

# Graph-Relational PSOATransRun Reasoners at RuleML<sup>.com</sup>.org

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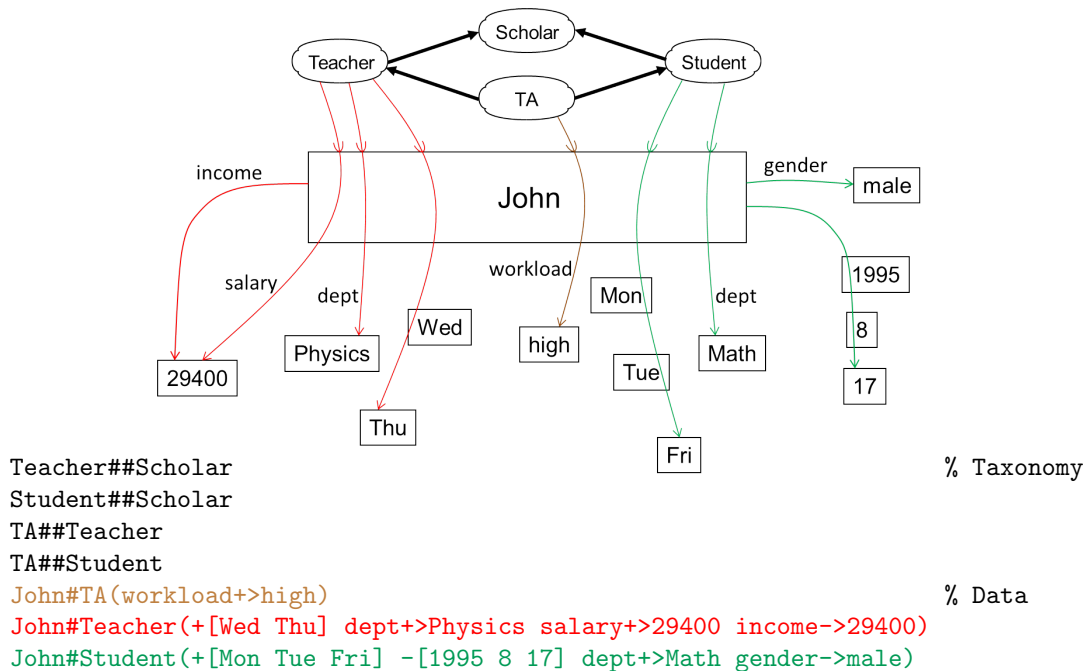
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**PSOA RuleML** languages enrich multiple inheritance and multi-membership from classical object-oriented programs and databases to *perspectival* data & knowledge representation.

“Rich TA” example of graph-relational data with (in)dependent slots and tuples:



Such factual data can be generalized to rule knowledge like `?o#TA(workload+>high) :- ...`, where querying by (non-)perspectival fact retrieval is generalized to rule-based inference.

**PSOATransRun** is the open (Java-)source reasoning framework for PSOA at RuleML.org, with translators to XSB & SWI Prolog’s and TPTP’s runtime engines (current release: **1.4.2**). Our test and use cases show efficiency advantages of dependent and tupled representations. These reasoners are to be complemented by one at RuleML.com, with advanced language-uniform UI (much beyond Web-based UI for earlier release: [psodemo-chatty-cat.eu-gb.mybluemix.net](http://psodemo-chatty-cat.eu-gb.mybluemix.net)). RuleML.com is closely tied to RuleML.org, reflecting and supporting the RuleML specification.

**PSOA use cases**, efficiently realized with PSOATransRun, include Port Clearance Rules, Medical Devices Rules, and Air Traffic Control (ATC) Knowledge Base (KB).

[psoa.ruleml.org/learn](http://psoa.ruleml.org/learn) is a resource page on PSOA syntax, (query) semantics, and tools.

**RuleML.com services** include general PSOA consulting (*harold.boyel at ruleml.com*) as well as building customized PSOA KBs and training users (*theodoros.mitsikas at ruleml.com*).