Maps and Gaps
The Disrupted Landscape

- New opportunities for building and sharing
- Social networks gaining traction
- Evolving ideas about balance between ‘re-use’ and ‘re-purpose’
- ‘Simplicity’ vs. ‘Complexity’ re-evaluated
- Considerations between ‘top-down’ and ‘bottom-up’ development processes examined in context
Generality and Specificity

- Start simple? Examples:
  - MARC 21
  - ISBD
  - Dublin Core
  - BibFrame
- Start from existing work? Examples:
  - RDA
- Mixed approach? Example: schema.org
Re-using or Re-purposing?

- Re-use has been the mantra since the dawn of Application Profiles
- As the linked data world develops, the idea of re-purposing has gained traction
  - Success of re-purposing tied to the availability of mapping services
  - Support of open extension and communication within communities essential
  - Openly visible change management (with careful versioning) critical
Bottoms up.

Top down.
# Top-down vs. Bottom-up

[Very] General observations

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Top-down</th>
<th>Bottom-up</th>
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<tbody>
<tr>
<td>Focus</td>
<td><em>Wide</em></td>
<td><em>Narrow</em></td>
</tr>
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<td>Granularity</td>
<td><em>Coarse</em></td>
<td><em>Fine</em></td>
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<td>Interoperability</td>
<td><em>Refine</em></td>
<td><em>Dumb-down</em></td>
</tr>
<tr>
<td>Usage</td>
<td><em>Global</em></td>
<td><em>Local</em></td>
</tr>
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<td>Size</td>
<td><em>Small</em></td>
<td><em>Large</em></td>
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What is a Map, Exactly?

- A map is two or more RDF elements (classes, properties, concepts) linked with an ontological property (RDFS, OWL, etc.)
- There are certain relationships we ‘know’ in a human sense but must be able to provide explicitly for machine use
- ‘Format-to-Format’ maps (such as are used in crosswalks) give us a very limited view of mapping possibilities
Why Maps? (1)

- Proliferation vs. richness
  - Addressing vocabulary chaos
- Mapping vs. Crosswalking
  - Crosswalking is format to format, normally developed for use within specific applications
  - X-walking: reductive process that dilutes the power of semantics by substitution
Why Maps? (2)

- Mapping should be part of the workflow of vocabulary development
- Maps can express a single POV, or, when endorsed, multiple POVs
- Maps can be managed like a vocabulary, as a versioned aggregation or graph
- Maps can identify gaps in a broad swath of related element sets
Using Bottom-Up Maps to Identify Gaps

*dc = Dublin Core
*marcrel = MARC 21 relators
*rdaroles = Resource Description & Access, Roles Vocabulary

dc:”Contributor”
dc:”Creator”
dct:”Creator”
dct:”Agent”
marcrel:”Author”
marcrel:”Author of screenplay, etc.”
rda:”Work”
rdaroles:”Author (Work)”
rdaroles:”Screenwriter (Work)”
rdaroles:”Creator”

*d = rdfs:domain
*r = rdfs:range
*s = rdfs:subPropertyOf
The ‘Supermap’: Gaps in Top-down Ontologies
Shifting Sands: BibFrame

- ‘Replacing’ MARC?
- Need to distinguish between *carrier* and *semantics*—MARC 21 is both
- The proposed BibFrame model occupies a gap between DC and RDA
- A new player, potentially able to fit into the communal map
  - Relatively coarse grained
- Still in process, destination unclear
Conclusions

- Separate consideration of metadata maintenance and publishing requirements
- Explore further the strategies required for re-purposing metadata vocabularies
  - Extension strategies
  - Robust versioning and change history (essential)
- Preserving the local view is important
- Mapping the best method to prevent data (and semantic) loss
Thank you!

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