Ontologies on the web; current uses

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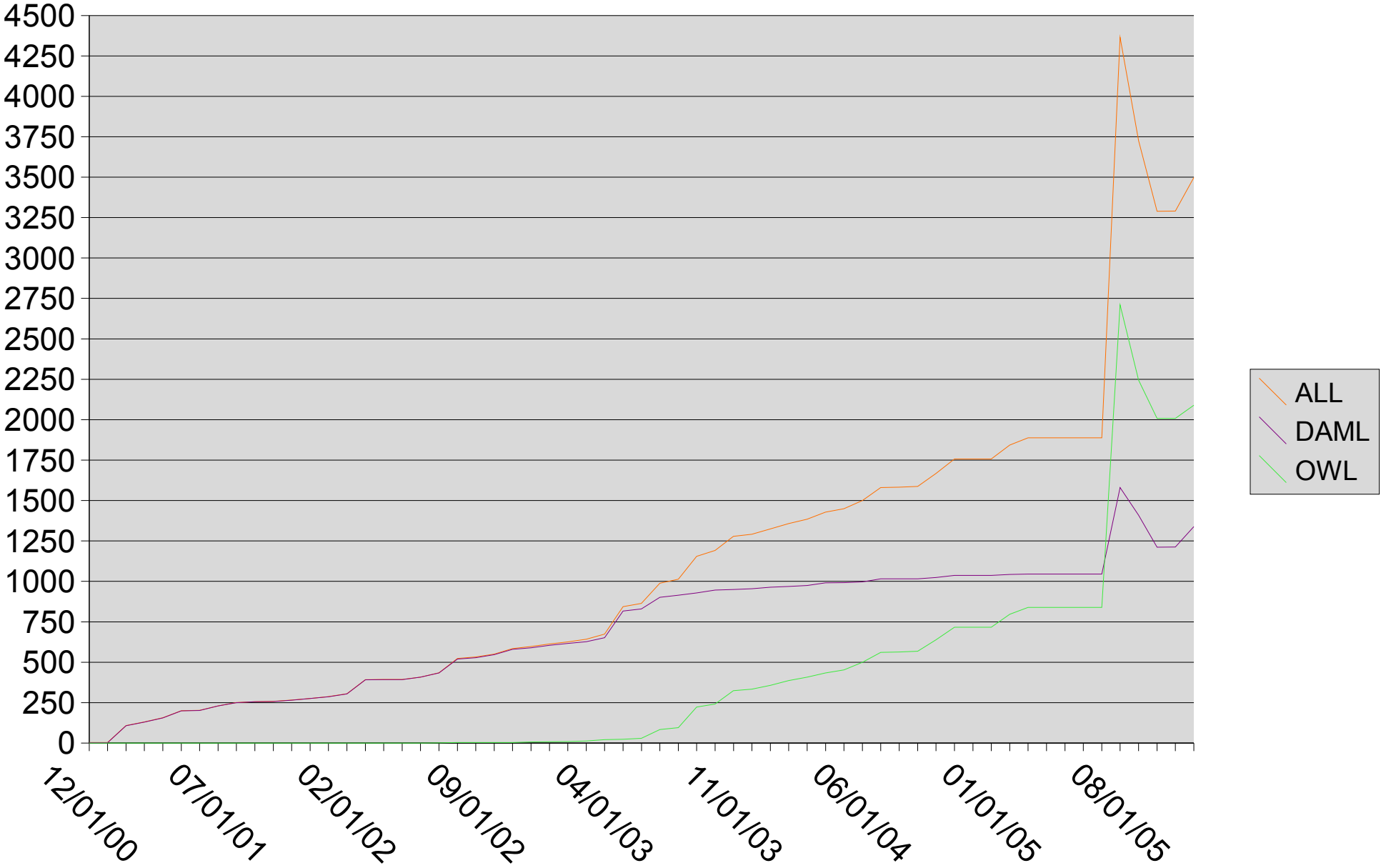
Joint work with Chris Baker, Greg Butler and Volker Haarslev.

