The W3C RIF (Rule Interchange Format) Working Group

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**Duration**

- [http://www.w3.org/2005/rules/wg](http://www.w3.org/2005/rules/wg)
- Duration:
  - Two phases
  - First phase up to two years (started end of 2005)
  - Second phase will be decided upon after finishing the first phase
Participants

- 76 participants from 34 organizations
- 4 invited experts
- From three communities:
  - Business rules
  - Description logics
  - Logic programming
- Have completely different ideas/goals!

Relationship to Other Efforts

- RuleML (initiated at DFKI!!)
- JSR 94 (Java Rule Engine API)
- OMG Production Rule Representation
- OMG Semantics of Business Vocabulary and Business Rules
- ISO Common Logic
- W3C RDF Data Access WG
- W3C XML Activity
Charter

- [http://www.w3.org/2005/rules/wg/charter](http://www.w3.org/2005/rules/wg/charter)
- “This Working Group is chartered to produce a core rule language plus extensions which together allow rules to be translated between rule languages and thus transferred between rule systems. The Working Group will have to balance the needs of a diverse community — including Business Rules and Semantic Web users — specifying extensions for which it can articulate a consensus design and which are sufficiently motivated by use cases.”

What is the Scope of “RIF”

- Obvious goal: “Rule Interchange Format”, i.e., a format for interchanging rules
- But: many people in WG interested in creating a new “Semantic Web Rule Language” (which is not directly covered by the charter!)
  - Solution: since an interchange format must have a formal semantics (and not just syntax), it is also a rule language (in a way); and: RIF must also be compatible with RDF and OWL
Scope cnt’d

- specify a format for rules, so they can be used across diverse systems = interlingua
- allow rules written for one application to be published, shared, and re-used in other applications and other rule engines
- common format = core language plus standard and non-standard extensions
- extensions need not all be combinable into a single unified language

Phase 1 Scope

- Extensibility: construct an extensible format for rules
- Conformance: “what are conformant rule engines”
- Load-andQuery Rule Engine: must not specify an engine control or query interface (language, protocol, or API)
- XML Syntax: primary normative syntax
- Horn Logic
- Datatype Support
Phase 2 Scope

- Extensions to the Logic (classical negation, fragments of OWL, FOL, negation as failure, …)
- Syntactic extensions (Lloyd-Topor …)
- More datatypes
- Data sources
- Actions (production rule systems)
- KB Access (updates, aggregation)

Compatibility

- XML: rules make use of XML data (phase 2)
- RDF: use RDF semantics as a starting point
- SPARQL:
  - query of the dataset
  - protocol for fetching additional dataset
  - use of XML datatypes, functions and operators
- OWL: allow knowledge expressed in OWL and in rules to be easily used together
Phase 1 Deliverables

- "Use Cases and Requirements" document, containing description and analysis of the rule use cases of interest to Working Group members
- W3C Recommendation providing technical specifications of the interchange format, suitable for implementers of rule engines and rule language translation software
- W3C Recommendation on using this rule interchange format in combination with OWL
- Set of Test Cases which reflect issue resolution and which aid in conformance evaluation

Problems

- Major problem: Industry vs. Research = Business Rules vs. Logic; syntax vs. formal semantics
- Minor problem: DL vs. Logic Programming (solved in phase 1 by restricting ourselves to pure Horn Logic which has the same semantics in both cases); will come up again in phase 2
Telcos and F2F Meetings

- Weekly Telco (about 90 minutes)
- About 3-4 F2F meetings per year (usually colocated with WWW, ISWC, ESWC, ...):
  - **F2F1** 8-9 December 2005, Burlingame, California, USA
  - **F2F2** 27-28 February 2006, Cannes-Mandelieu, France
  - **F2F3** 8-9 June 2006, Budva, Montenegro
  - **F2F4** 4-5 November 2006, Athens, Georgia, USA