This project aimed to develop homogeneous co-operative robots which are capable of mapping and searching a maze-like environment. Each agent can perform this task individually; however, the introduction of additional agents leads to an increase in efficiency as well as creating redundancy, and therefore robustness. Communication between robots is artificially restricted to line-of-sight to simulate environments with restrictions on telemetric communication, such as underground. A modular maze was built to test the robots’ individual and co-operative performance. The project touches on a wide variety of engineering fields including control theory, artificial intelligence, mechanical design, circuit design, and software architecture.