* Work done while at the Fungal Web Project, Concordia University

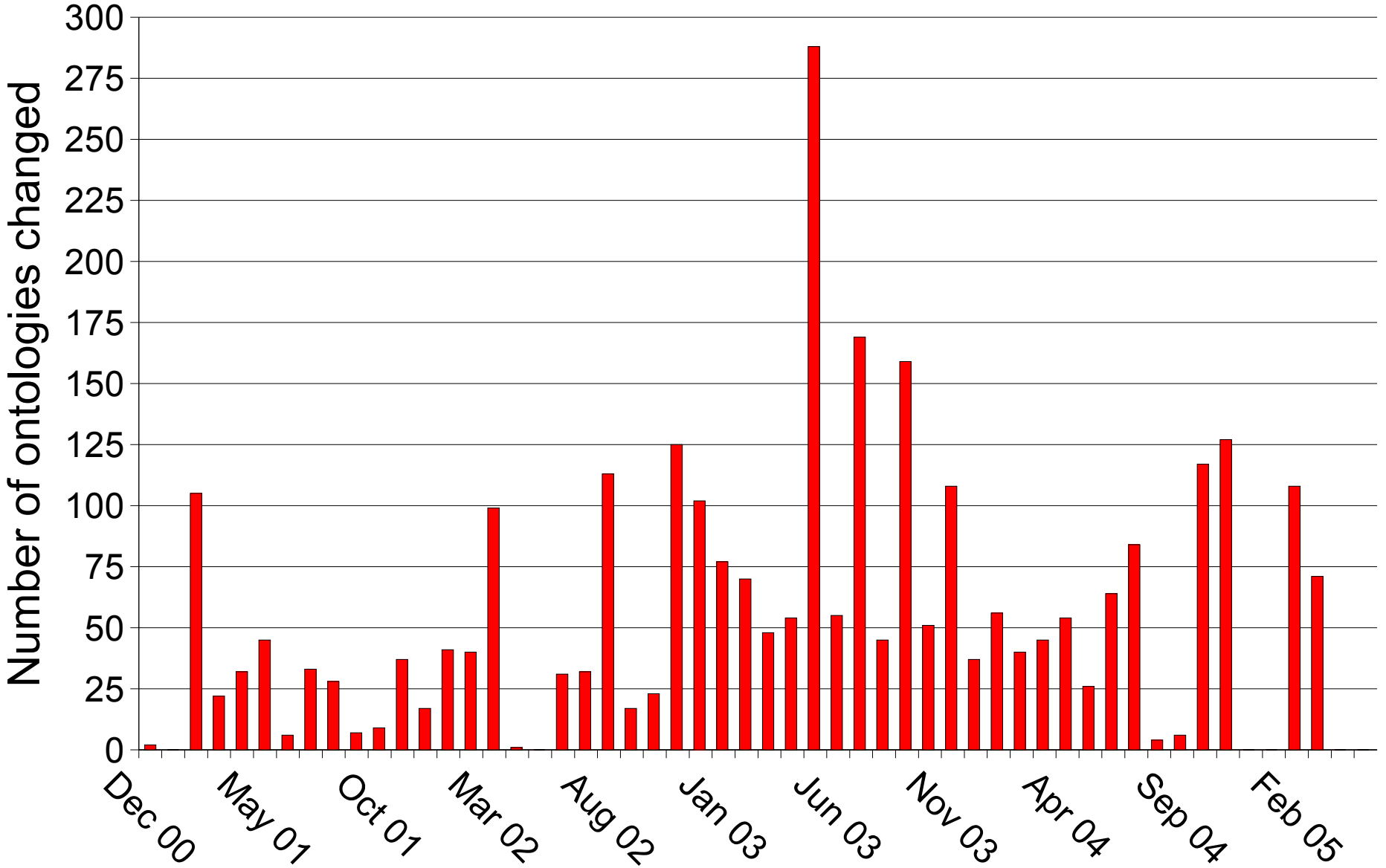
Outline

- How many ontologies are really out there?
- What are they being used for?
- What are people doing with them?
- How complicated are they? Are these still research toys?

