

Introduction to DC-Vocamp 2016

Gary Berg-Cross
DCVoCamp Organizer
Ontolog Forum and RDA US Advisory Committee
gbergcross@gmail.com

<http://vocamp.org/wiki/GeoVoCampDC2016>

Thank you: UMD's Center for Geospatial Information Science
Tweet: #DCvocamp16

Outline

Intro & Call in Info

Some History

Why VoCamps

Overview of the Days

Methodology

- Conceptual and ontological engineering
- Something on Ontology Design Patterns

<https://webmeeting.umd.edu/geovocampdc2016/>

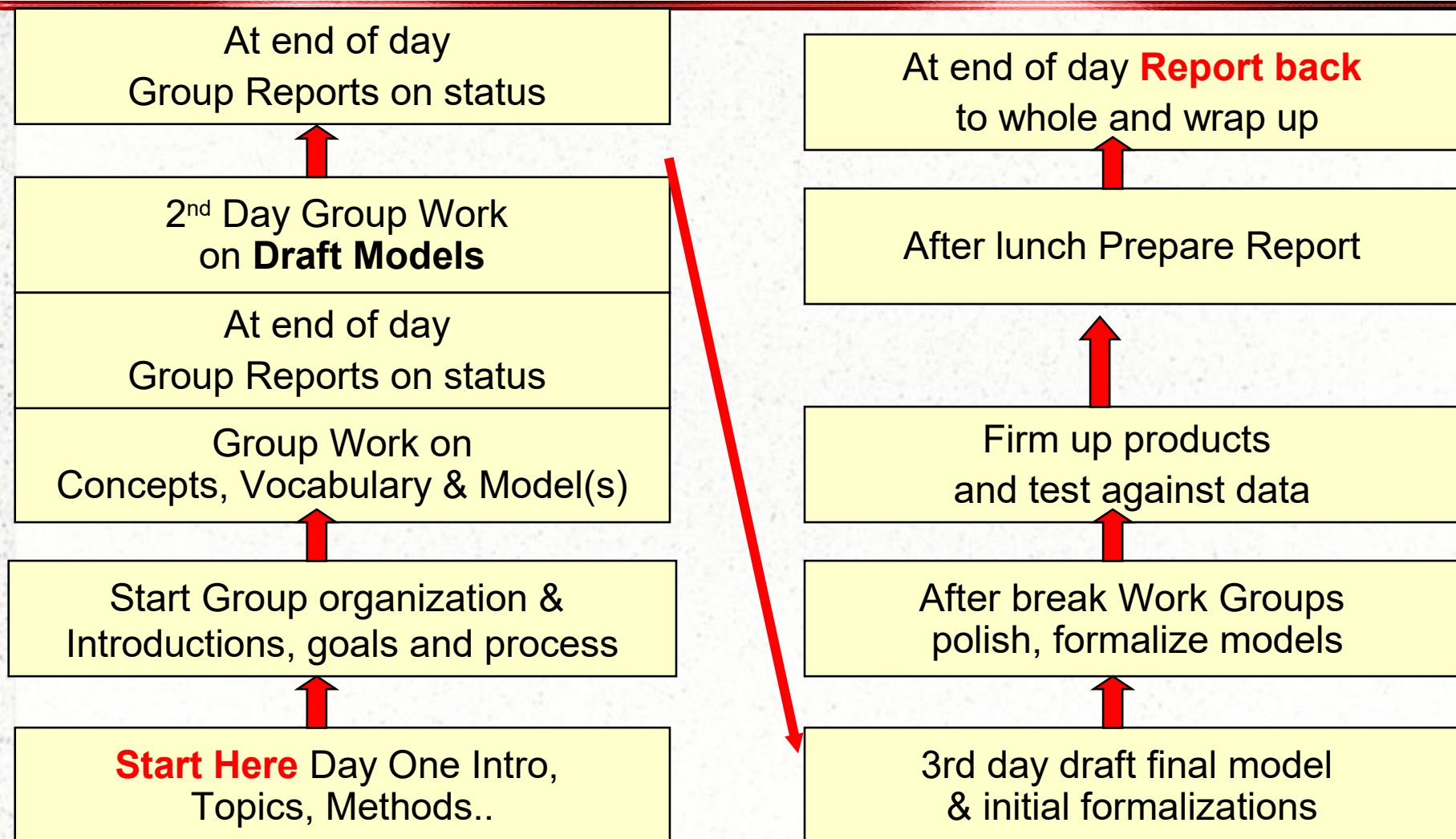


Attendees at Spatial Semantics & Ontologies (SSO) 2011 Workshop, Chicago, Nov. 1, 2011

