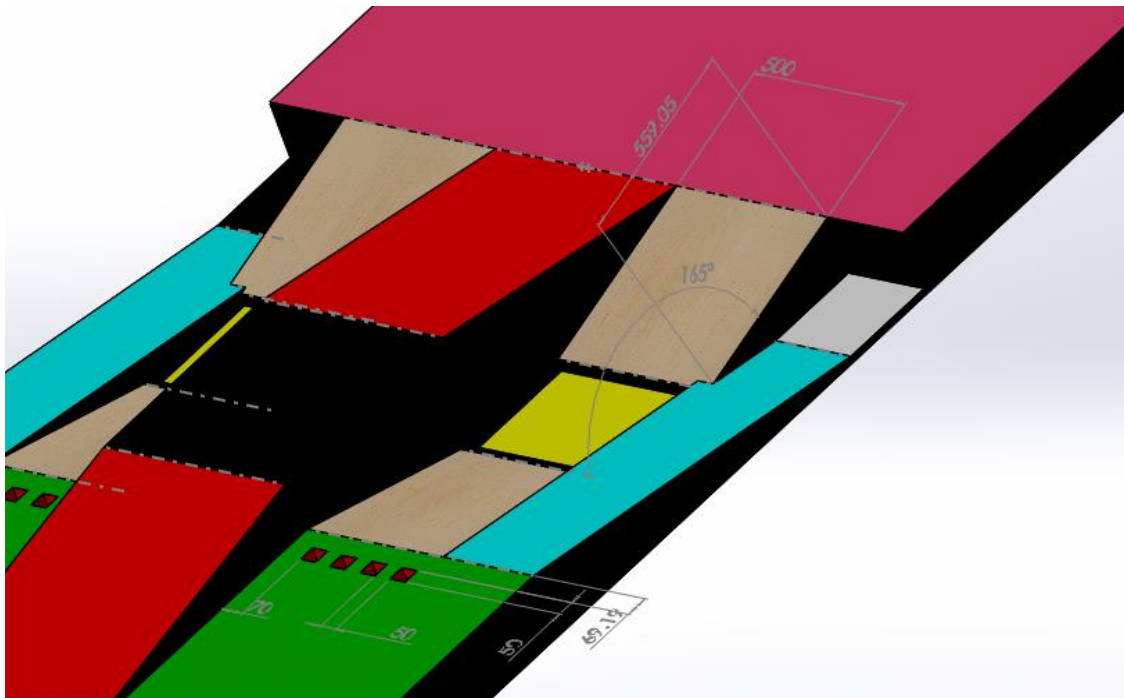17. Maze walls
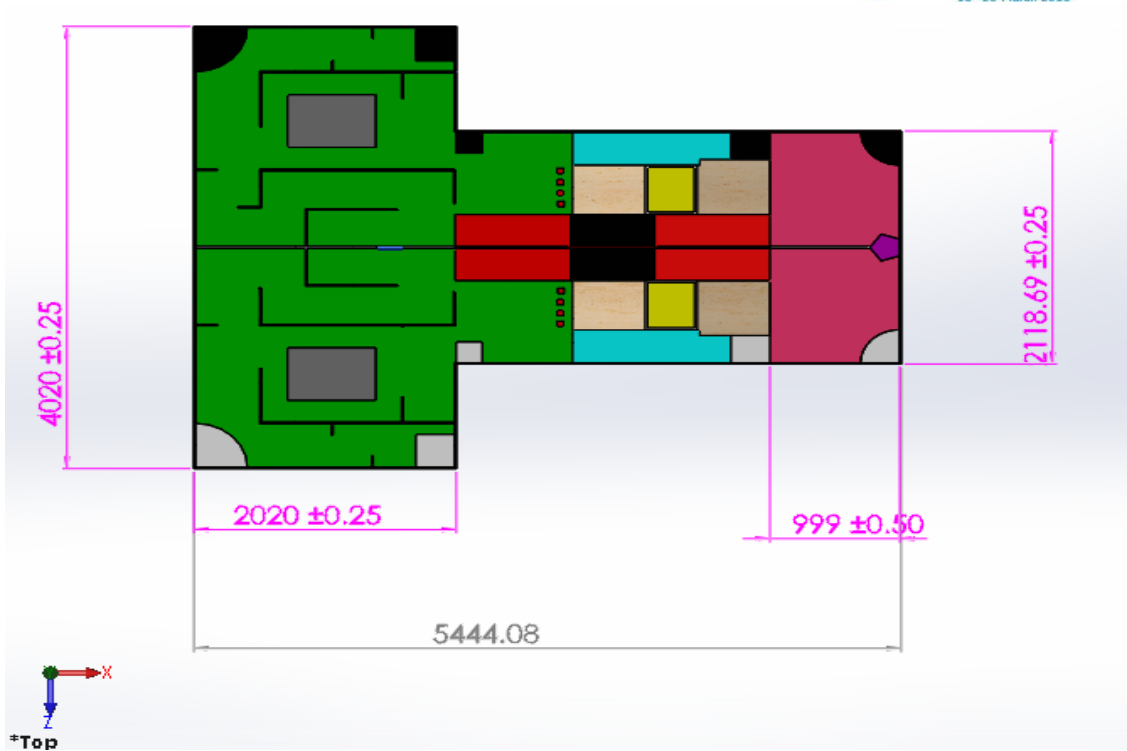
Fig 3