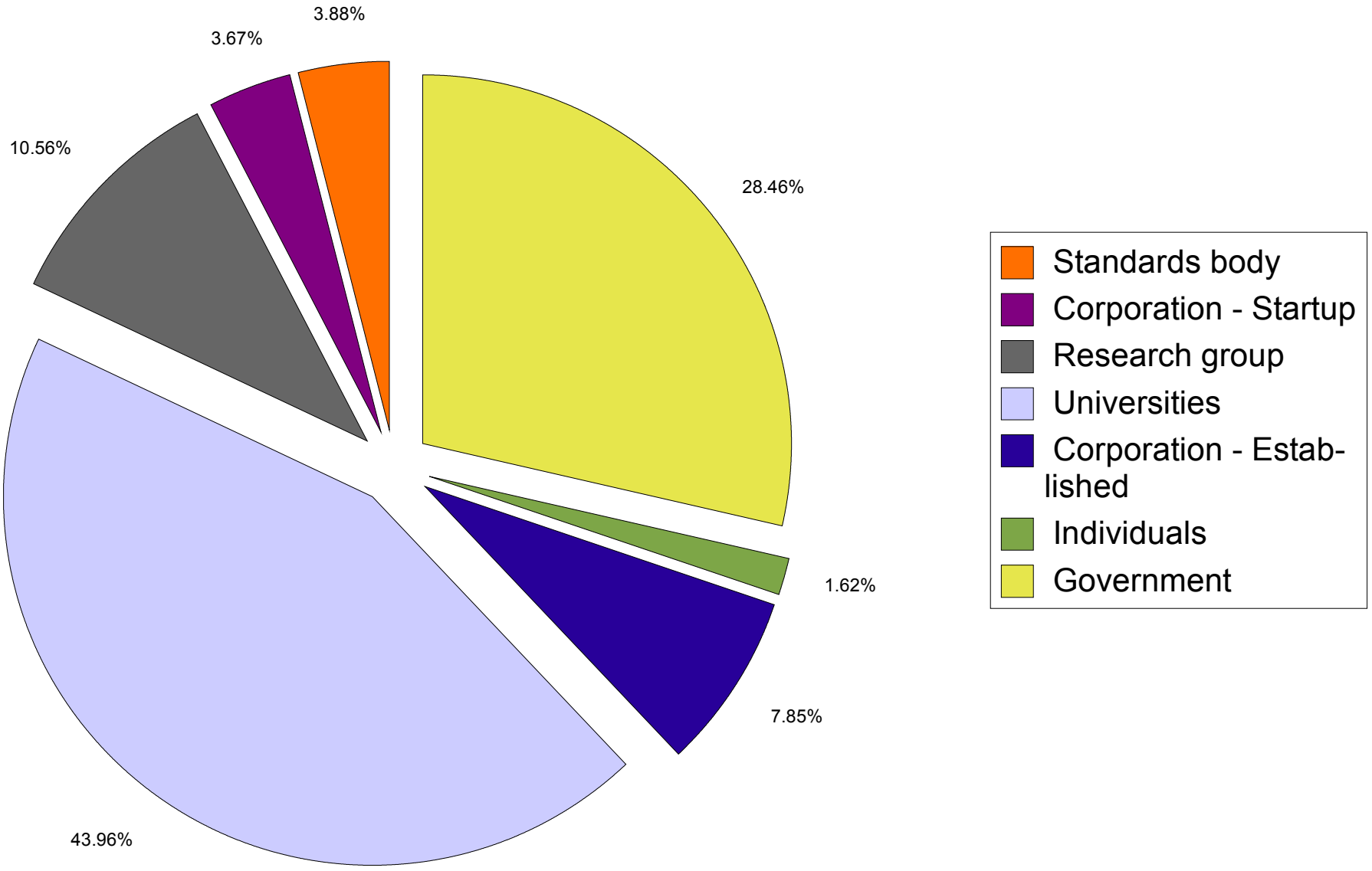
Ontologies over time



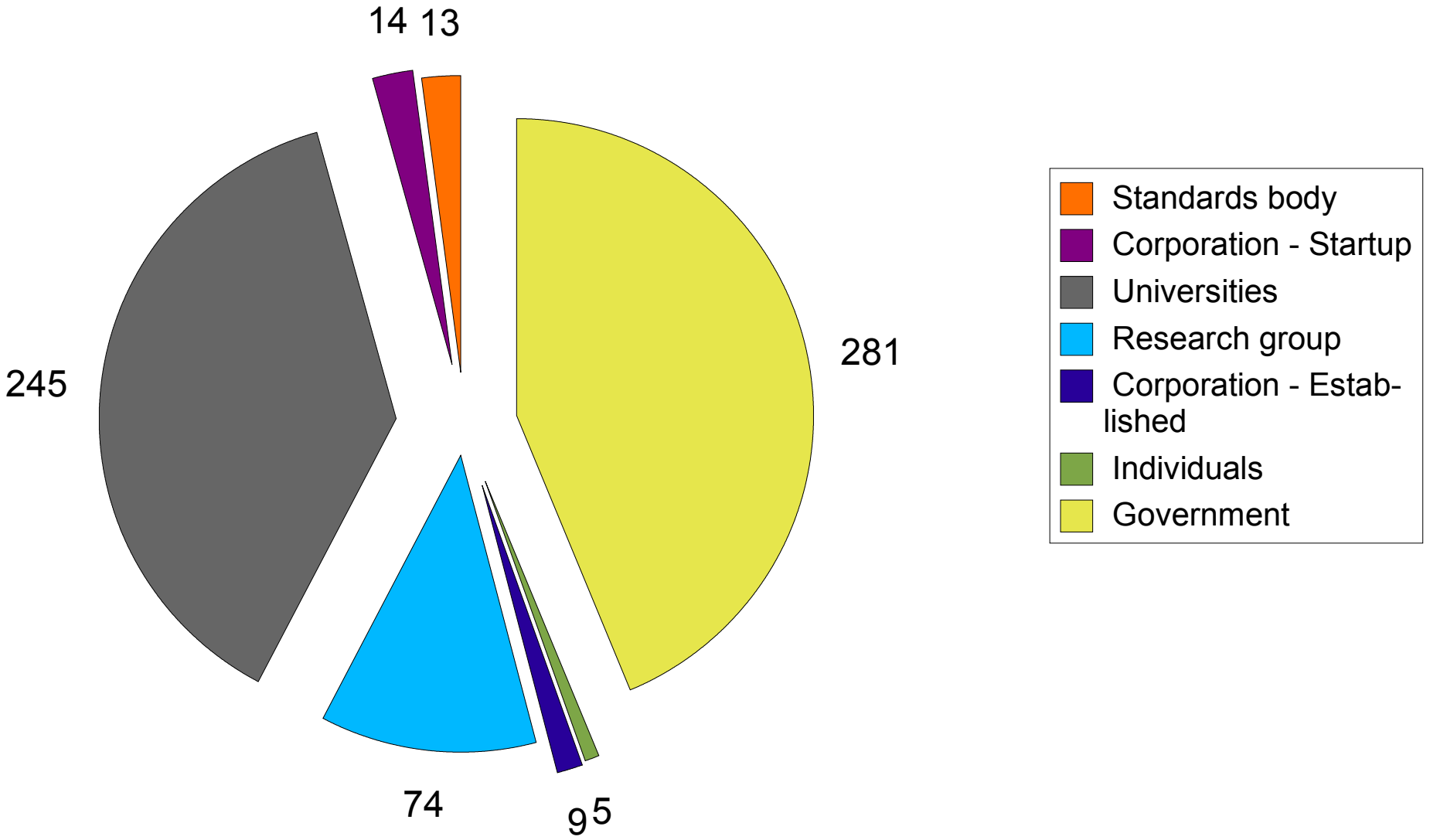
