2008 International RuleML Symposium on Rule Interchange and Applications (RuleML-2008)

October 30-31, 2008 ─ Orlando, Florida
URL: http://2008.ruleml.org

Objectives

In recent years rule based technologies have enjoyed remarkable adoption in two areas: (1) Business Rules Processing and (2) Web-Centred Reasoning. The first trend is caused by the software development life cycle, which needs to be accelerated at reduced cost. The second trend is related to the Semantic Web and Service-oriented technologies, which aim to turn the Web into a huge repository of cross-referenced, machine-understandable data and processes. For both trends, rules can be used to extract, derive, transform, and integrate information in a platform-independent manner. While early rule engines and environments were complex, expensive to maintain, and not very user friendly, the current generation of rule technology provides enhanced usability, scalability and performance, and is less costly. A general advantage of using rules is that they are usually represented in a platform independent manner, often using XML. This fits well into today's distributed, heterogeneous Web-based system environments. Rules represented in standardized Web formats can be discovered, interchanged and invoked at runtime within and across Web systems, and can be interpreted and executed on any platform.

Collocated with the 11th International Business Rules Forum, the **2008 International Symposium on Rule Interchange and Applications** (**RuleML-2008)** is the second symposium (after last year's highly successful RuleML-2007 - http://2007.ruleml.org/) devoted to work on practical distributed rule technologies and rule-based applications which need language standards for rules operating in the context of, e.g., the Semantic Web, Intelligent Multi-Agent Systems, Event-Driven Architectures and Service-Oriented Computing Applications. The RuleML symposium is a new kind of event where the Web Rules and Logic community joins the established, practically oriented Forum of the Business Rules community (http://www.businessrulesforum.com) to help cross-fertilizing between Web and Business Logic technology. The goal of RuleML-2008 is to bring together rule system providers, representatives of, and participants in, rule standardization efforts (e.g., SBVR, RuleML, RIF, PRR, CL) and open source rules communities (e.g., jBoss Rules, CLIPS/Jess, Prova, OO jDrew, Mandarax, XSB, XQuery), practitioners and technical experts, developers, users, and researchers. They will be offered an exciting venue to exchange new ideas, practical developments and experiences on issues pertinent to the interchange and application of rules in open distributed environments such as the Web.

The Symposium gives emphasis on practical issues such as technical contributions and show case demonstrations of effective, practical, deployable rule-based technologies, rule interchange formats and applications as well as discussions of lessons learned that have to be taken into account when employing rule-based technologies in distributed, (partially) open, heterogeneous environments. We also welcome groundwork that helps to build an effective, practical, and deployable rule standard, improve rule technology, provide better understanding of the integration and interchange of rules, and make the current generation of rule engines and rule technology more usable for advanced Web and Service Oriented Architectures.

Topics of Interest

We invite industry practitioners, rule system providers, technical experts and developers, rule users, and researchers who are using rule-based systems, developing systems and applications, or exploring problems and best practices (especially in the areas of system interoperability, rule interchange, or business agility), to share their ideas, results, and experiences. We invite submissions related (but not limited to) to one or more of the following topics:

