Locating Biology: The Development and Application of an Environment Ontology

21st – 25th February, 2010.

Schloss Dagstuhl - Leibniz Center for Informatics

Seminar Agenda

Organizers
Michael Ashburner (University of Cambridge, GB)
Christian Freksa (Universität Bremen, DE)
Suzanna Lewis (Lawrence Berkeley National Laboratory, US)
Norman Morrison (University of Manchester, GB)
Barry Smith (SUNY - Buffalo, US)

Day 1 - Mon 22nd Feb	**Day Theme**	
07:30 – 08:45	Breakfast	
Session 1.1	**Welcome**	
09:00 – 09:20	Welcome	M. Ashburner
09:20 – 09:50	Introduction of participants and the organizations they represent.	
09:50 – 10:00	Overview of seminar goals and procedures.	S. Lewis
10:00 – 10:30	Discussion	
10:30 – 10:45	Coffee Break	
Session 1.2	Background	**Session Chair S. Lewis**
10:45 – 11:05	Introducing EnvO	N. Morrison
11:05 – 11:25	Introducing Gaz	M. Ashburner
11:25 – 11:45	Collecting Use Cases	N. Morrison
11:45 – 12:15	Discussion	

12:15 – 14:00	Lunch	
Session 1.3	**Geospatial Environments**	**Session Chair N. Morrison**
14:00 – 14:30	Habitats vs Environments - what do we really mean?	B. Bennett
14:30 – 14:50	TBC	W. Kuhn
14:50 – 15:10	Vagueness and the tradeoff between the classification and delineation of geographic regions	T. Bittner
15:10 – 15:30	Discussion	
15:30 - 15:45	Coffee Break	
Session 1.4	**Representing the Environment**	**Session Chair M. Ashburner**
15:45 – 16:05	Logic-based ontologies of environments	M. Keet
16:05 – 16:25	Taxonomy of Common-sense Landscape Categories or Realist Ontology of Landscape: Which does EnvO Need?	D. M. Mark
16:25 – 16:45	TBC	P.L. Buttigieg
16:45 – 17:30	Discussion	
18:00	Dinner	
22:00	Cheese Platter	

Day 2 - Tue 23rd Feb	**Day Theme**	
07:30 - 08:45	Breakfast	
Session 2.1	**User community**	**Session Chair** **D.M. Mark**
09:00 – 09:20	TBC	N. Sarkar
09:20 – 09:40	The ENA	R. Vaughan
09:40 – 10:00	TBC	P. Mabee
10:00 – 10:30	Discussion	
10:30 – 10:45	Coffee Break	
Session 2.2	**PLANNING**	**Session Chair** **N. Morrison**
10:45 – 11:05	The OBO Foundry	S. Lewis
11:05 – 11:25		
11:25 – 11:45		
11:45 – 12:05		
12:05 – 12:15	Discussion	
12:15 – 14:00	Lunch	
Session 2.3	**Session Theme**	**Session Chair**
14:00 – 14:20		
14:20 – 14:40		
14:40 – 15:00		
15:00 – 15:20		
15:20 – 15:30	Discussion	
15:30 – 15:45	Coffee Break	
Session 2.4	**Session Theme**	**Session Chair**
15:45 – 16:05		
16:05 – 16:25		
16:25 – 16:45		
16:45 – 17:05		
17:05 – 17:30	Discussion	
18:00	Dinner	
22:00	Cheese Platter	

