International Networking

Christian Freksa

www.spatial-cognition.de
Three Research Areas

- Reasoning
- Action
- Interaction
Reasoning

- Modeling human and external cognition
- Spatial assistance for experts and lay people
- Human navigation in complex environments
- Qualitative spatio-temporal reasoning
- Spatial action planning

Action

- Navigation in autonomous artificial systems
- Exploration, map learning, and route planning
- Coordinated multi-agent interaction
- Perception-based navigation in humans and robots
- 3D visualization for complex real-time tasks

Interaction

- Intelligent communication in language and maps
- Integration of spatial and linguistic capabilities
- Ontology-based models for natural language interaction
- Adaptive wayfinding assistance systems
- ‘Cognitively adequate’ human-robot interaction
Thomas Barkowsky
John Bateman
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Frank Kirchner
Bernd Krieg-Brückner
Till Mossakowski
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Gerhard Strube
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- Start: January 2003
- Duration
  - 4+4 years funded
  - 12 years planned
- DFG-Funding
  - 6.6 M€ (2003-2006)
  - 10.5 M€ (2007-2010)
- Coordination
  - Christian Freksa, (coordinator, Bremen)
  - Bernhard Nebel (deputy coord., Freiburg)

● + 50 researchers in 15 projects
IQN – International Quality Network on Spatial Cognition