

Modes of Interaction for a Cognitive Shopping Cart



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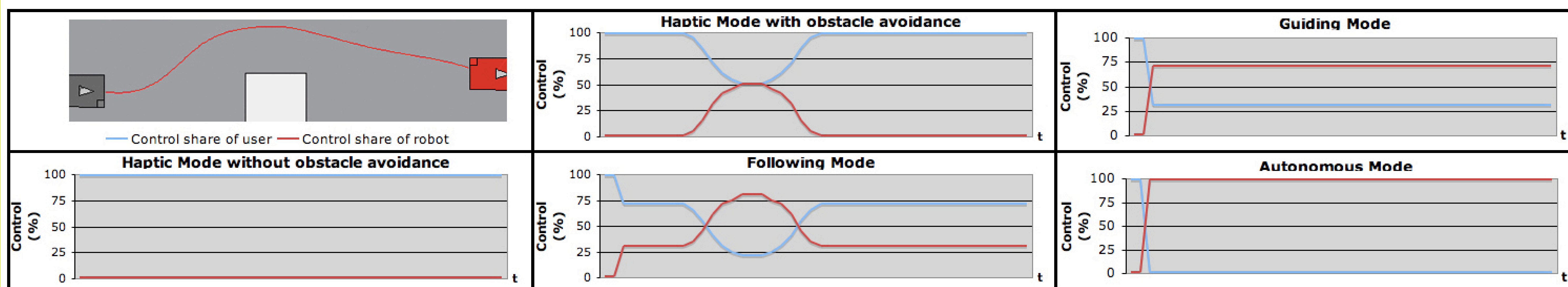
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InBOT and user share control depending on the mode

- Modes of Interaction
- Haptic Steering Mode
 - Following Mode
 - Guiding Mode
 - Autonomous Mode

Interaction initiates
mode transitions

- Modalities of Interaction
- Speech commands and feedback
 - Force sensitive handlebar
 - Touch screen Interface
 - Gesture recognition



Robot controlled modes

- Guiding Mode
- Autonomous Mode

Main control:

Topological navigation

RFID-Barrier marking border of the topological area

Behavior-based control

- Velocity vectors
- Behaviour straight to target
- Repelling: Obstacles
- Look for Gaps
- Resulting

Handling of dynamic objects



User controlled modes

- Haptic Steering Mode
- Following Mode

Assistive functionalities:

Advise & Navigation

Obstacle Avoidance

Velocity vectors

- Haptic handle
- Repelling: Obstacle shopping cart
- Resulting