Changes to available ontologies.



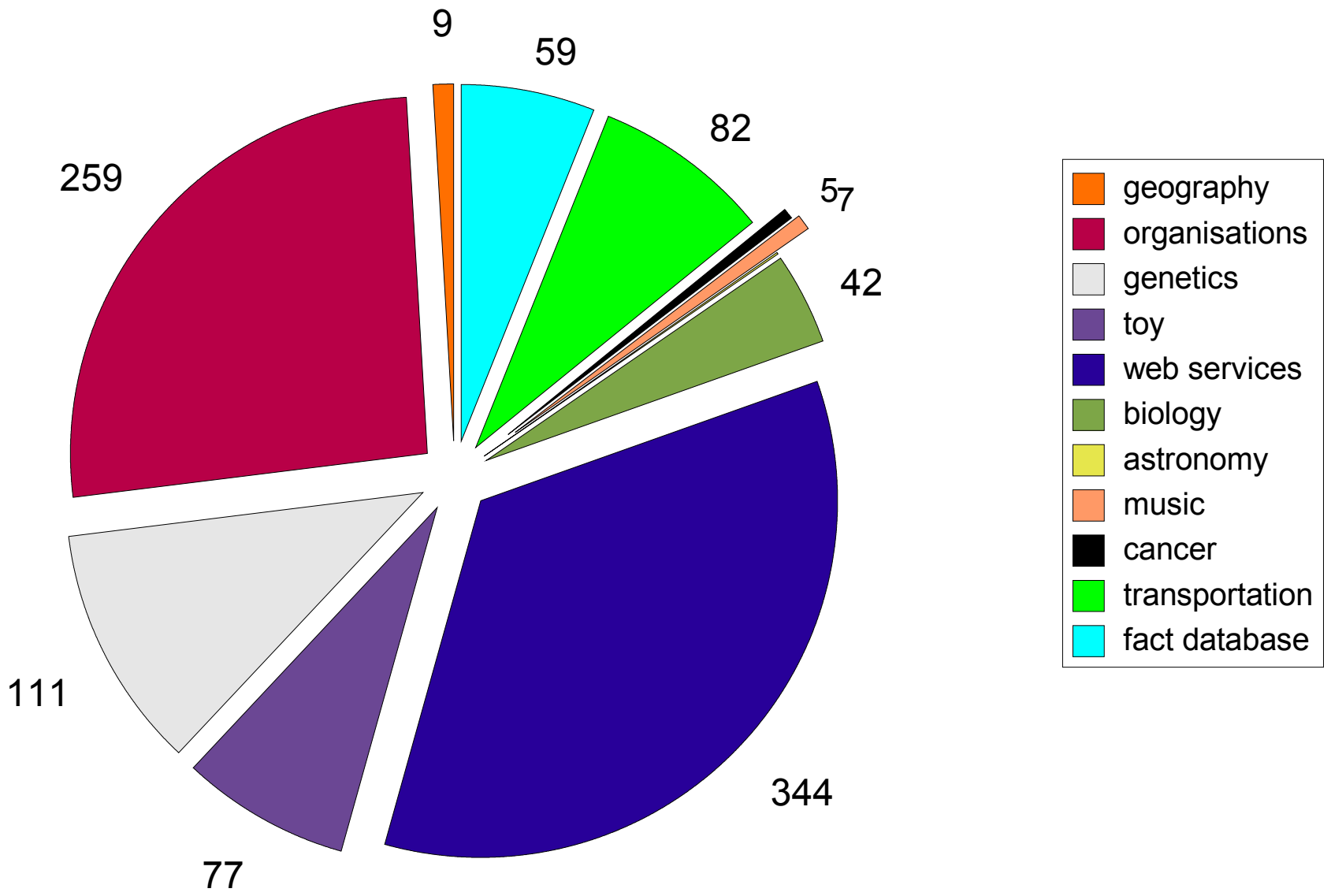
Ontology Publishers.