Day 3 - Wed 24th Feb	**Day Theme**	
07:30 – 08:45	Breakfast	
Session 3.1	**Session Theme**	**Session Chair**
09:00 – 09:20		
09:20 – 09:40		
09:40 – 10:00		
10:00 – 10:20		
10:20 – 10:30	Discussion	
10:30 – 10:45	Coffee Break	
Session 3.2	**Session Theme**	**Session Chair**
10:45 – 11:05		
11:05 – 11:25		
11:25 – 11:45		
11:45 – 12:05		
12:05 – 12:15	Discussion	
12:15 – 14:00	Lunch	
Session 3.3	**Session Theme**	**Session Chair**
14:00 – 14:20		
14:20 – 14:40		
14:40 – 15:00		
15:00 – 15:20		
15:20 – 15:30	Discussion	
15:30 – 15:45	Coffee Break	
Session 3.4	**Session Theme**	**Session Chair**
15:45 – 16:05		
16:05 – 16:25		
16:25 – 16:45		
16:45 – 17:05		
17:05 – 17:30	Discussion	
18:00	Dinner	
22:00	Cheese Platter	

Day 4 - Thu 25th Feb	**Day Theme**	
07:30 – 08:45	Breakfast	
Session 4.1	**Session Theme**	**Session Chair**
09:00 – 09:20		
09:20 – 09:40		
09:40 – 10:00		
10:00 – 10:20		
10:20 – 10:30	Discussion	
10:30 – 10:45	Coffee Break	
Session 4.2	**Session Theme**	**Session Chair**
10:45 – 11:05		
11:05 – 11:25		
11:25 – 11:45		
11:45 – 12:05		
12:05 – 12:15	Discussion	
12:15 – 14:00	Lunch	
Session 4.3	**Session Theme**	**Session Chair**
14:00 – 14:20		
14:20 – 14:40		
14:40 – 15:00		
15:00 – 15:20		
15:20 – 15:30	Discussion	
15:30 – 15:45	Coffee Break	
Session 4.4	**Session Theme**	**Session Chair**
15:45 – 16:05		
16:05 – 16:25		
16:25 – 16:45		
16:45 – 17:05		
17:05 – 17:30	Discussion	
18:00	Dinner	
22:00	Cheese Platter	

Day 5 - Fri 26th Feb	**Day Theme**	
07:30 – 08:45	Breakfast	
Session 5.1	**Session Theme**	**Session Chair**
09:00 – 09:20		
09:20 – 09:40		
09:40 – 10:00		
10:00 – 10:20		
10:20 – 10:30	Discussion	
10:30 – 10:45	Coffee Break	
Session 5.2	**Closing Session**	**Seminar Organisers**
10:45 – 12:15	Final discussion + Seminar Wrap Up	
12:15 – 14:00	Lunch	
18:00	Dinner	
22:00	Cheese Platter	

Titles & Abstracts

Vagueness and the tradeoff between the classification and delineation of geographic regions

Thomas Bittner
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In this talk, the vague, granular, and scale-dependent nature of the classification and delineation of geographic regions is analyzed from an ontological perspective. In classification and delineation systems for ecoregions, ecosystems, biomes, biotopes, etc. the interplay of granularity and different sorts of vagueness leads to two tradeoffs: Firstly, for geographic regions there is a tradeoff between the possible preciseness (lack of vagueness) of the delineation and the possibility of a classification system that is not trivial. Secondly, there is a tradeoff between the reliance on local qualities for the precise delineation and the reliance on non-local qualities for the classification. If the roles of vagueness and granularity in the classification and delineation of geographic regions are not understood properly, then both tradeoffs seem to pose serious challenges for scientific uses: Logically rigorous, non-local, and non-arbitrary classification systems for ecoregions, ecosystems, biomes, biotopes, etc. seem to be impossible and their delineation seems to be arbitrary or merely policy-based.

Logic-based ontologies of environments

Marijke Keet (Free University Bozen-Bolzano, IT)

During this talk, I will focus on answering the three questions regarding development of environment ontologies, which concern the challenges, requirements, and prioritization of activities. Establishing a clear set of requirements by and for the different stakeholders is essential for success. The proposed prioritization of the plethora of possibilities for environment ontologies is directed toward an orchestration of logic-based ontologies represented in more and less expressive languages to suit the different purposes, and concentrating first on environments of whole organisms in agriculture and nature.
