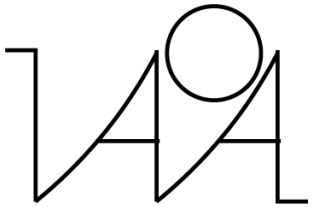
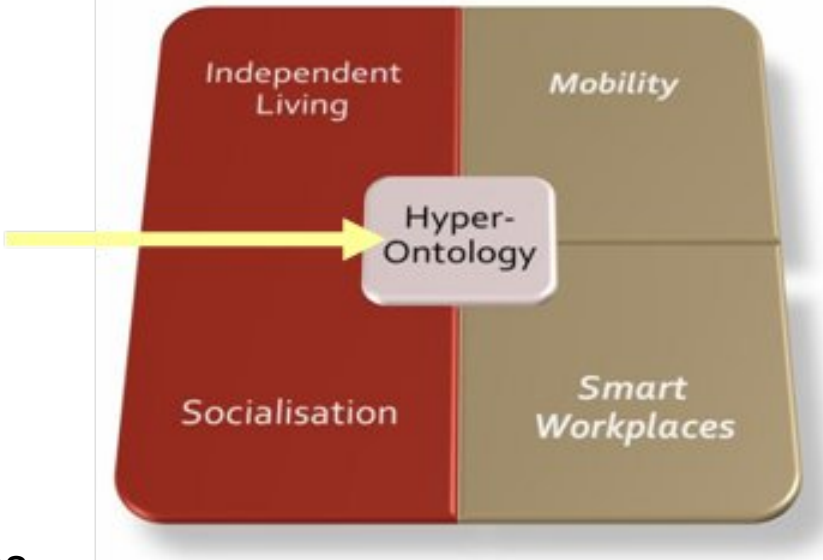
John Bateman – University of Bremen

Some (more) Burning Issues for Ontology Initiatives



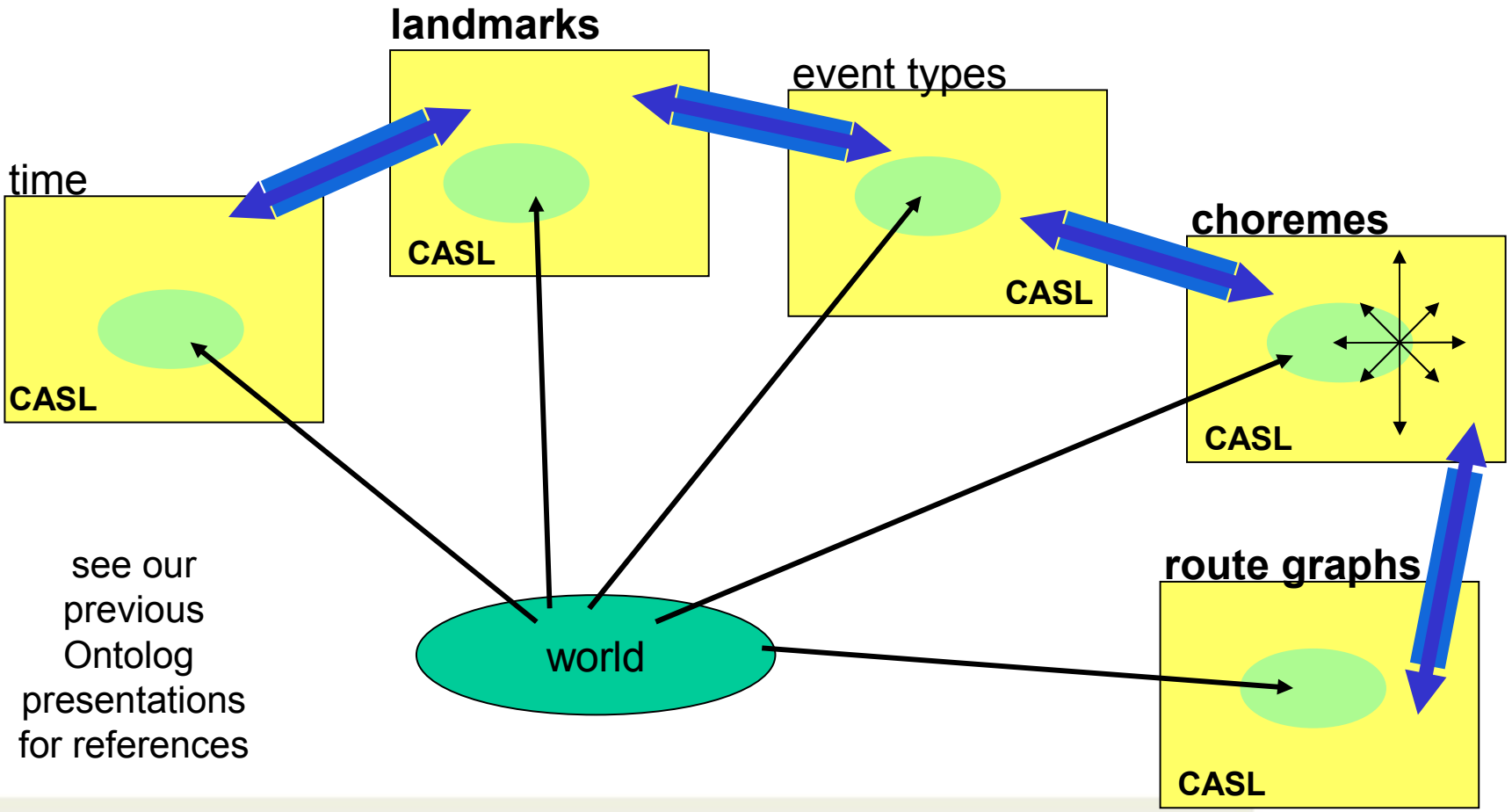
Background: Current Ontology Work in Bremen