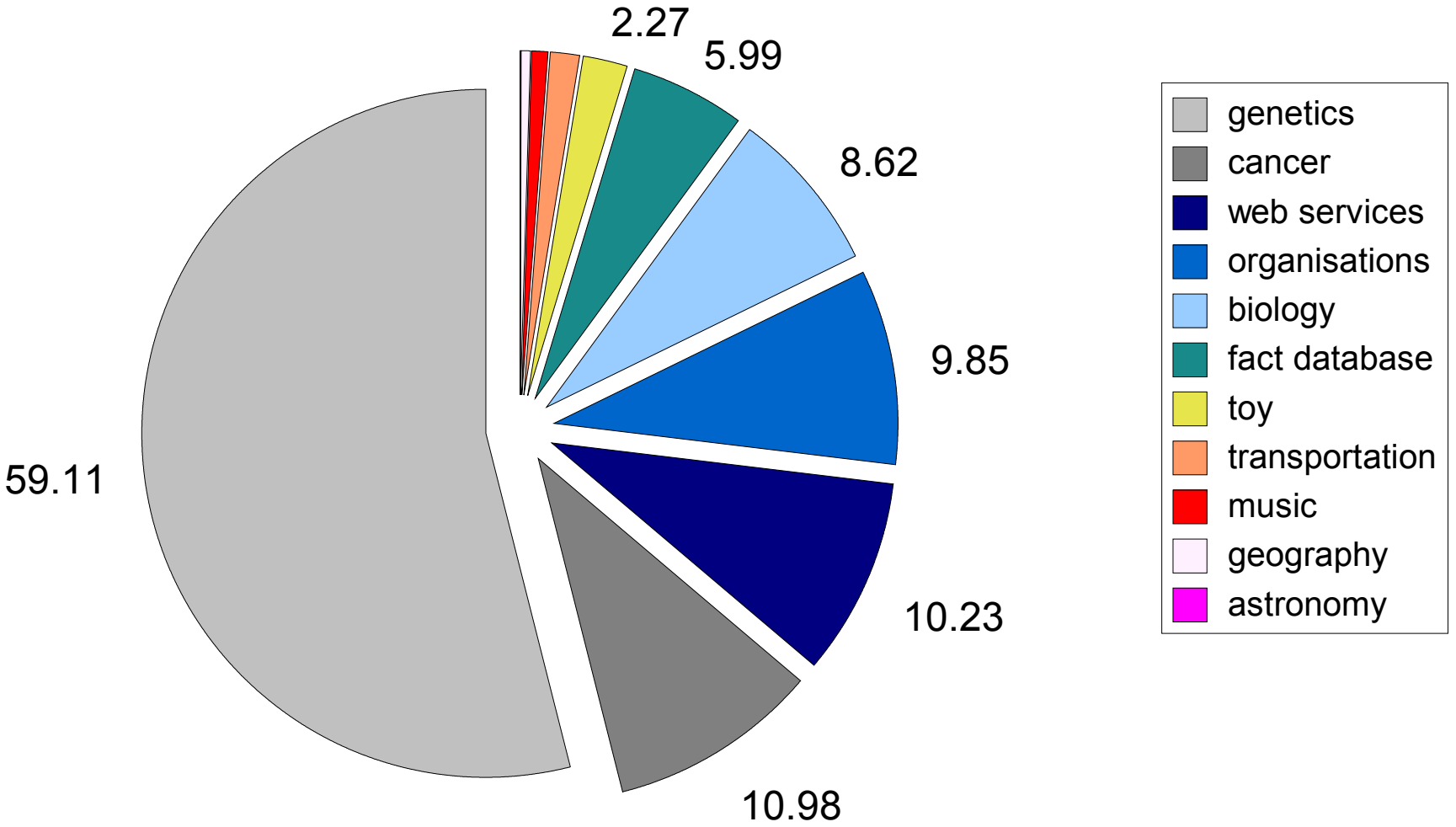
Amount published.



