



## Tutorial: Agents-While-You-Wait

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## Agenda



- Self-Organizing Behavior
- The What and Why of Agents
- The How of Agents
- Case Study: Alcatel-Bell, Geel, Belgium
  - Presentation of the Problem: Stefano Corgnati, Atos, Torino, Italy
  - Preliminary Design: Paul Valckenaers, Katholieke Universiteit Leuven, Belgium
  - Group Design

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## Design Questions for Agents



- Individual Agents
  - What do they represent? {Things, Functions}
  - What do they know? {Implicit, Explicit} x {Self, Environment, Others}
  - How are they structured? {Body-Head, Modular, Wrapper}
- Community Issues
  - Comm. Channel: Addressed x Persistent x Remote
  - Comm. Protocol: {Reaction, Command, Voting, Fixed Protocol, Conversation}
    - » Contract net: Roles x Currency x Overbidding x Selection
  - Configuration: {Global, Local Static, Local Dynamic}
  - Coordination {Hierarchical, Constraint Propagation, Field-Based}
- Implementation Issues
  - Hardware
  - Software

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