Building Ontologies with Basic Formal Ontology

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Principles for Terminology

Gather and Select Terminology

1. Include in the terminology terms used by scientists
2. Strive to ensure maximal consensus with the scientists’ usage
3. Identify areas of disciplinary overlap where terminological usage is not consistent
4. In terminology construction and ontology design, make use of as many existing resources (terminologies and ontologies) as possible.

Formatting Terminology

5. Use singular nouns.
6. Use lowercase for common nouns.
7. Avoid acronyms.
8. Associate each term in the ontology with a unique alphanumeric identifier.
10. Ensure univocity of relational expressions.
11. Avoid mass terms.
12. Distinguish the general from the particular.

Principles for Definitions

13. Provide all nonroot terms with definitions
14. Use Aristotelian definitions
15. Use essential features in defining terms.
16. Start with the most general terms in your domain.
17. Avoid circularity in defining terms.
18. To ensure the intelligibility of definitions, use simpler terms than the term you are defining.
19. Do not create terms for universals through logical combination.
20. Definitions should be unpackable (Term-definition intersubstitutability)

Principles for Taxonomies
21. Structure every ontology around a backbone is_a hierarchy.
22. Ensure is_a completeness.
23. Ensure asserted single inheritance.
24. Both developers and users of an ontology should respect the open-world assumption.
25. Adhere to the rule of objectivity, which means: describe what exists in reality, not what is known about what exists in reality

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