Assistive Robots for Blind Travelers

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- **Motivation**
  - 1+ billion people worldwide have some form of disability (WHO)
  - Mobility tied strongly to employment, social inclusion, and personal independence
- **Approach**
  - Explores three principal research areas in the context of assistive robots for blind travelers:
    1) Accessible interfaces for assistive robots
    2) Assistive interaction between humans and robots
    3) Effective cooperation between a variety of human-robot and robot teams

Illustration of assistive robots interacting with blind travelers

- **Results to date**
  - Identified high value robot task, functional constraints, and challenges specific to urban travel

Interaction with stakeholders

  - Accessible interfaces necessary to allow blind travelers to effectively communicate with all platforms

Smartphone-based navigation app