Track B : Upper Ontologies for Specifying Context

• Track Co-champions:
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• Blog Page
  • Not there yet...
Motivations
Objective

• The objective of this Ontology Summit 2018 track is to understand:
  • The role of upper ontologies in providing or using context
  • Upper ontology partitions that explicitly define a kind of context
  • Disposition of other model content that may be considered as the context for something, in the context of upper ontologies.
"The FAA predicts 400,000 to 2.3M licensed Part 107 remote pilots by 2020”
- FAA Air Traffic Organization
Policy: Order JO 7200.23
Why we Need Context

• “Meaning is context”

• Dictionaries: the meaning (referent) of a word or term is sensitive to the context in which it is used

• Ontologies: should deal with that formally

• Desired end point: there should be nothing in the ontology for which it can be said that the ‘meaning’ of that item is itself dependent on context
  • If that is the case the ontology is still just a dictionary
  • Therefore: ontology must contain within it all the material relating to context
Context-dependent data stores

Integration issues arise from:
- perspective / context
- terminology mismatch
Context-dependent data stores

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There are various points at which the bank interacts with a given person (customer for various products)
Context examples in Upper Ontology

• Sowa: KR Lattice defines Independent, Relative and Mediating Thing
  • Relative: contractually defined thing (teacher, parent, asset, catalyst, resource etc.)
  • Mediating: another name for [this kind of] context
• BFO: Dependent Continuant is defined in context of Thing
  • Here, the context may be anything
KR Lattice: ‘Relatives’ Partition

• Everything which may be defined falls into one of three categories:

  - **Independent Thing**
    - “Thing in Itself”
    - e.g. some Person

  - **Relative Thing**
    - Thing in some context
    - e.g. that person as an employee, as a customer, as a pilot...

  - **Mediating Thing**
    - Context in which the relative things are defined
    - e.g. employment, sales, aviation
Hierarchy of Contexts: Customer

- Legal Person
- Natural Person
- Organization
- Bank Client
- Retail Customer
- Current Account Holder
- Loan Borrower
- Retail Customer Relationship
- Current Account Relationship
- Loan Relationship
- Bank Client Relationship

played by
In context
Session Ideas and Motivations

• Hear from the leading TLOs on how they view or handle context
• Get someone in from ISO TC37 to talk about this
• Structure
  • Usual: 2 or 3 speakers + discussion
  • Panel? E.g. convene and interview TLO leaders as distinct from presentations?
• Case Studies: get some practical experience on how context is handled in real applications
• Theory: Hope to hear about:
  • BFO, DOLCE, GFO, YAMATO, UFO, OntoUML/SMIF, who else?
  • Lessons from Cyc, SUMO etc.?
  • Context inclusion versus microtheories
Presentations

Session 1: 07 Feb
• Try and get an overview of how Context is seen and handled in TLOs
• Depending on availability, either a panel or 2 or 3 invited speakers

Session 2: 14 March
• Practical implications
• Case studies and / or pragmatic solutions to contextual problems, that use upper ontologies.
Questions?