Conclusion

- Rules and ontologies for the Semantic Web are an ongoing R&D topic
- Putting them to getting is not easy, and can be done at various levels
- Here: touched a number of formalisms, focusing on
  - features (used for profiling)
  - underlying concepts/foundations
- Systems and languages are quite diverse, switching between them is not easy
- The RIF standardization effort is helpful also in this respect
- At the forefront of research, (expressive) combinations of rules and ontologies are not settled yet

Research Issues

- **Semantics for rules plus ontologies.**
  Missing: case studies and large(r) scale example
- **Semantic and computational properties.**
  Intertranslatability, expressiveness (what can/cannot be expressed?)
  More refined complexity studies
- **Efficient implementations, algorithms.**
  scalability versus expressiveness
- **Beyond logic rules.**
  e.g., production rules, business rules
- **Knowledge combination/integration beyond rules and ontologies.**
  e.g., descriptions of temporal processes (work flows, protocols, action theories,...)

Resources

- presentations and tutorials from the past Reasoning Web summer schools (`http://reasoningweb.org/`) can be found here: `http://rease.semanticweb.org/`
- Thomas Eiter. Answer Set Programming for the Semantic Web (Tutorial). ICLP'2007. `http://www.dcc.fc.up.pt/iclp07/eiter.pdf`
- Thomas Eiter, Giovambattista Ianni, Axel Polleres, Roman Schindlauer, and Hans Tompits. Reasoning with rules and ontologies. Reasoning Web 2006. `http://www.polleres.net/publications/eit-etal-2006_rowSchool.pdf`
- Thomas Eiter, Giovambattista Ianni, Thomas Krennwallner, and Axel Polleres. Rules and Ontologies for the Semantic Web. Reasoning Web 2008. `http://www.polleres.net/publications/eite-etal-2008.pdf`