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Master Technology, Create Technology

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Research highlights

Computer science: Powerful algorithm for segmented alignment of ontologies of arbitrary size

A large range of internet-based ontologies are available on for sharing common knowledge bases. However, the proliferation of such ontologies has led to disorder, which creates difficulties in their effectiveness.

Thus this disorder has led to demands 'ontology alignment' to literally align two or more seemingly similar, but quite different ontologies for unified understanding.

As a solution to these issues, Md. Hanif Seddiqui and Masaki Aono at Toyohashi University of Technology have developed an efficient and scalable algorithm for ontology alignment: the so-called 'Anchor-Flood algorithm'.

Notably, the Anchor-Flood algorithm achieved the best running time in the OAEI 2009 (Ontology Alignment Evaluation Initiative) contest.

The Anchor-Flood algorithm can be applied not only to ontology alignment problems, but also for similarity measurements for data in two graphs. This includes potentially many areas of research including web link analysis and web community mining.

Reference:
- Md. Hanif Seddiqui, Masaki Aono
- An efficient and scalable algorithm for segmented alignment of ontologies of arbitrary size.
- *Journal of Web Semantics: Science, Services and Agents on the World Wide Web 7*, 344–356 (2009).
- Digital Object Identifier (DOI): 10.1016/j.websem.2009.09.001
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Enlarge Image
Fig: Ontology alignment contest (Anchor Flood achieved No.1 speed).