Knowledge Engineering in Robotics

(for robots, by robots, about robots)
European Robotics Forum, Västerås

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Questions we want to have answered

Terminology What are task descriptions, action recipes, skills and other primitives, and what are their relationships?

Conventions Are there shared definitions, conventions (e.g., coordinate systems, units), and data structures?

Scene graphs How should data be represented (maps, objects, actions)? What data should be annotated and how? What kind of reasoning is performed or needed?

Reuse of knowledge How can a robot decide which knowledge (e.g., map or skill) to reuse in a new situation?

Reuse of tools What existing software modules, algorithms, libraries, or APIs can be reused?

Knowledge engineering How will/should the knowledge base grow? What are the processes bootstrapping a knowledge base useful in real applications?

Goals

- Making each other aware of the ongoing research;
- Avoiding duplication of work;
- Writing a white paper on the current status of the work;
- Modular ontologies?
- ...

Presentation list

- Alexander Perzylo, Technical University Munich, Germany
  RoboEarth
- Saadia Dhouib, CEA, France
  Proteus
- Fabien Lagriffoul, AASS, Örebro University, Sweden
  GeRT
- Jacek Malec, Lund University, Sweden
  Rosetta
- Herman Bruyninckx, KULeuven, Belgium
  BRICS