**Static Camera Feasibility:**

In the football field, there are 5 embedded IP cameras. If we examine it in terms of items, they can be divided into subtopics such as;

* These cameras have two layers security system. The first layer is password and username. The second layer is to connect to router. Unfortunately, the second system will not be eliminated as we discussed. We have to be connected to this router to get data.
* The cameras have 4K resolution and 3 different view axis; azimuth, elevation and roll. The reduce of resolution is possible to reduce processing time. On the other hand, we will need internal parameters to control these axis and this information is accepted as internal (it means it have to be shared by company). Dr. Omur Arslan has already this information he needs to get an approval by Bosch to share us. It can takes time !!!!!
* The images can be taken with using python-openCV and all of the team members have already basic knowledge on this topic.
* Position information can be obtained by processing images from static cameras. Position information can be resolved by more traditional methods such as interpolation, or by newer methods such as neural networking. The important point is that we will need a lots of data from the football match to use NN. The traditional methods can be much more easier.

The proposal suggestion is to transmit the position information obtained by image processing to the simulation developed in previous year and to detect rule violations with this method.