DAML Rules Phase II

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Announcing...

Phase II of DAML Rules effort

• Time has come for agreement & push on rules in DAML
  – As a KR to layer above DAML+OIL/OWL
  – For use in DAML-S, DAML-Sec, application scenarios
  – W3C thinking hard about rules now

• RuleML as point of departure?
  – Already has connections to DAML+OIL. ∃ early versions of:
    • Description Logic Programs KR theory: expressive intersection, expressive combination of LP with DL
    • DAML+OIL syntax for RuleML (∃ direct RDF syntax too)
    • Applications experience of RuleML, e.g., in Services
Overview of RuleML

• RuleML Initiative (2000--)
  – Dozens of institutions, researchers; esp in US, EU
  – Mission: Enable semantic exchange of rules/facts between most commercially important rule systems
  – Standards specification: 1st version 2001; fairly stable now
  – A number of tools and demo applications
  – Successful Workshop on Rules at ISWC was mostly about RuleML / LP
  – Can itself use a “home” institutionally.

• Initial Core: Horn Logic Programs KR
• …Webized (in markup)… and with expressive extensions
Overview of RuleML, Continued

• Fully Declarative KR (not simply Prolog!)
  – Well-established logic with model theory
  – Available algorithms and implementations
  – Close connection to relational DB’s; core SQL is Horn LP

• Intent: Abstract graph syntax
  – First encoded in XML, then RDF, then DAML+OIL

• Expressive Extensions incrementally
  – Non-monotonicity: Negation as failure; Courteous
  – Procedural Attachments: actions/effecting, tests/sensing
  – Events cf. OPS5/Event-Condition-Action
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Action Plans

• Look for setting up of mailing list on Rules for DAMLers
• Please get involved
  – YOUR suggestions and feedback
  – Think about where you can use rules
  – Build tools, use tools
  – Get more educated about rules and RuleML, tools
    • Look soon for info pointers via mailing list, DAML website
    • Can start with http://www.mit.edu/~bgrosof and http://www.dfki.de/ruleml

• DAML-EU Joint Committee focus
• Coordinate with W3C (and possibly Oasis too)
• Contacts: Benjamin Grosof, Mike Dean