

Ontology Alignment, Matching and Translation

In the old days

- People have been building knowledge based systems for ~40 years
- There was not much interest in integrating them before the mid 80s
- Cyc argued (~1985) for the utility of having a shared KB, but just one that all would refer to
- Agent oriented approaches in the 90s imagined having multiple share ontologies
 - KIF was proposed as an interlingua for importing and exporting knowledge

Ontology matching

- Matching or aligning knowledge encoded in different KR languages can be very hard
- Differences in the KR languages can be major or subtle and both can cause problems
 - E.g., FOL, vs. bayesian vs defaults vs stereotypes vs ...
- Trying to deal with this problem usually means that you need to adopt a very abstract and flexible interlingua
- It's much easier if we can limit ourselves to translation between different schemas in the same KR languages
 - e.g., like the problem of schema mapping in RDBMs