

Action Acquisition of Multiple Intelligence Agents in Real World (Prof. J. Ota and Prof. T. Arai)

In this research, the actions of our agents are to be generated by the interaction between the agents themselves and the world. In the situations that the agents to accomplish tasks without control of human operator, the agents must be able to interact with the outside world and acquire the proper actions to accomplish tasks. Our intelligence agents are designed to be able to use only little local sensor information in which to make the decisions to act. As shown in Fig.1, our agents interact with the world through their sensors. The simulation shows that our agents can achieve their goal without collision.

In Fig.2 shows the actual mobile agents avoid collision in the experiment. From the experiment, we can prove the robustness of our method. The autonomous navigation as in our research has several applications, such as security patrol or floor cleaning. The autonomous navigation is also known to be fundamental function needed to realize mobile robot system in real world.

Keywords: Multiple Mobile Robots, Exploration, and Navigation

References

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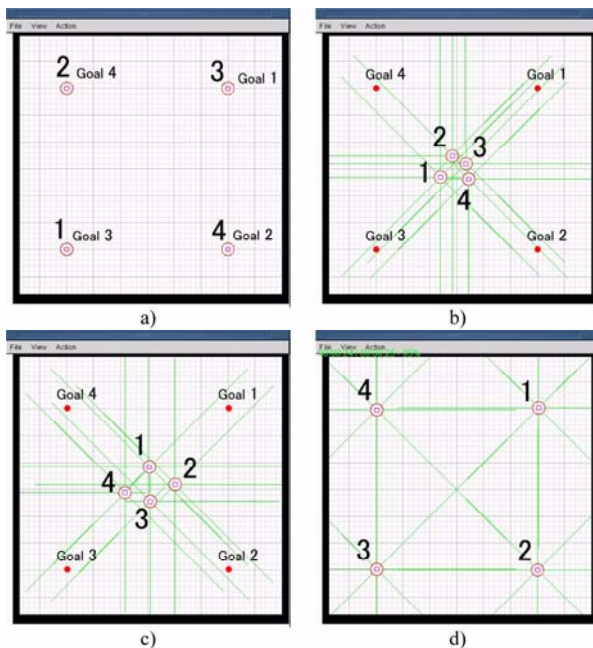


Fig. 1 Simulation of Distributed Mobile Robots Navigation

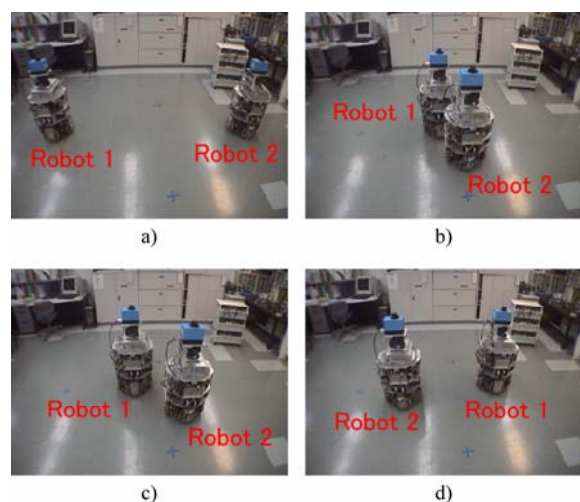


Fig.2 Experiment of 2 Mobile Robots