
GEONOVUM
The future of geo standards:
the Geo – BIM perspective
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The future of geo standards: the Geo – BIM perspective

Presentation White paper Geo-standards focus on Geo - BIM

Trigger white paper: 10 years Geonovum

- Observation: full-grown Dutch SDI
- Geo standards act as backbone of the Dutch SDI

- However: SDI remains work in progress, due to
  - evolving technology
  - changing demands from society
  - Web of data

White paper Geo standards

- Identifying trends:
  - More 3D data
  - More sensor data
  - More Linked Data
  - More users: Spatial Data on the Web
  - More channels: rise of the platform
- Predicting impact on standards:
  - Semantic standards
  - Exchange formats
  - Standards for data access

Whitepaper Geo-standaarden

Consultatieversie

GEONOVUM

Geonovum Document 31 mei 2017

Laatste werkversie:
https://geonovum.github.io/whitepaper-standaarden/

Redacteurs:
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Participate:
GitHub Geonovum/whitepaper-standaarden
Dien een melding in
Commit history

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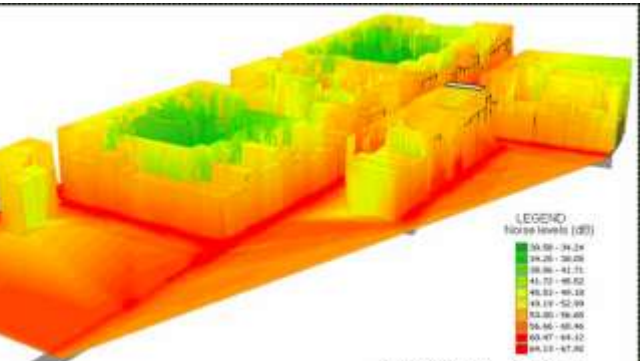
Samenvatting

In deze White paper kijken we terug op 10 jaar standaarden ontwikkelen en beheren. Hierbij richten we ons

https://geonovum.github.io/whitepaper-standaarden/

Trend related to Geo – BIM: more 3D

- Questions a citizen might ask:
  - What are the noise effects of this new road?
  - Is it safe, a day-care centre close to this gas pipeline?
  - What is the visual impact of this planned windmills?



Trend related to Geo – BIM: more 3D

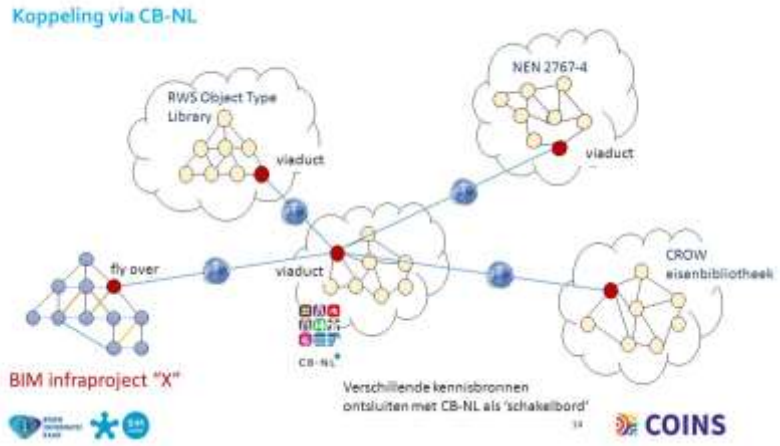
- In other words, society needs:
  - More detailed impact analysis regarding noise, air quality, safety, etc.

- This requires:
  - Reliable 3D data -suitable for analysis- of both the as-built and the as-planned situation

Impact on semantic models

Trend: more Linked Data

Impact: use LD to link concepts in Object Type Libraries (OTL's)



However: more focus on individual objects = less focus on relations between objects ('map view')

Risk from Geo POV: invalid topology, geometrical errors

Impact on exchange formats

Trend: spatial data on the web

Impact: requests for lighter formats (e.g. JSON, GeoPackage) besides (City)GML

Challenges: poor support 3D CRS's (e.g. only WGS'84 in geoJSON), lack of 3D data types (e.g. no solids in GeoPackage and geoJSON)

Impact on standards for data access

Trend: more 3D & more spatial data on the web

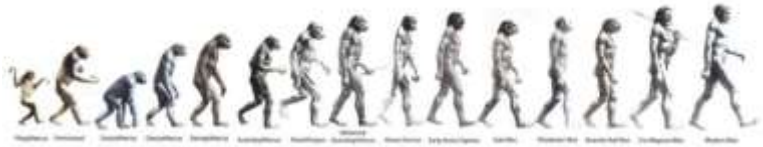
Impact: expanding current 2D standards for dissemination

- View services: OGC 3D portrayal services
  - 3D Tiling (based on Cesium)
  - i3s
- Download services:
  - CityGML
  - CityJSON (early development!)

Summary

- Geo – BIM integration important in trend towards 3D data
- Integration requires:
  - Harmonisation of semantics
  - Harmonisation of geometry & topology

- Important from SDI perspective:
  - Evolution, rather than revolution!



OGC Making location count.
W3C
buildingSMART International home of openBIM