

# Governing principles for a useful OOR

Bill Andersen, Ontology Works, Inc.

22 August 2008

# Desiderata

- [ What we want

- Any content can play

- Any implementation path can play

- [ What we don't want

- An OOR that is wedded to a particular standard or perspective on what "ontologies" are

# Syntactic egalitarianism

— [ *Can't stipulate authoring language* ]

— [ Ontologies are linguistic artifacts ]

— [ Each is expressed wrt a logical system ]

— [ The OOR must accept ontologies expressed in arbitrary logical systems ]

— [ Enabled thru plug-in API ]

# Semantic accessibility

— [ *Can't stipulate end-use (engines)* ]

— [ Each logical system makes semantic assumptions ]

— [ Upward (semantics-preserving) and downward (semantic approximation) approaches are available ]

— [ Collection of inter-system translation modules ]

— [ Enabled thru plug-in API ]

# Role of Common Logic

— [ A catch-all system for exchange and transmission of logical theories (i.e. ontologies)

— [ Expressiveness  $\geq$  FOL ('>' from sequence markers)

— [ Ideal upper-limit logical system for translation in OOR

— [ Translation to or implementation of a CL concrete dialect

— E.g. OWL  $\rightarrow$  CLIF or OWL as a concrete CL dialect

# How much meta-level?

- [ We need to search

- [
  - Ontologies with the name “kitty”

- [
  - Requires a uniform notion of names

- [ Maybe some minimal notion of syntactic constituency

- [
  - Each language has its own idea of structure  
(OWL≠CLIF≠UML≠...)