- Representation and meta-annotation of rules and rule sets (modules) for publication and interchange
- Collaborative authoring, modeling and engineering of rule specifications and rule repositories
- Heterogeneous and homogenous information integration of external data and domain knowledge into rules including OO data representations, databases, Web resources, meta-data repositories and ontologies
- Homogeneous and heterogeneous integration of rules and ontologies
- Rules in Web 2.0 and Web 3.0
- Rules in Semantic Web Technologies
- Rules in Web Intelligence Research
- Hybrid rule systems combining, e.g. declarative rules and OO programming or forward-reasoning production rules and backward-reasoning derivation rules
- Management and maintenance of distributed rule bases and rule repositories during their lifecycle
- Interchange and refactoring of rule bases in heterogeneous execution environments
- Verification and validation of interchanged rule bases in heterogeneous execution environments
- Contributions on effective, practical, and deployable Web standards on rules as well as special purpose, vertical domain rule languages
- Rule-based agility and its role in middleware
- Communication between rule based systems using interchange formats and processing / communication middleware such as Event Processing Networks, Enterprise Service Bus and Event Driven Architectures
- Applications, products, research, and development in rule-based, distributed complex event processing, event communication and reaction rules (e.g., ECA rules, production rules, trigger rules)
- Event-driven/action rule languages and models
- Rule-based Event Processing Languages and rule-based CEP
- Rule patterns and CEP patterns
- Practical solutions tackling the real-world Software Engineering requirements of rule-based systems in open, distributed environments such as the Web
- Modeling of executable rule specifications and tool support (e.g. development environments, editors, compilers, interpreters, translators)
- Execution models, rule engines, and environments
- Compilation vs. interpretation approaches of rules
- Applications and integration of rules in web standards, e.g., semantic web services, WS-standards, BPEL, security (e.g. XRML), meta data processing
- Rule-based software agents and (web) services

- Applications of rules in the Semantic Web and Pragmatic Web (e.g. negotiation of ontology meaning or communication within a pragmatic context)
- Comparing and advancing the state of current business rules engines and management system tools
- Rule interchange standards and related industry interchange formats, e.g. RuleML, RIF, SWRL, etc.
- Interoperation between different rule formats such as business rules, reactive rules, derivation rules, logical formulas, constraints, association rules, transformation rules and ontological domain conceptualization including meaning negotiation and practical use of agreed rules and vocabularies
- Applications based on (Semantic) Web rule standardization or standards-proposing efforts
- Translation of interchangeable and domain-independent rule formats and rule models into executable technical rule specifications
- Extraction and reengineering of platform-independent, interchangeable rules and rule models from existing platform-specific resources
- Natural-language processing of rules
- Graphical processing, modelling and rendering of rules
- Incorporation of rule technology into distributed enterprise application architectures such as Real-Time Enterprise, Business Activity and Performance Management, Business Process Management, Enterprise Workflow Systems, Database Management Systems or Supply Chain Management Solutions and related areas such as Service-based Architectures, Semantic Web Services, IT Service Management and IT Service Level Management, and Policy solutions
- Rule-based policies and electronic contracts: their specification, execution, and management
- Languages for exchanging and processing information through the web, e.g. common base event, WS-standards, ebXML, XBRL, etc.
- E-contracting and automated negotiations with rule-based declarative strategies
- Applications of rules in e.g. legal reasoning, compliance rules, security, IT government, security, risk management, trust and proof reasoning, etc.
- Rule-based (multi-valued) reasoning with and representing uncertain and fuzzy information
- Rule-based reasoning with non-monotonic negation, modalities, deontic, temporal, priority, scoped or other rule qualifications
- Rule-based default reasoning with default logic, defeasible logic, and answer set programming

RuleML-2008 Challenge

The RuleML-2008 Challenge is one of the highlights of RuleML-2008. It addresses the system demonstration for practical use of rule technologies in distributed and/or Web-based environments. The focus of the challenge is on rule technologies (including rule languages and engines), interoperation and interchange. The challenge offers participants the chance to demonstrate their commercial and open source tools, use cases, and applications. Prizes will be awarded to the two best applications. All accepted demos will be presented in a special Challenge Session.

A submission to RuleML challenge has to meet the requirement that declarative rules explicitly play a central role in the application. Basically this means that:

- Rules are explicitly represented in a declarative format and they are decoupled from the application (rather than being compiled or hard-coded into the application logic).
- Rules are used in interesting and practically relevant ways to, e.g., derive useful information, transform knowledge, provide decision support and provide automated rule-based monitoring, enforcement, validation or management of the behavioural logic of the application.