Left to Right: Mohsen Taherian, Krzysztof Janowicz, Benjamin Adams, Markus Schneider, Zhuojie Huang, Nancy Wiegand, Kathleen Stewart, Brandon Whitehead, Alexander Savelyev,

Emily White, Xi Wang and Gary Berg-Cross

Notional Logic of Work Sessions



Outline for Day 1- Tuesday Nov. 29th

9:00 - 9:10 Introductions, Welcome, Logistics & Schedule Overview –Center for Geospatial Information Science/SOCO

Main room 1101 Morrill Hall : Note - Morning session includes an adobe connect virtual meeting

9:10-9:20 Workshop Vision and Strategy- Gary Berg-Cross

9:20 -10:30 Working Topics (Presented by Topic Leaders)

10:30-10:45 Brief Recap on Group Methods- Gary Berg-Cross

10:45-11:00 Break (Coffee available)

11:00-12:00 Group organization & inductions - setting goals & process (Breakout Rooms)

12:00 -1:00 **Lunch and Networking** - On your Own

1:00- 1:30 *Remote presentation by Krzysztof Janowicz (UCSB)*

1:30 – 3:00 Group Work on Concepts, Vocabulary and Model (Breakout Rooms)

3:00 -3:15 **Break**

3:15 -4:30 Group Work on Draft Models (Breakout Rooms)

4:30-5:30 Group Reports to the Whole: includes Adobe session as a virtual meeting

Post 5:30 PM – Groups may make arrangements for dinner on their own

Some History

The Spatial Ontology Community of Practice was officially begun in
October of 2006

Oct. 2009 NeoGeoVoCamp held at the Library of Congress

[SOCoPVoCampDC_2010_12_03](#) & [GeoVoCampDC2011](#)

GeoVoCamp Santa Barbara 2012 & [GeoVoCamp Dayton 2012](#)

[GeoVoCamp SCoP DC 2012](#)

[Descartes-Core GeoVoCamp Santa Barbara 2013](#)

[SOCoP's GeoVoCampDC2013 held at NSF Nov. 18-19, 2013](#)

[Descartes-Core GeoVoCamp Santa Barbara 2014](#)

[GeoVoCamp at USGS in DC - GeoVoCampSOCoP2014](#)

GeoVoCampDC2015 Nov.30-Dec. 2 at USGS Facility in Reston VA

Also an Ontology Hackathon as part of Ontology Summit

SOCoP workshop info at:<http://ontolog.cim3.net/wiki/SocopWorkshops.html>

Why VoCamps?

Problem: manageable semantics for work groups

The session is organized around 3-4 Interdisciplinary Work Groups made up of domain experts, group facilitators and people with web/modeling/semantic/ ontological experience.

- Facilitate group discussion
- Help with the conceptualization needed
- Help develop small, well engineered coherent, minimally constrained schemas as modular starter set

Build on and follow up GeoVoCamp & RDA meetings

This will be a great opportunity for people interested in using semantics to see lightweight approaches applied in context.

Day 2 Wednesday

- Wednesday Nov. 30th 9:00~9:15 Updates, Q & A etc. (schedule etc.) Main room

9:15-10:45 Group Work on Concepts, Vocabulary and Model (Breakout Rooms)

10:45 -11 Break

11:00-12:15 Group Work on Draft Models (Breakout Rooms)

12:15 -1:15 Lunch and Networking – on your own

1:15- 2:45 Work Groups – draft final conceptual model (Breakout Rooms)

2:45- 3:15 Work Groups identify data to test model & Prepare initial formalizations

3:15-3:30 Break 3:30-4:30 Prepare Brief Back Report (Breakout Rooms)

4:30-5:30 Interim Group reports and discussion Main Room (Broadcast as Virtual Meeting)

Dinner as organized by group interest

Thursday - Day 3

- Th. Dec. 1

9:00-9:15 Updates, Q & A etc. (schedule, GitHub effort etc.) Main Meeting Room

9:15- 9:45 Presentation by Grant McKenzie: "Semantic Signatures for place differentiation."

