

FU-Fighters 2003 (Global Vision)

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Short Team Description

Our F180 team, the FU-Fighters, participated for the fifth time at the RoboCup competition. This year we used our improved omnidirectional team: we added a dribbling device and a shooting device. This year we also use a second camera in the vision system and learning algorithms in the behavior control. Our team won second place in the SmallSize league competition last year.

For RoboCup 2003 we improved our omnidirectional robots, which we used in RoboCup 2002 in Fukuoka, Japan. We self developed special wheels which allow for better omnidirectional movement than in 2001. Further, the robots use a linear kicking device and a dribbling device with a rotating vertical tube, which were deployed by many teams in the F180 league.

For local control we use the same microcontroller board as in 2001 but since 2002 with a new radio transceiver module.

The only physical sensors for our behavior control software are two s-video cameras that look at the field from above and output two video streams in NTSC format that are captured by a PC, using two consumer frame grabbers from Hauppauge. The computer vision system running on the PC finds and tracks the ball and the robots.

We use a hierarchy of reactive behaviors to control the robots.