Abstract:

This paper deals with the problem of mission allocation for robot agents cooperating with human agents, in industrial application. RFID (Radio frequency identification) sensor platform is exploited to describe the environment state. Relevant information is available in RFID tags which are placed on objects and machines, and agents (robots or humans) types. The mission allocator receives the information from the RFID platform, and calculates the adequate sub-mission (set of sequential tasks) assigned to each agent. The robot agents execute the assigned tasks, organized through task planning strategy. The human agents perform the assigned sub-mission plans introduced via Human Machine Interfaces (HMIs). After the execution of each task by the agents, the environment state is updated. A general framework allowing mission distribution for robot and human agents is proposed in this article. The effectiveness of …