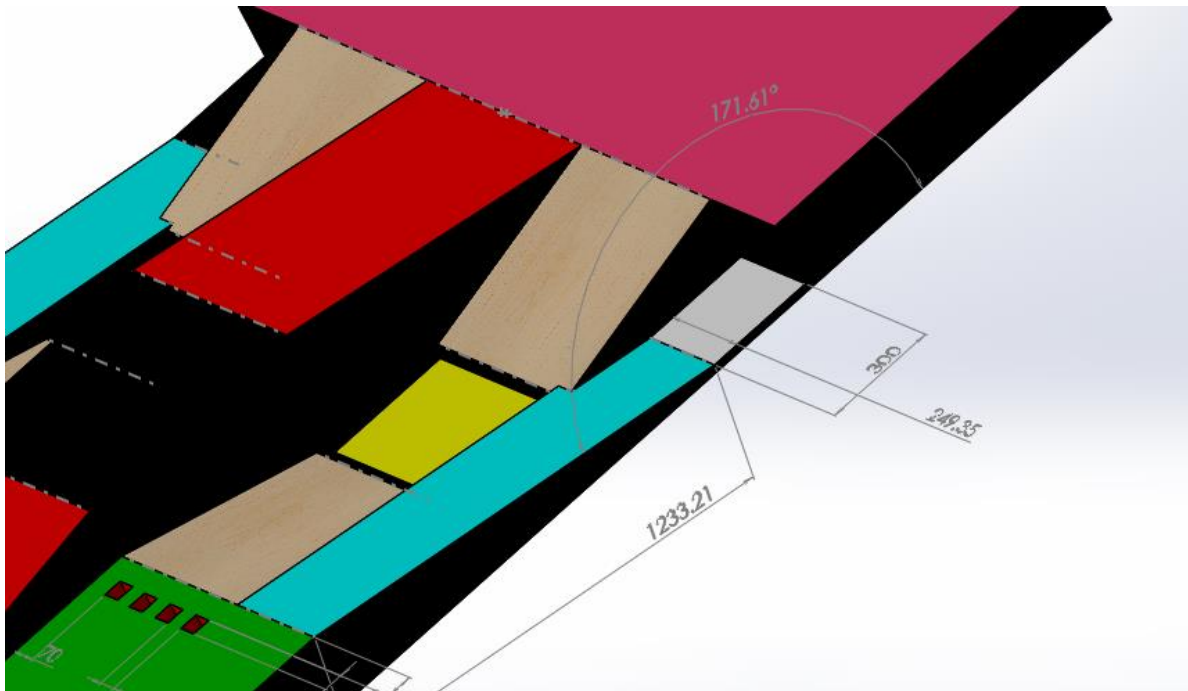*Fig 4*

Fig 5

Fig 6

Fig 7
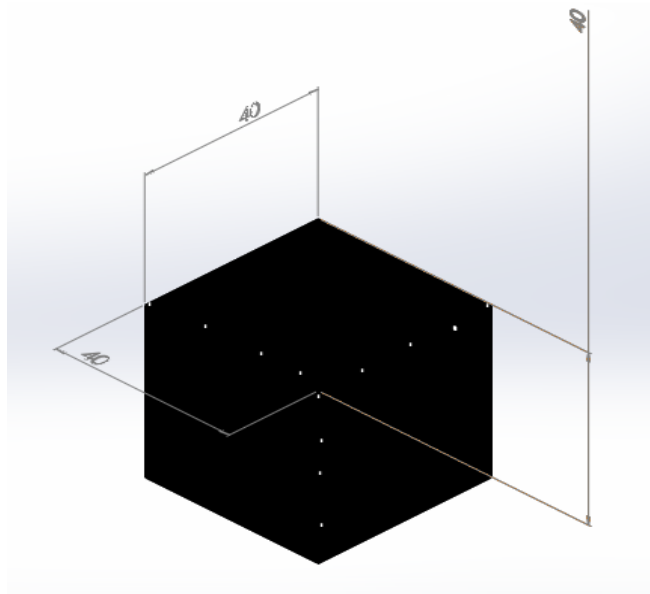

Fig 8

Fig 9