Ontology topics (ad hoc)



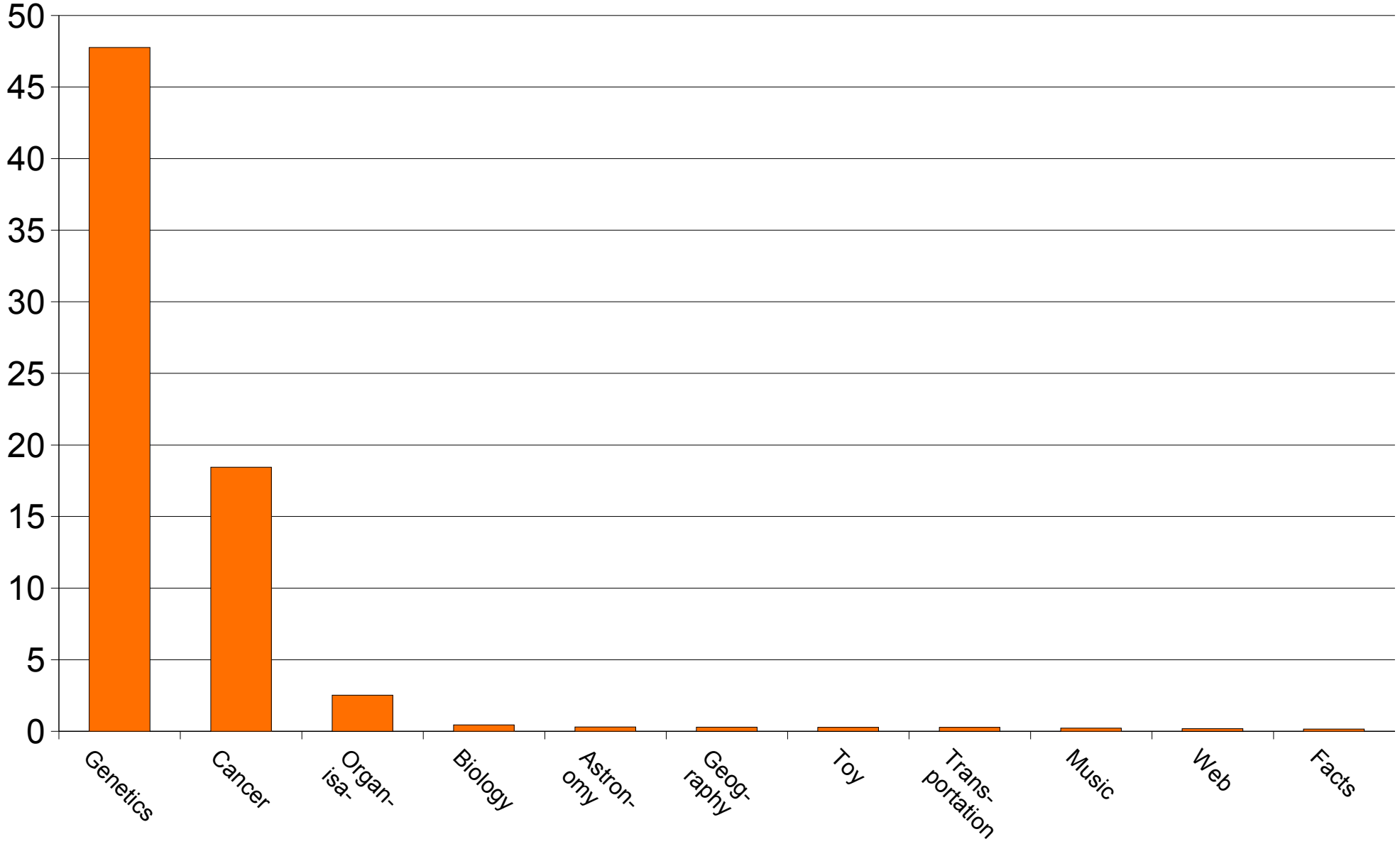
Amount of data per topic.