- Ontology of linguistic semantics (Generalized Upper Model) and its use for natural language processing
- Ontologies of space (many diverse spatial calculi) and their use for spatial reasoning
- Ontologies of:
  - tourism,
  - assisted living,
  - buildings,
  - navigation,
  - transportation,
  - health monitoring,
  - sensors, ...
- in Open Ontology Repositories



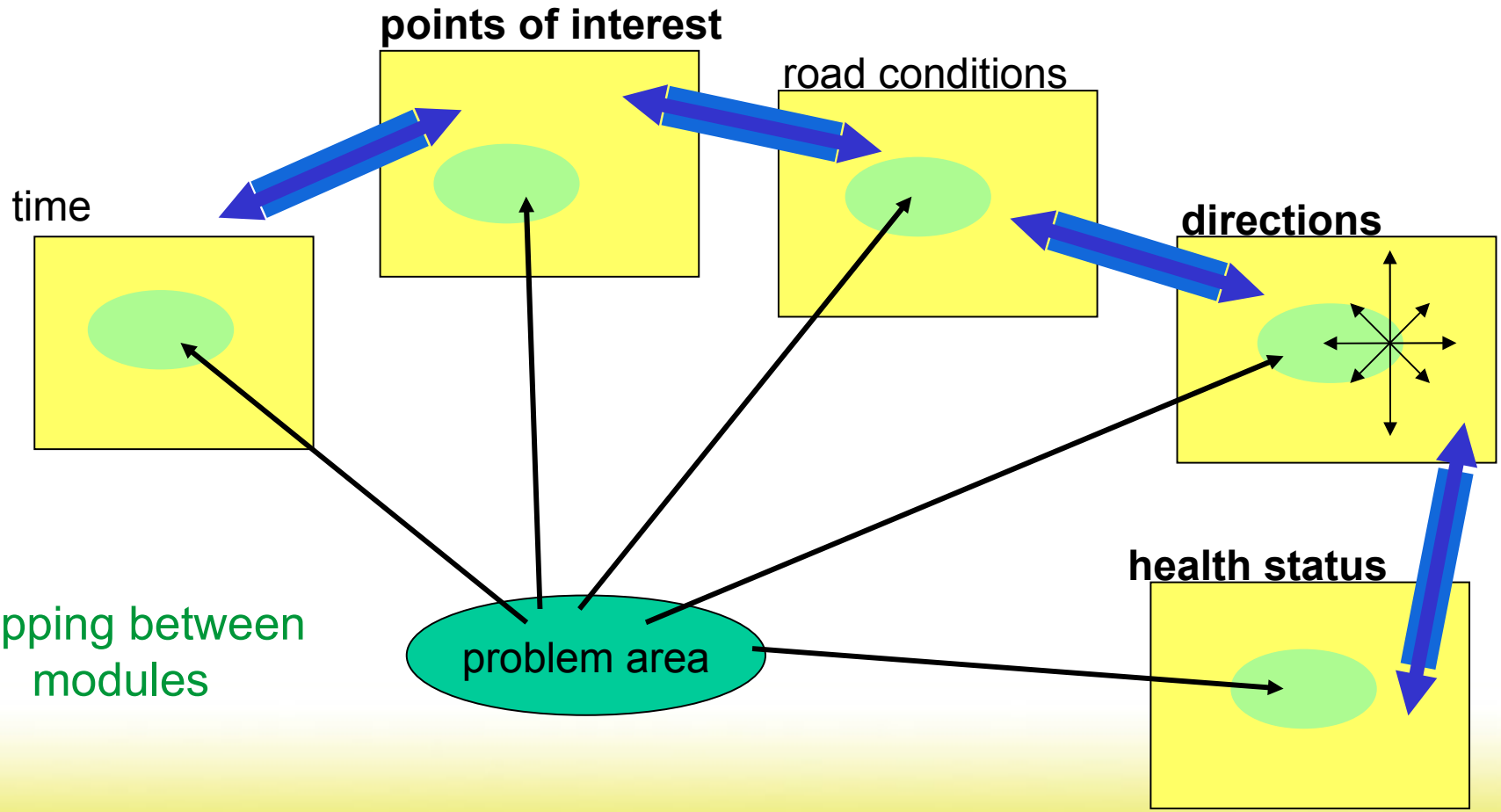
OASIS ONTOLOGIE
Quality of life for the Elderly

