



Where Everywhere ?

Making spatial part of the web..



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Google

Geography



Google Search

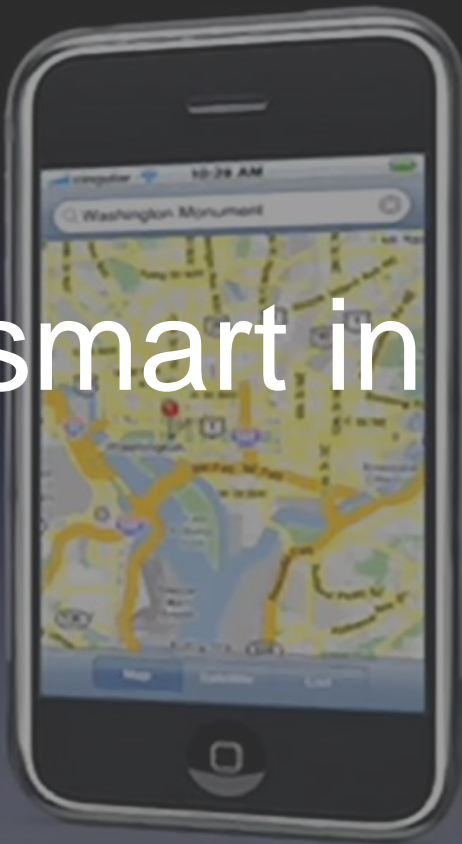
I'm Feeling Lucky



"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!

A white swan is shown swimming in dark water. The swan is facing left, and its head is turned slightly towards the viewer. The water is dark, and the swan's white feathers are the primary light source. The text 'So what's the problem?' is overlaid in white, sans-serif font on the left side of the image.

So what's the
problem ?

Implicit and unstructured..

- Most web content about places unstructured
- Harvesting requires sophisticated NLP and inference
- Does not scale !

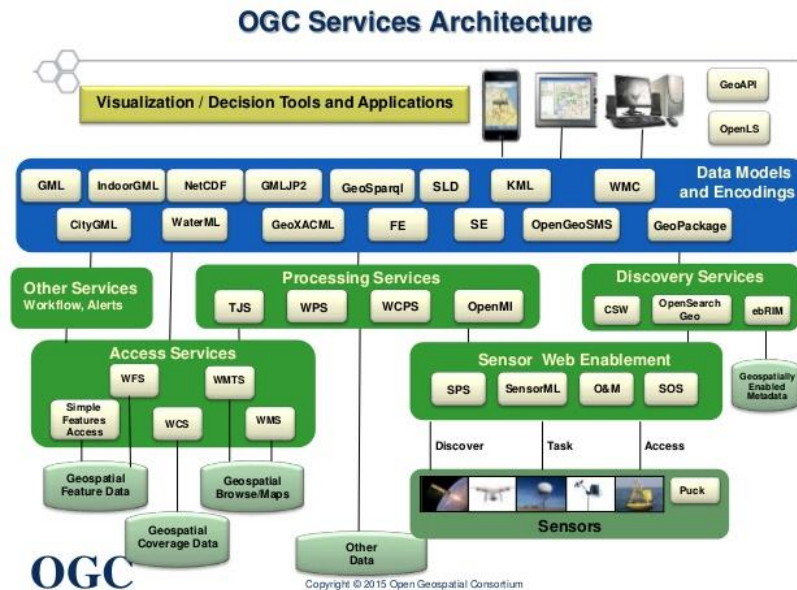
```
<h3>Visiting Address</h3>
<p>Netherland Institute for Sound and Vision<br />Media
Parkboulevard 1<br />1217 WE Hilversum</p>
<p>If your navigation system does not recognize our
(new) adress, you can find us on Sumatralaan 45, 1217 GP
Hilversum.</p>
<h2>Postal Address</h2>
<p>Nederlands Instituut voor Beeld en Geluid Media Park,
<br />Postbus 1060<br />1200 BB Hilversum</p>
<h2>Opening hours</h2>
<ul><li>The experiece is open Tuesday - Sunday, 10.00 -
17.30h</li>
<li>Closed on monday</li>
</ul><h2>Entrance prices</h2>
<ul><li>Adults: € 16,00</li>
<li>Children between the ages of 4 and 12: € 9,00</li>
<li>Children up to age 3: Free</li>
</ul>
```

A vast field of yellow tulips stretches to the horizon under a clear sky. A single red tulip stands out prominently in the middle ground, slightly to the right of the center. The text "Spatial is special!" is overlaid in white on the left side of the image.

