

The Future of Free & Open Source Geospatial

From static maps to shared standards

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2003: three kinds of maps



The public

Static web pages



Colleagues

Web with access to the data



Experts

ArcView and MicroStation

Données & Cartographie = SIG

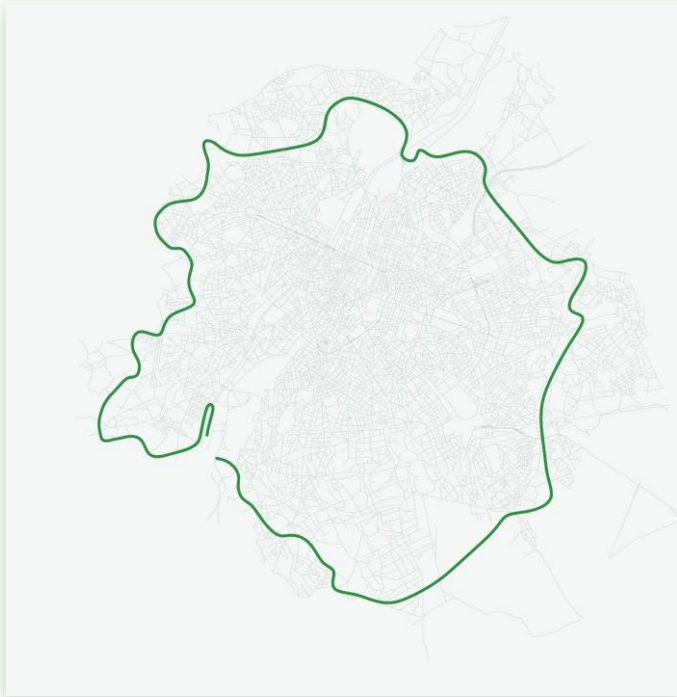
• Pourquoi de la carto ?

- La **cartographie** permet d'avoir une **vue d'ensemble** pour la compréhension des problématiques et pour leurs gestions. De plus elle permet de toucher tous les utilisateurs quelque soit leur niveau de formation.
- Il existe néanmoins **différentes approches** carto en fonction de leurs **niveaux**.
A/ Grand public => developpement « web base » statique
[Espaces verts gérés par l'IBGE](#)
- B/ Utilisateur Interne => developpement « web base » avec accès aux données pour la gestion.
[Mailiage Vert & Bleu](#)
- C/ Utilisateur confirmé => Outil cartographique et de dessin spécifique:
Arcview & Microstation

My own slide, May 2003

Between the public and the experts: no bridge.

2005: the Promenade Verte



1

Trace received as DGN B-splines

Smooth at small scale, unusable over the street network (July 2005)

2

One trace per user

We needed a rigorous line: cyclist and pedestrian are not the same route

3

Into a spatial database

SQL load script dated 28 June 2005, then web map, signs and beacons (2006)

I wasn't looking for open source

1

At university

Only proprietary solutions were on the table

2

Open vs proprietary

Open source can make money, and it does

3

I came for the sharing

An ArcView web export, then MapServer and PostGIS

The toolbox I found

ArcView extension

maps exported as an HTML image grid

MapServer

open-sourced 1999

PostGIS

0.1 in 2001

OpenLayers

2006

Standards were already converging

1994

OGC is founded

Eight charter members; Intergraph is the first commercial one. Commercial vendors converge on common standards.

2007

INSPIRE: standards for data

In force on 15 May 2007. I took part in drafting the INSPIRE Data Specifications Technical Guidelines for environment themes.

Transversality and compatibility came first.

From a project to a Region

Brussels

- Brussels Environment: from a shared database (2005) to the GeoBru specification (2011)
- BruGIS: the Region's urban planning map
- geo.brussels: the regional geoportal

Flanders

- Initiatives start to move from 2010
- Geopunt, the Flemish geoportal (2013)

Wallonia

- Initiatives start to move from 2010
- Géoportail de la Wallonie (February 2013)

Three regions, many administrations, the same needs.

Then the ecosystem exploded

1994

OGC is founded

MEANWHILE



Channel
Tunnel



Pulp Fiction

1999

MapServer goes
open source

MEANWHILE



Y2K bug



The euro

2001

PostGIS 0.1

MEANWHILE



Wikipedia



Shrek

2005

Google Maps and
Google Earth

MEANWHILE



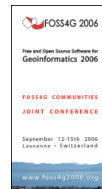
YouTube



Our
Promenade
Verte

2006

FOSS4G Lausanne
and OSGeo



Flyer,
September
2006

Every need got a tool. Every tool got a community.

