Plan for first Year of WP5

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Outline

T5.1

Robot control SW architecture for evaluation

- define Abstract Robot Control Architecture (ARCA)
  - provide interfaces
  - specify control and information flow between components (UML)
- proved remote interface to the robot

T5.2

Simulation infrastructure

- provide simulation infrastructure
  - stage 1:
    - 3D robot model with models of real world sensors
    - one room, table, cups, cans
    - physical model and properties of objects

T5.3

Sensor data acquisition

- physical robot
  - arrange initial experiments and scenarios for WP2 (to gain multi-level symbolic representations from raw sensor data)
- store acquired data centrally

T5.4

Demonstrators

- Stage 1:
  - simulated demonstrator
  - *partly physical demonstrator (if possible)
  - integrate achievements from WP1-WP4 into artificial cognitive system (ACS)

T5.5

Benchmarking and evaluation

- Stage 1:
  - use experiences for reproducing robot activities in essentially identical environments
  - Demo 1.1: Serve-a-coffee[1]
  - Demo 1.2: Clear-coffee-mugs-from-table

[1] see details in B1.1

Goals

- Simulated robot platform
  - 3D model of PR2
    - Extension: Kinect, Infrared camera (more?)
    - Integration of further sensor into simulation
  - 3D environment restaurant/kitchen
    - Tables, chairs, objects (static, dynamic)
  - 3D human models (static, dynamic, random)
- 2D/3D Navigation (platform, arms)
  - Collision avoidance
- Remote interface to the robot

Goals (cont.)

- Year one demonstrator2D/3D Navigation (platform, arms)
  - collision avoidance
- Remote interface to the robot
- Year one demonstrator
- Abstraction layer for all integrated components
- Integration onto the real robot
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- Integration onto the real robot
- Define Abstract Robot Control Architecture (ARCA) with other project participants
  - Provide interfaces

Discussion

- What is needed by other WP?
  - Interfaces?
- Abstraction level of sensory data?
  - raw data, symbolic data..?

Thank You!

Any questions?

Further Reading