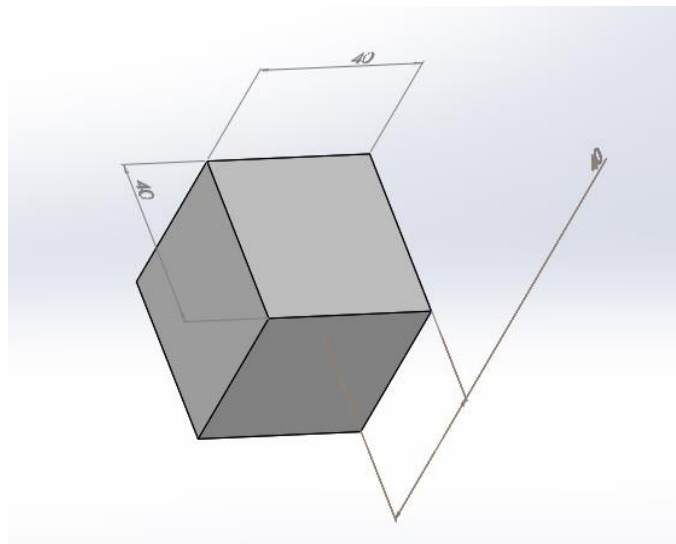*Fig 10*

Fig 11 (Achilles for Hades team)
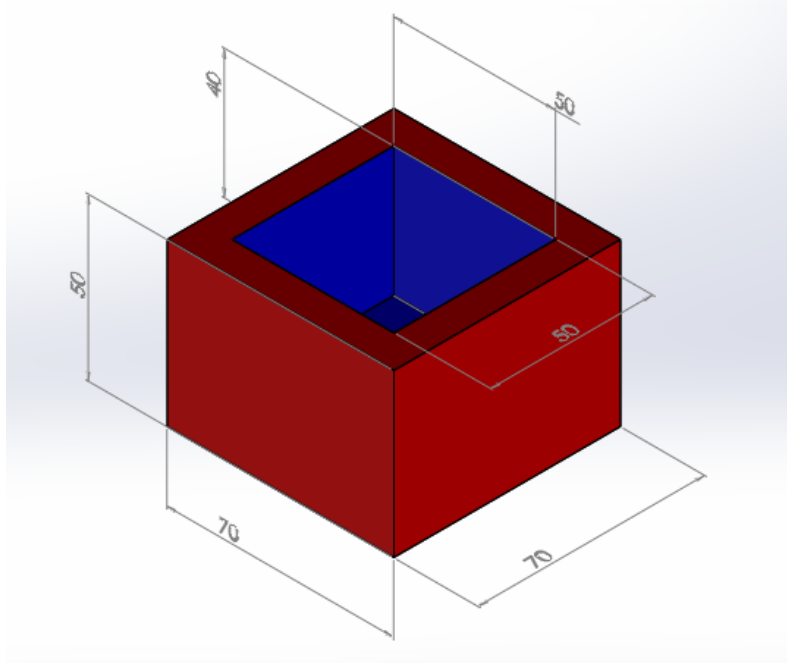

Fig 12 (Achilles for Zeus team).