GeoNetwork and INSPIRE

BRUXELLES ENVIRONNEMENT
LEEFMILIEU BRUSSEL

GEONETWORK METADONNÉES

GeoNetwork™
OpenSource
Geographic data sharing for everyone

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User: libre Consultation Logout

FIND INTERACTIVE MAPS, GIS DATASETS, SATELLITE IMAGERY AND RELATED APPLICATIONS

What?
Where?

Open Map Viewer

Reset Advanced Options

CATEGORIES

- Applications
- I_1_Referentiels_de_coordonnees
- I_2_Systemes_de_maillage_geographique
- I_3_Denominations_geographiques
- I_4_Unites_administratives
- I_5_Adresses
- I_6_Parcelles_cadastrales
- I_7_Reseaux_de_transport
- I_8_Hydrographie
- I_9_Sites_proteges
- II_1_Altitude
- II_2_Occupation_des_terres

Aggregate Results matching search criteria : 1-10/75 (page 1/8), Sort by Relevance

ENSEMBLE DES SITES DANS LE MAILLAGE VERT

Abstract Ensemble des sites dans le maillage vert. On dispose du type d'espace vert, du nom du site, du REM, du numéro d'identification objet vert unitaire, de son statut, du gestionnaire du site, du...

Keywords land occupation - landscape management - land use classification - urban management, Belgique - Brussels Capital Region (place)

Identification info

Title	Ensemble des sites dans le maillage vert
Alternate Title	maillage_vert
Date	7/08/2008
Date Type	creation
Date	7/08/2008
Date Type	Publication
Date	7/08/2008
Date Type	revision
Code	à définir
CodeSpace	INSPIRE
Abstract	Ensemble des sites dans le maillage vert. On dispose du type d'espace vert, du nom du site, du REM, du numéro d'identification objet vert unitaire, de son statut, du

Brussels Environment's catalogue, September 2008

75 results

for “espace vert”, in categories aligned on INSPIRE themes

Metadata by hand

XML files built version after version

From practice to duty

INSPIRE makes sharing a legal obligation

One annual gathering, the same questions

FOSS4G Europe · Timișoara

29 Jun – 3 Jul

OSGeo, in Europe and beyond:
sustainability, new legislation, AI

FOSS4G · Hiroshima

30 Aug – 5 Sep

Bridging Geospatial Technology and
Humanity

EFGS · Brussels

30 Sep – 2 Oct

Geo-enabling the future

Open Source Conference · Luxembourg

7 Oct

Leading by example in digital
sovereignty

FOSS4G Belgium

15 Oct

The Future of Free & Open Source
Geospatial

Sustainability
Sovereignty
Humanity
AI

Who pays for open source?

Commitment

- Volunteers
- Causes that matter
- Personal interest
- Recognition among peers

Means

- Sponsors (thank you!)
- Subsidies
- Time and infrastructure
- Reaching scattered communities

Open source runs on commitment, and commitment has a cost.

Shared code feeds AI

2018

**GitHub goes to
Microsoft**

Announced 4 June,
closed 25 October: \$7.5
billion

2019

**Microsoft backs
OpenAI**

\$1 billion; about \$10
billion reported in 2023

2020

**Mapbox GL JS turns
proprietary**

The community forks it:
MapLibre

2022

Copilot class action

Trained on public code;
filed in November

What we shared freely became raw material, and was not necessarily shared back.

One prompt, one 3D map



Shubham Sharma, YouTube: <https://youtu.be/v0l68jXVoUw?t=360>

One prompt

Build an interactive 3D map of Annecy

Real open data

OpenStreetMap buildings via the Overpass API

Open source on top

three.js, running in the browser

Garbage in, garbage out

***“Garbage in,
garbage out”***

A sentence from my first geography classes,
about the data behind maps.

AI does the doing

What took weeks by hand now takes a prompt

Skills are no longer the barrier

Interesting results without the old expertise

Judgment still is

Ask nonsense, get nonsense

Autonomy or isolation?

The promise: autonomy

- Do it all yourself
- Fewer skills needed
- No need for others

The reality: isolation

- Resources appropriated, not necessarily shared back
- Each of us alone with our own agent
- Communities left behind

Sharing our code is done. Which sharing comes next?

Don't wait for the future. Build it.

17:00 • Forum

How our communities work,
and the questions we put to
them

Join the mailing list

lists.osgeo.org • [belgium](#)

Come back and share

Tell us your experience, here,
next time

Merci • Dank u • Thank you