9:45-10:45 Work Groups Firming up products and alignments (Breakout Rooms)

10:45-11:00 Break

11:00-12:00 Prepare group reports and plans for follow up (Breakout Rooms)

12:00 -1:00 Lunch and Networking - On your Own

1:00 ~ 2:30 Group reports & Wrap up (Main Room)

Something on Ontological Engineering Methodology

- Used to clarified agreement & reduce ambiguities/conflicts on domains (e.g. geospatial, chemical, materials & related phenomena)

Ontology Engineering

Problems, Vocabulary Components, Relation Identification & Clarification

Lightweight Methods: develop general, reusable patterns that provide a common, modular framework to generate ontologies that are consistent and can support interoperability.

Conceptualization Phase

Agreements can then be formally represented in: **Constrained, engineered models** - Systematic organization & framing with visual expression.

Minimal encoding bias: No assumptions about knowledge representation

Existing Voc & Ontologies

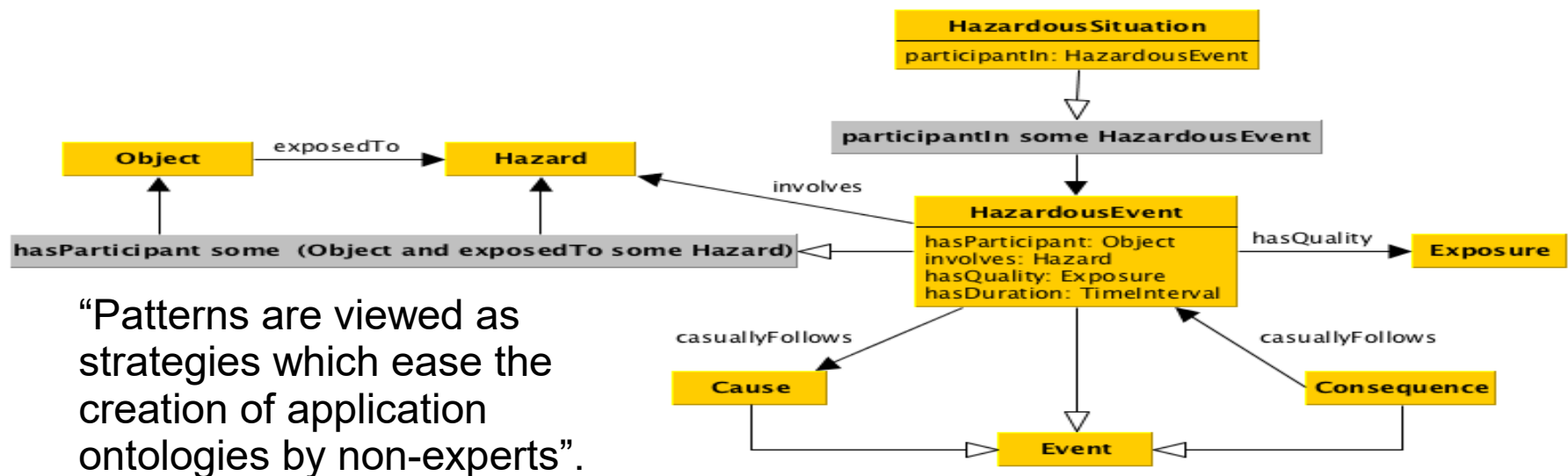
We like data-grounded work with interoperability in mind

Formalization

Rationale for Ontology Design Patterns

Small, well engineered, modular starter set

- Hard to reuse only the “useful pieces” of a comprehensive/encyclopedic (foundational) ontology, meaning high cost and maybe not right model
- better to agree on focused conceptual constraints
- **Solution Approach (let 100 flowers bloom)**
 - Use coherent, minimally constrained ODP schemas as modular starter set ontologies with
 - explicit documentation of design rationales,
 - best reengineering practices to facilitate reuse,
 - Product is a network of “concepts” with vocabulary which people may build on/extend from for various purposes.



Topics

- Topography focused topic - basic terrain primitives, slope, slope length, shape, curvature (Usery & Sinha)
- RDF vocabulary for Chemical Safety & Chemical Terminology (Leah McEwen)
- A pattern to support Materials Research vocabularies (Kimberly Tryka & Alden Dima)
 - Note: telecoms are available if group agrees to them.



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