Agent-oriented Proof Planning

Project MI 4 OMEGA: Siekmann, Autexier, Benzmüller

Overview of the project

Overall System and Case Studies

Results
- Increased flexibility in proof construction
- Meta-level proof search controlled by reasoning patterns
- Automatic learning of proof-planning knowledge
- Support for user-friendly interaction
- Access to mathematical services for the deduction community
- Significant case studies
- CoRe-calculus for semantical reasoning

Open Problems
- Unified proof construction layer based on CoRE
- Adaptation of reactive and deliberative proof planning procedures
- Adaptation of mathematical support tools
- Maintenance of mathematical knowledge sources
- Resource-adaptive sampling of mathematical knowledge
- Support for typical mathematical activities