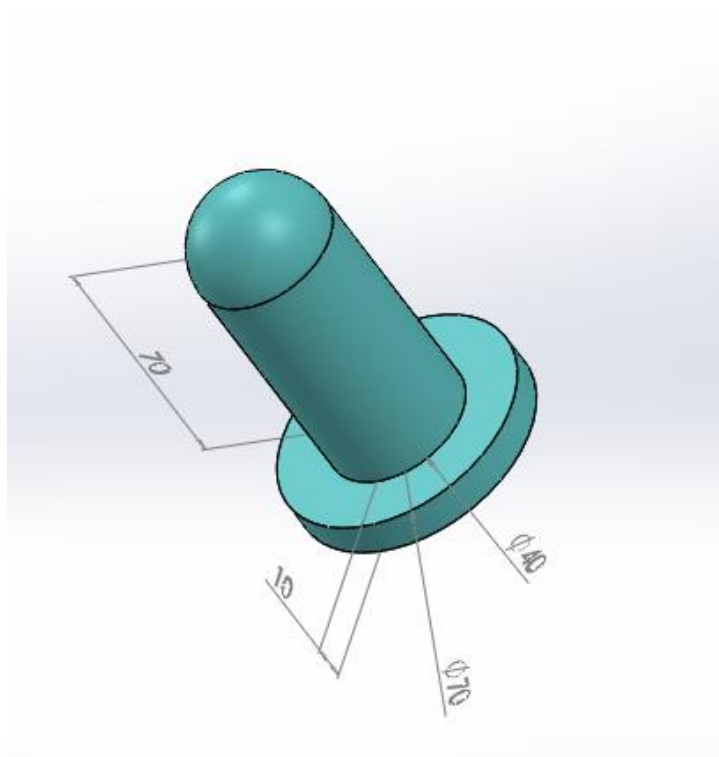*Fig 13 (one of the three Shell for hiding achilles)*
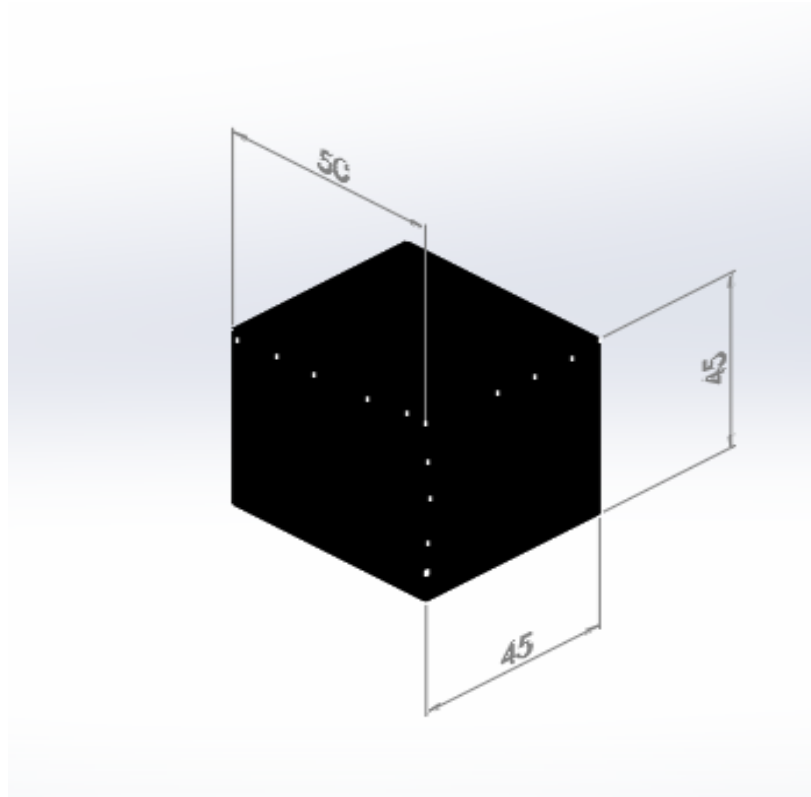

