

Robot Technology and the Future

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Abstract

World widely, various types of intelligent service robots are being on the research, and already became well acquainted with human beings. Also, many people expect these robots will be living together with mankind at work or home in the foreseeable future. Nevertheless, many people yet have a pessimistic point of view about the ultimate form of robot would be impossible to be realized in the real at the technology view. The intelligent service robot is distinguished from industrial robot in many aspects. The intelligent service robot is supposed to be working at human living environment with human. This simple-looking difference introduces tremendous technological challenges. Such challenge includes artificial intelligence, vision and voice recognition, communication, mechanical and hardware architecture as well. And also the technology level required to accomplish a task given by the user is very different according to the application requirement. Some simple task may be achieved by simple robotic technology but some others are not. That means that commercial realization of service robot strongly depends on the gap between market requirement and technology level available. Such kind of issues will be discussed in the lecture. The lecture will also mention the history of robot development and application of robot in the various fields. Additionally, the outline of DARPA Robotics Challenge which is the one of the most recent and advanced robot events will be reviewed.

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