

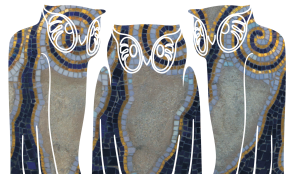
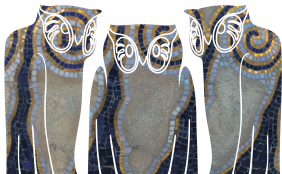
FLoC Olympic Games 2014

Citius, Maius, Potentius – Faster, Bigger, More Powerful

Birte Glimm Nico Matentzoglou Bijan Parsia Andreas Steigmiller

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OWL Reasoner Evaluation 2014





- ▶ OWL is a W3C standardised logic-based ontology language based on Description Logics
- ▶ ORE 2014 is the 2nd OWL Reasoner Evaluation Competition
- ▶ ORE 2014 compares 11 OWL reasoning systems on hundreds of ontologies
- ▶ We evaluate different problems (classification, consistency checking, realisation) in two OWL profiles/fragments

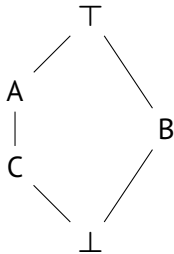


DL Syntax

$A \sqsubseteq \exists r.B$

$B \sqsubseteq \forall r^{-}.C$

$\models A \sqsubseteq C$



FOL Syntax

$\forall x. [A(x) \rightarrow \exists y. [r(x, y) \wedge B(y)]]$

$\forall x. [B(x) \rightarrow \forall y. [r(y, x) \rightarrow C(y)]]$

$\models \forall x. [A(x) \rightarrow C(x)]$

- ▶ Reasoners have to compute all subsumptions between concepts/unary predicates
- ▶ Output: all explicitly stated and implicitly following subsumptions



ORE 2014 Award Criteria



- ▶ Reasoners ranked according to
Expected Results / Tasks Attempted



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Expected Results / Tasks Attempted

- ▶ 3rd Prize: MORE with 85.7%
(Ana Armas Romero, Ernesto Jimenez Ruiz, Bernardo Cuenca Grau, Ian Horrocks, Cristina Feier)



- ▶ Reasoners ranked according to
Expected Results / Tasks Attempted

- ▶ 2nd Prize: ELK with 86.4%
(Yevgeny Kazakov, Markus Krötzsch, František Simančík, Pavel Klinov)

- ▶ 3rd Prize: MORE with 85.7%
(Ana Armas Romero, Ernesto Jimenez Ruiz, Bernardo Cuenca Grau, Ian Horrocks, Cristina Feier)



- ▶ Reasoners ranked according to
Expected Results / Tasks Attempted

- ▶ 1st Prize: Konclude with 95.5%
(Andreas Steigmiller, Thorsten Liebig, Birte Glimm)

- ▶ 2nd Prize: ELK with 86.4%
(Yevgeny Kazakov, Markus Krötzsch, František Šimančík, Pavel Klinov)

- ▶ 3rd Prize: MORE with 85.7%
(Ana Armas Romero, Ernesto Jimenez Ruiz, Bernardo Cuenca Grau, Ian Horrocks, Cristina Feier)