Fig 14 (Helen)

Fig 15 (Block kept inside)

VIOLATIONS AND DISQUALIFICATION

1. -No team is allowed to hinder the **functioning** of robots of opponent's team. Failing to do so will straight away lead to disqualification.

2. -No team is allowed to touch the robots of opponent's team. Failing to do so will straight away lead to disqualification.

3. -During the match, the team members are not allowed to touch the machine or the arena without permission of referee. Failure to do so will lead to disqualification.

4. Any kind of damage to the arena will attract disqualification.

5. -The teams will be asked to get ready 15 minutes before the start of their match. If a team is not ready within the stipulated time, the other team will be declared as the winner.

6. In any case, the decision of the judges will be final if they feel that any team is not playing with fair interest.

GENERAL RULES

1. -All the students enrolled in high school, undergraduate, postgraduate (excluding PhD.) program at any recognized institute (identity card will be checked) are eligible to participate.

2. -A team can consist of a maximum of 5 members.

3. -Each team must declare a name for their team at the time of competition.

4. -The machines you build will be first checked for size and safety. The machine should not cause electric power breakdowns.

5. -The machine must not contain any combustible, corrosive, or otherwise dangerous materials for safety reasons. No explosive compression or decompression, either internal or external is permitted.

6. -Judges have the right to disqualify any machine whose working mechanism or game strategy is considered hazardous in any way.

7. -In case any kind of dispute arises the judges' decision will be considered final and binding to all and no argument will be entertained.

NOTE: ANY RULE IS SUBJECT TO CHANGE DURING THE EVENT SUCH AS LENGTH OF THE GAME OR INCREASING OR DECREASING THE NUMBER OF OBJECTS, ETC. TO INSERT AN ELEMENT OF INTEREST IN THE GAME MAKING SURE IT IS FAIR TO ALL THE TEAMS.

ABSTRACT SUBMISSION

1. -The abstract should contain a brief description of your game strategy and robot design. The key components and their use must be described. If possible attach some photographs of your bot (or upload a video on YouTube and paste its link). The power supply and its network must be described well.

2. -The abstract should be a word document file.

3. -The abstract must contain full details (including contact information) of all the members of the participating team with team leader's name highlighted.

4. -Last date of abstract submission is **20th February, 2016**.

5. -Teams would be shortlisted on the basis of abstract submitted.

6. -Shortlisted teams Id would be put on the website on **28th February, 2015**.

REGISTRATION PROCEDURE

The registration shall be done through the Cognizance website.

1. Each Member needs to register on the website. This will generate a unique **Cogni id**, after email verification.

2. The **Team Leader** (which you will select yourself) needs to login into the website through his username and password.

3. The 'Breach Wars' event, **under the Robotics** page, has the tab 'Register' to register the team for the event.
4. Enter the **Cogni id** of team leader and other members of the team.

5. This will generate your Team Id and a mail shall be sent to the mail id of team leader about the registration.

Submit your entries and mail your queries to breachwars@cognizance.org.in
Note: Keep looking for updates and tutorials at cognizance website.