

## **Investigation of homogeneous multi robots communication via bluetooth**

### **Abstract**

Task assignments to team of homogenous autonomous robots are in research trends in robotic field. Autonomous homogeneous multi-robot is known to have similar architecture in terms of structure and identical control system as well as their tasking. At present, most research of multi-robot mainly focuses on motion control layer. Nevertheless, a successful control and coordination of a group of robot rely on effective inter-robot communication. In this paper, in depth investigation of the Bluetooth between two homogenous mobile robots, namely MechA and MechI, is presented. MechA is pre-programmed with dedicated movement, and upon completion the data acquired is sent to MechI for coordination. A distance-based measurement was made for comparison, giving a reliable data for crisp observation. Coordination of multi-robots can be done by controlling the movement of each mobile robot through wireless communication between mobile robots with error distance of  $0.0322 \pm 0.0147$  m.

**Keywords** — Autonomous robots, multi robots, homogenous multi robots, robot coordination.