Where Everywhere?
Making spatial part of the web.

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Google Search

I'm Feeling Lucky
"everything is related to everything else, but near things are more related than distant things."

Waldo R. Tobler, 1970
Location is the smart in smartphone
Never Lost!
So what's the problem?
Implicit and unstructured..

- Most web content about places unstructured
- Harvesting requires sophisticated NLP and inference
- Does not scale!
Spatial is special!
The SDI problem…

- Geospatial industry has developed its own web services to publish Location information
- Dominated by large Government data publishers and Enterprise customers
- “Fit for purpose” for a niche industry?
mm... better fix it then, but how?
1. Use Cases and Requirements
2. Spatial Data on the Web Best Practices
3. Time Ontology in OWL
4. Semantic Sensor Network Vocabulary
5. Coverage in Linked Data
what is best practice?
The Audience...
Best Practice not theory
No re-inventing the wheel
Builds on W3C Data on the Web Best Practices
Benefits vs. Effort

www.w3.org/TR/sdw-bp/
Best Practices Summary

Best Practice 1: Use globally unique persistent HTTP URIs for Spatial Things

Best Practice 2: Make your spatial data indexable by search engines

Best Practice 3: Link resources together to create the Web of data

Best Practice 4: Use spatial data encodings that match your target audience

Best Practice 5: Provide geometries on the Web in a usable way

Best Practice 6: Provide geometries at the right level of accuracy, precision, and size

Best Practice 7: Choose coordinate reference systems to suit your user’s applications

Best Practice 8: State how coordinate values are encoded

Best Practice 9: Describe relative positioning

Best Practice 10: Use appropriate relation types to link Spatial Things

Best Practice 11: Provide information on the changing nature of spatial things

Best Practice 12: Expose spatial data through 'convenience APIs'

Best Practice 13: Include spatial metadata in dataset metadata

Best Practice 14: Describe the positional accuracy of spatial data
**Best Practice 1: Use globally unique persistent HTTP URIs for Spatial Things**

Use stable HTTP URIs to identify Spatial Things, re-using commonly used URIs where they exist and it is appropriate to do so.

### Why

To publish spatial data on the Web, we need to stitch the Spatial Things and their corresponding entities into the Web's information space; contributing to the Web of data. First: [WEBARCH] Good Practice: Identify with URIs states that "agents should provide URIs as identifiers for resources". Second: the 5 Star Data scheme states: "★★★★★ use URIs to denote things, so that people can point at your stuff.

Resources identified with HTTP URIs can be specified as the basis of 5★ Linked Data: "★★★★★ link your data to other data.

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**NOTE**

While there is a cost to this conflation, problems can be mitigated by avoiding making statements that confuse Spatial Thing and the page/document, such as "Luluru is available in KML format";

- [http://sws.geonames.org/7645281/](http://sws.geonames.org/7645281/) dcterms:hasFormat

This statement is clearly not true; an ancient monolith covering more than 3 km² cannot be provided in XML [XML1]!

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**EXAMPLE 4**

This URI identifies the Amsterdam Central train station:

https://btr.basisregistraties.overheid.nl/top10nl/id/gebouw/182625209

This URI was minted using the recommendations in the Dutch URI strategy. Although minted by the Kadaster, they chose to use the domain 'basisregistraties.overheid.nl' (which translates to 'base registries . government . nl') because this is expected to be a more persistent name than 'kadaster.nl'.

Even though the Kadaster is over a 100-years old, organization names are not considered persistent in general as organizations may merge or whose names may change. ‘top10nl’ is the name of the dataset, and ‘gebouw’ means ‘building’ – giving the human reader of this URI a clue of what is being identified. The last part of the URI is the building number from the dataset.
Better citizens of the web..
Thank you!

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