



New Rule Interchange Format (W3C RIF) Standard Published

- **A new standard for interoperation and interchange between various rule engines and rule languages from decision rules to reaction rules**
- **A concrete expression language for rules on the (Semantic) Web and for business rules, making businesses more agile**
- **New W3C RIF standard to be featured at forthcoming RuleML 2009 Symposium**

Berlin July 21st 2009 The W3C Working Group working on W3C Rule Interchange Format (RIF) has recently launched a new standard for the interchange of rules. The standard will allow systems to interoperate whether they use different varieties of rule based languages and technologies.

Rule based systems have been investigated comprehensively in the realms of declarative programming, expert systems, production rules, rule-based event/action logics and event-processing reaction rules over the last two decades. The basic idea is that users employ rules to express what they want, the responsibility to interpret this and to decide on how to do it is delegated to an interpreter (e.g., an inference rule engine or a just in time rule compiler). In recent years rule based technologies have experienced remarkable interest, namely in two areas: business rules processing, and rule-based reasoning in the context of the Semantic Web.

2009 has already been a major step forward for rules in enterprise service networks and on the Web. The [W3C Rule Interchange Format \(RIF\) Working Group](#) has published several public specifications of the new W3C RIF standard. The OMG has published its [specification for Production Rules Representation](#), which is being aligned with W3C's RIF. [RuleML](#) has published drafts on Reaction Rules for rule-based Complex Event Processing as a step towards a standardized event processing language for rules. People around the world are working on implementations of these specifications. In parallel, business rules are already playing an important role in Web Services and Business Process Management.

The [W3C Rule Interchange Format \(RIF\) Working Group](#) has published several public specifications for a new standardized Rule Interchange Format (W3C RIF) which is part of the latest W3C Semantic Web stack. The mission of the Rule Interchange Format (RIF) Working Group is to produce W3C recommendations for rules interchange.

The [RIF Working Group](#) has published six Last Call Working Drafts. The [Corporate Semantic Web](#) research group at the Freie Universitaet Berlin has been actively involved in this standardization effort. Prof. Dr. Adrian Paschke, who leads the CSW group, has co-edited several of the W3C RIF specifications. Together, they allow systems using a variety of rule languages and rule-based technologies to interoperate with each other and with other Semantic Web technologies. Three of the drafts define XML formats with formal semantics for storing and transmitting rules:

- The [RIF Production Rule Dialect \(PRD\)](#) is designed for the kinds of rules used in modern Business Rule Management systems.
- The [RIF Basic Logic Dialect \(BLD\)](#) is a foundation for Logic Programming, classical logic, and related formalisms.
- The [RIF Core Dialect](#) is the common subset of PRD and BLD, useful when having a ubiquitous platform is paramount.

The other drafts:

- [RIF Datatypes and Builtins \(DTB\)](#) specifies the datatypes and standard operations (modeled on [XPath Functions](#)) available in all RIF dialects
- [RIF RDF and OWL Compatibility](#) specifies how RIF works with RDF, RDFS, OWL 1, and OWL 2.
- [RIF Framework for Logic Dialects \(FLD\)](#) provides a mechanism for specifying extended dialects, beyond BLD, when more expressive power is required.

Further drafts, published in December 2008,

- [RIF Use Cases and Requirements](#) describing use cases and requirements for RIF
- [RIF Test Cases](#) defining test suites for the RIF language dialect

Currently, the Working Group requests comments to be sent to public-rif-comments@w3.org by 31 July 2009.

Next step will be the call for implementations of RIF. Upcoming RIF dialects, on which Corporate Semantic Web is currently working, will address a [RIF Reaction Rules dialect](#) for event-based reaction rules / rule-based complex event processing. Related standardization efforts such as the OMG Production Rules Representation (OMG PRR 1.1), which defines a meta model for production rules, a currently looking into the possibility to adopt W3C RIF as concrete XML-based expression language.

The new RIF standard will be featured at the [RuleML 2009 symposium](#) in a W3C RIF workshop in November 2009 (see <http://2009.ruleml.org>), co-located with the Business Rules Forum in Las Vegas, Nevada, USA.

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