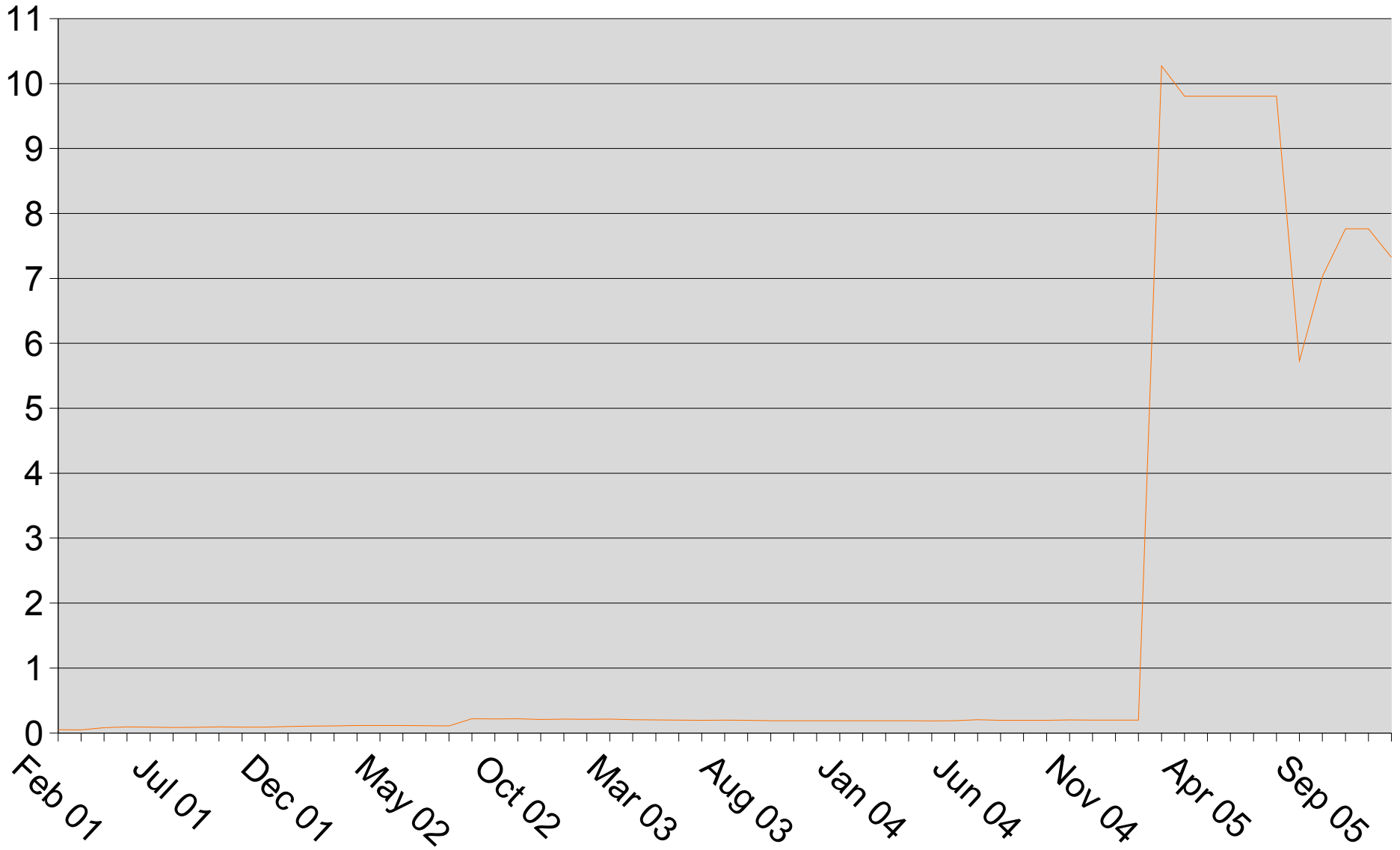
Evaluating Ontologies: Complexity

$$\text{Complexity} = \frac{\text{Number of classes}}{\text{Number of class modifiers}}$$