Ontological diversity
➡ inter-ontology mappings



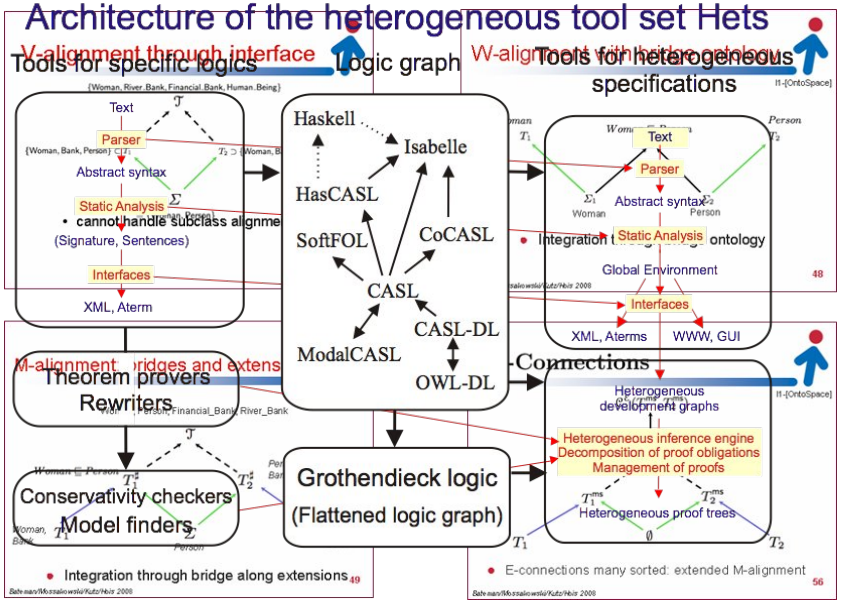
see our previous Ontolog presentations for references

Mapping between modules



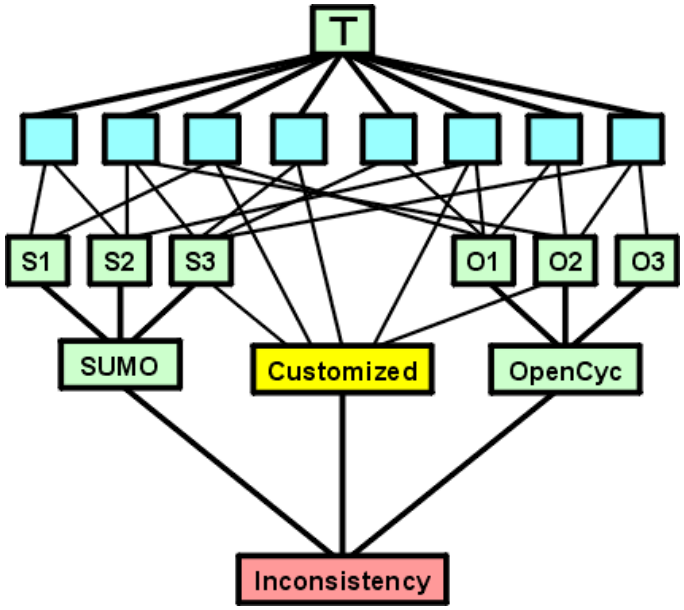
Current Ontology Work in Bremen

- Tools for ontological development (HETS)
- Formalisation of ontological modularity (CASL) experiments:
  - DOLCE in CASL,
  - SUMO+MILO in CASL,
  - spatial calculi in CASL, …
  - formal ontology alignment, …
- Methodologies for sound ontological development and benchmarking
- Evaluation and correction of existing ontologies



IAOA + *Ontological Modularity*

- **Proposed Action Area:**
  - **Ontology Structuring Mechanisms and Ontological Modularity**
  - **Formalizing and populating John Sowa's 'lattice of theories' as a structured graph of heterogeneous specifications (HETS)**
- **Relations between ontology development and standardisation standards as modular ontologies?**
- **Standardisation of the modularisation layer itself?**
- **Building awareness of modularisation into ontology courses and curricula?**
- **Thinking small rather than monolithic!**



John Sowa
(email/web discussion)

IEEE Standard
Upper Ontology
Working Group