Design and Implementation of a Distributed Query System Supporting Conference Organization Committees

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Introduction:

Conference organization involves various procedures which make the task difficult both for the users and the developers of such systems. Tasks like responsibility assignment, contact information retrieval, and partner management are complex, and usually involve redundant transactions.

Tasks of the system:

Coordinating chair responsibilities (responsibility assignment)
Finding contact information about selected chairs of the symposium.
Answering questions of participants about the conference such as important dates, topics addresses, program schedule etc.

Added Functionality: Map an organization.

Personal Rule Based Scripts

Semantic and Pragmatic Vocabularies

Web Pages

Dynamic Imports/ Queries at runtime

User

General Chair Prova Rule Engine

Rule Base

External Agent

Web Service

Web Service Client

Program Chair

Prova Rule Engine

Rule Base

Personal Rule Based Scripts

Semantic and Pragmatic Vocabularies

OO jDREW, the Object Oriented Java Deductive Reasoning Engine for the Web

Personal Agent

Publicity Chair

OO jDREW Rule Engine

Rule Base   Fact Base

Friend of a Friend (**FOAF**) profiles

Personal Agent:

Act in a rule-based manner on behalf of symposium chairs.

Requesting

Dispatching

Receiving   mule   Sending

Enterprise Service Bus

JMS

SOAP

JMS

External Agent:

Exchange messages with (the public interface of) Organizational agents, sending queries (requests), receiving answers (results), or interchanging complete rule sets.

OA@ECAI-2012

Prova Rule Engine

Rule Base

Prova is an open source programming language that combines Prolog with Java.

OA@SymposiumPlanner2012

Prova Rule Engine

Rule Base

Organizational Agent:

Represents goals and strategies shared by each member of the Symposium organization.

OA@RuleML

Prova Rule Engine

Rule Base

Semantic and Pragmatic Vocabularies

Role Assignment Matrix (OWL Ontology)

Organizational Rule Scripts (RuleML)

Role Assignment Matrix (OWL Ontology)

Conference Management System

Semantic and Pragmatic Vocabularies

Role Assignment Matrix (OWL Ontology)

Dynamic Imports / Queries at runtime