INTUITIV
Intuitive-nonverbal and informative-verbal robot-human communication

Reliably interpretable and predictable robotic action as a central factor for user-centered robot-human communication

The best possible design of robot-human communication plays an essential role in the care sector. The acceptance of new technologies depends in particular on whether the robot's intention becomes clear to humans through its behaviour.

Goals and Methods

The INTUITIV project aims to develop non-verbal and verbal forms of communication on the example of application in the rehabilitation sector. The focus here is on investigating the approaching dynamics, avoidance strategies and movement trajectories of an autonomous robot in the hospital environment. The aim is to establish understanding and trust for patients and caregivers in the actions of the robotic system. The influence of iconic information in the form of sounds, displays, simulated eye movements, etc. on perceptibility and the need for appropriate use of linguistic communication is also analysed. Thus, a situation-adapted selection of the most appropriate interaction possibility is to be guaranteed. The long-term adaptation of communication to a user can thus be made possible and dynamically developed through an iterative evaluation process.

Innovations and perspectives

The reliable interpretation and predictability of robotic action are key factors in achieving user-centered robotic-human communication. Language processing, dialog design and navigation in hospital rooms are therefore addressed focuses of the project.

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Partner:
- E&K AUTOMATION GmbH, Rosengarten (Coordinator)
- German Research Center for Artificial Intelligence (DFKI) GmbH, Bremen and Saarbrücken
- GESTALT Robotics GmbH, Berlin
- HFC Human-Factors-Consult GmbH, Berlin
- Johannesbad Saarschleife AG & Co. KG, Saarbrücken
- Institute for Information, Health and Medical Law (IGMR), University of Bremen

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