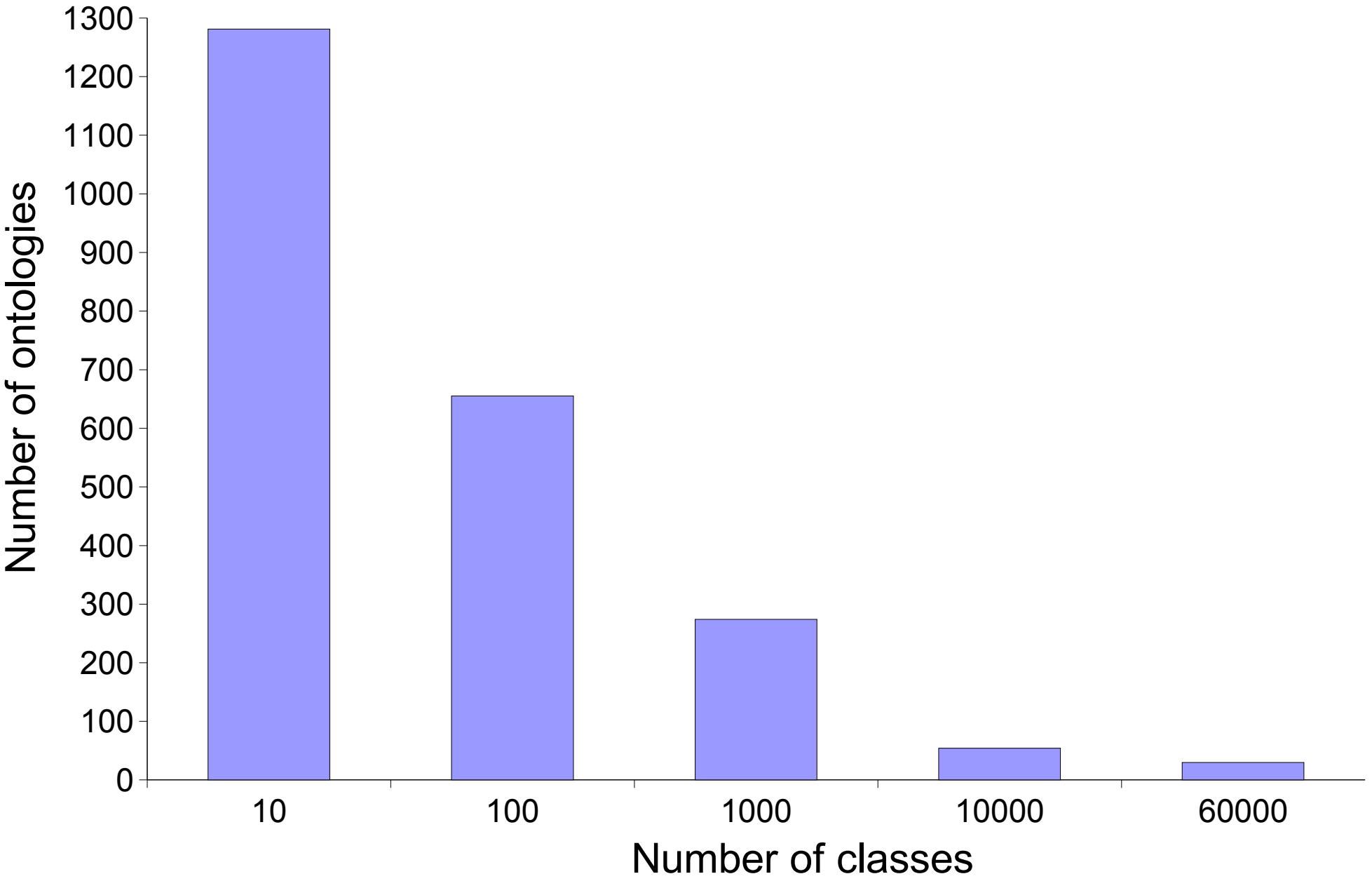
Topic complexity.



Average complexity over time



Ontology size.



Notes and Observations

- Scaling is still an issue for tools.
- Ontology use growing in scope and scale, but not in complexity.
- Data integration are already being (re)created. (But there is hope)
- Ontology evaluation needs further work.

Conclusion

- Still early in the adoption of the technology.
  - Limited production in bio-medical domain for simple data exchange.
  - Limited production use in web services for service definition.
- Many engineering issues to be solved.
- Ontology and metrics list is available at:

http://junobeach.cs.uwaterloo.ca/~warren/datasets/known_ontologies.xml.gz