The remit of the team

Problem

Strictly does not need to help the competition.

Mainly embedded

Modest goals

Ideal goals

A very difficult environment would be a hall of people in RoboCup.

Machine-learning and binaural

Explain the methods briefly

Inituitive and naive

Similar to convolution

Peak

Complexity is N^2

FFT can simplify to Nlog(N)

PHAT can improve

The sample period

Peak at zero

One of the few examples that can estimate distance

Some other techniques

Paper says that it is reasonably accurate

Traditional

Steering

Cross-correlations can be used.

Spatial filter

Directions, Multiple signals

SRP-PHAT

Grid

Particle filter

Fine grid

Errors

Not considered much

Subspaces

Kinds

Resolution and computation

Decomposition

Subspaces

Similar to beamforming

Quick example

Real-time

Equations

Iterative algorithm

Not very good since it tends to fail a lot

Full coordinates

GCC-PHAT problem

Grid

Only a coarse grid is used

Resolution is affected

Around 30 papers considered.

Had not had as much simulations as hoped.

In winter, the simulations will be done.

Choose a method.

Realistic environment.

In the next semester, the designing and testing will be done.

Electronics

Software

Testing, Robotics context