Abstract

Lacking a common ground in Human-Robot Interaction is the main source of errors and miscommunications especially for remote exploration robotics. Advances in language and social psychology studies are the rescue, particularly the common ground theory. This paper reviews common ground theory, then it introduces a framework inspired by the miraculous history of Helen Keller. Then a case study is presented to investigate the proposed framework. Finally, the paper explores some potential future issues in the application of the proposed common ground approach in Human-Robot Interaction.

References

- Tim Paek and Eric Horvitz, Uncertainty, utility, and misunderstanding: A decision-theoretic perspective on grounding in conversational systems, Psychological models of communication in collaborative systems, Papers from the AAAI Fall Symposium, November 5-7, North Falmouth, Massachusetts, 1999, pages 85-92.
- Kristen Stubbs and Pamela Hinds and David Wettergreen, Challenges to Grounding in Human-Robot Collaboration: Errors and Miscommunications in Remote Exploration Robotics,

**Index Terms**

Computer Science  
Artificial Intelligence

**Keywords**

Human Robot Interaction  Helen Keller Heuristic  Common Ground