Albert-Ludwigs-Universität Freiburg
Institut für Informatik
Lecture: Introduction to Mobile Robotics
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Sheet 3

Topics: Odometry data vs. true trajectory

Submission deadline: Fri 11.05.2007, 11:00 a.m. (before class)

Exercise 1:

The CARMEN log files created by the simulator contain TRUEPOS messages, which provide ground truth information about the robot's pose, and corresponding readings from the odometry. Complete the class `TrueposeMessage` to parse these lines.

Exercise 2:

Visualize the TrueposeMessages by completing the relevant code stubs. Use both pose information contained in the messages. Make sure that you paint all robot messages in the same coordinate system frame of the laser scans (note relative vs. absolute coordinate systems). Test your program only with the new log files provided with the source code, the old ones are erroneous regarding the TruePos messages.

Exercise 3:

Compute the lengths of both trajectories and output the numbers in the `RobotControl` class. Compute the euclidean distance between the final poses of both trajectories and output it as well. Use the new methods provided in CarmenPoint.

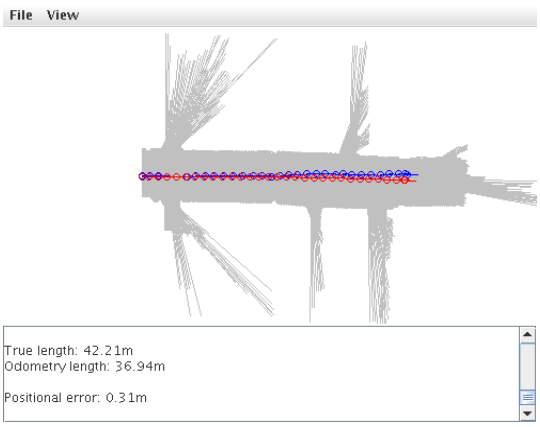

Figure 1: Screenshot after reading `run.log`, with laser scans switched on.