The demo should preferably (but not necessarily) be embedded into a web-based or distributed environment so that there will be a need for features related to the RuleML conference topics, as listed in the call for papers.

For more details please consult the RuleML-2008 Challenge website (http://ruleml-challenge.cs.nccu.edu.tw).

Important Dates

Paper Submissions due	June 16, 2008
Notification of acceptance	July 22, 2008
Final submissions due	August 13, 2008
Symposium date	October 30-31, 2008
RuleML Challenge	October 30, 2008

Location / Highlights

Buena Vista Palace, Orlando Florida, USA

- Plenary keynotes, highlight/lightning talks, a session on Rule Standards, and a joint Boxed Lunch Panel about "Rules on the Web" together with the Business Rules Forum featuring prominent and visionary speakers.
- Keynote speakers:
  - Michael Kifer (State University of New York at Stony Brook, USA), on "Rule Interchange Format: The Framework". Joint keynote between RuleML-2008 and RR2008.
  - David Luckham (Stanford University, USA) on "The Power of Events: An Introduction to Complex Event Processing in Distributed Enterprise Systems".
  - Paul Haley (Haley Ltd) on "Event and Process Semantics will Rule".
  - Benjamin Grosof (Vulcan Inc, USA) on "Hyper Logic Programs in SILK: Redefining the KR Playing Field for Business and VLKB".
- A RuleML-2008 Challenge with prizes to demonstrate tools, use cases, and applications.
- Industry, demo and scientific research & development papers and presentations advancing and assessing the state of the art in event and rule-based systems selected in a peer-reviewed fashion by an international program committee.
- Invited talks given by leaders from industry and world-class experts featuring practical topics on event and rule-based computing and industry success stories.
- Social events to promote networking among the symposium delegates in an informal setting.

Submission Guidelines

Authors are invited to submit original contributions of practical relevance and technical rigor in the field, experience reports and show case/use case demonstrations of effective, practical, deployable rule-based technologies or applications in distributed environments. Papers must be in English and may be submitted as:

- Full Papers (15 pages in the proceedings)
- Short Papers (8 pages in the proceedings)
- RuleML-2008 Challenge Demo Paper + Show Cases (up to 8 pages in the proceedings)

Please upload all submissions as PDF files in LNCS format (http://www.springer.de/comp/lncs/authors.html). To ensure high quality, submitted papers will be carefully peer-reviewed by 3 PC members based on originality, significance, technical soundness, and clarity of exposition. Authors are requested to upload their complete papers by June 2, 2008. The selected papers will be published in book form in the Springer Lecture Notes in Computer Science (LNCS) series along with a CD with demo software and documents. The best paper from all submissions will be determined by the PC and a Best Paper Award will be handed over at the Symposium by a Sponsor. All submissions must be done electronically via http://www.easychair.org/conferences/?conf=ruleml2008. We will pursue the publication of a selection of revised papers to a special issue of a high-quality journal (IEEE TKDE).

Submissions to the RuleML Challenge 2008 consist of a demo paper of up to 8 pages, describing the demo show case, and a link to more information about the demo/show case, e.g. a project site, an online demonstration, a presentation, or a download site. Demo papers should contain a substantial presentation of the system to enable a proper evaluation of the techniques used. The content of papers should be sufficiently substantial for publication in the conference proceedings. The demo paper should be submitted at http://www.easychair.org/conferences/?conf=ruleml2008, while the demo link should be submitted at http://ruleml-challenge.cs.nccu.edu.tw/, and it will be immediately publicly available. If the link is password-protected, then please submit a password for anonymous login from any Web browser, giving us the permission to pass the password on to 3 PC members. The submissions should satisfy the minimal requirements defined in the topics of interest. The demos will be evaluated during RuleML-2008 and prizes will be awarded to the first two best applications.

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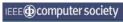TC on Distributed Intelligent Systems

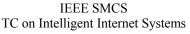## Media Partners

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