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 ?

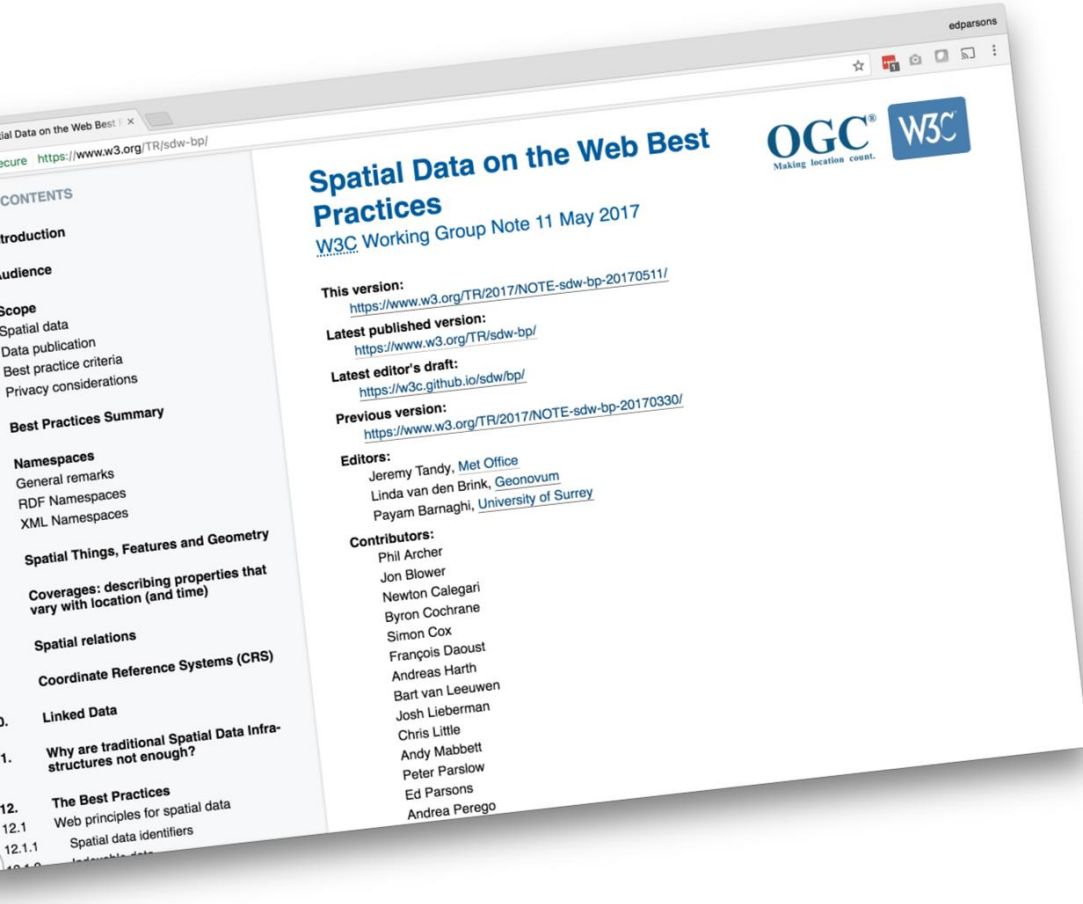


http://www.w3.org/2015/spatial/wiki/Main_Page

- 
- A white box truck is parked in an outdoor lot. The truck has a large white box body and a cab on the left. Overlaid on the side of the truck is a list of five topics. The truck has two roof-mounted lights, a side door on the cab, and a diamond-shaped warning label on the side panel. The background shows other vehicles and trees under a cloudy sky.
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 information space, enabling information to be related, combined on the basis of 5★ Linked Data: "★★★★ link your data to other data"

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 "Uluru is available in KML format"; e.g. `<http://sws.geonames.org/7645281/> dcterms:hasFormat <http://www.geonames.org/kml/~25.34434_131.03282_15.kml>`

This statement is clearly not true; an ancient monolith covering more than 3 km² cannot be provided in [XML \[XML11\]](#)!

EXAMPLE 4

This URI identifies the Amsterdam Central train station:

<https://brt.basisregistraties.overheid.nl/top10nl/id/gebouw/102625209>

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 their 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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