maptiler

ESA PhiWeek, ESRIN Frascati, Italy
November 15th, 2018
Petr Pridal, Ph.D. <petr.pridal@klokantech.com>

KLOKAN TECHNOLOGIES

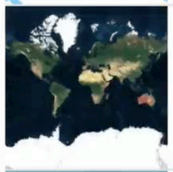
M A P T I L E R

www.maptiler.com

maptiler

maptiler CLOUD

Streets


Satellite

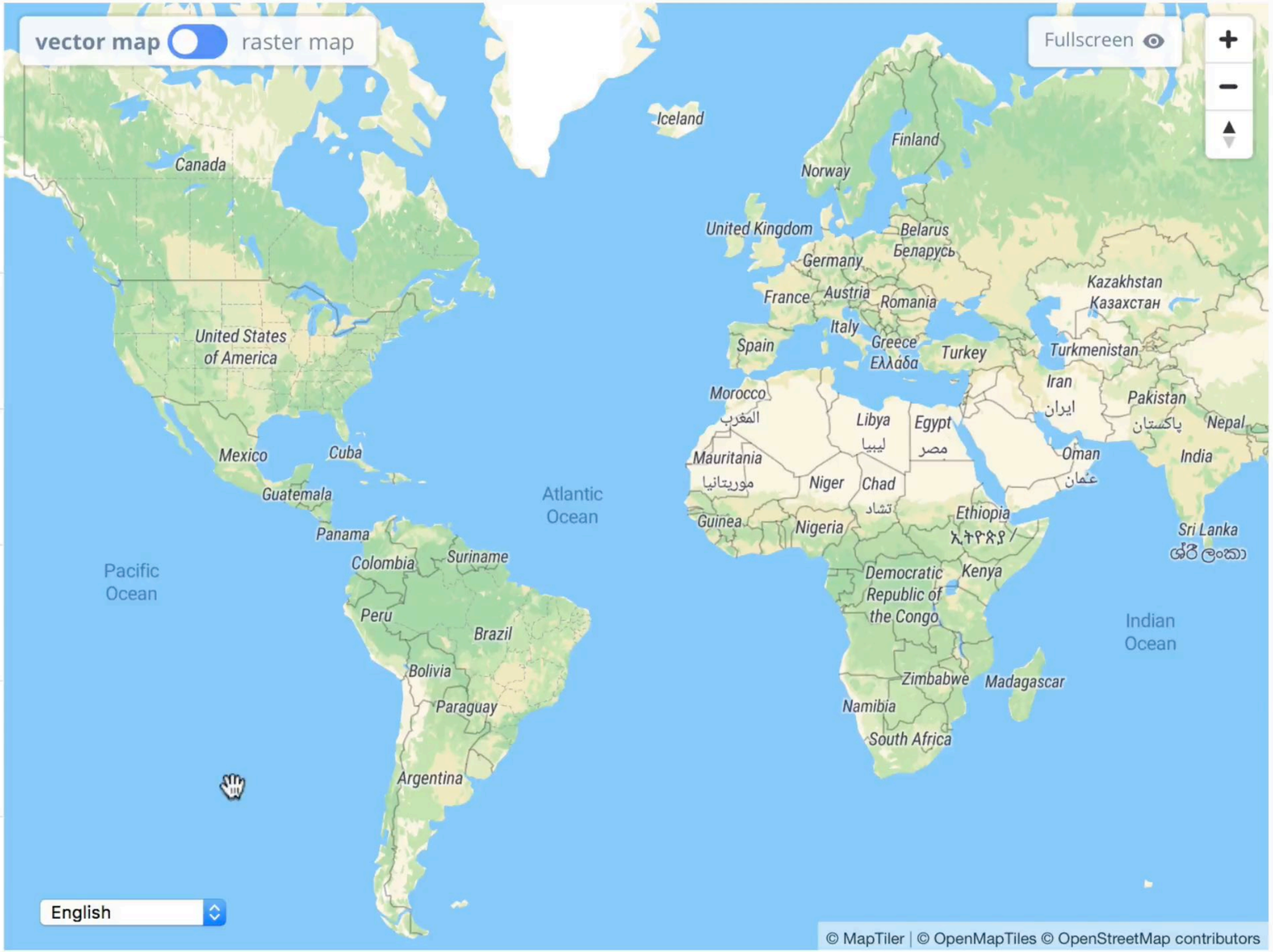
Topo

Basic

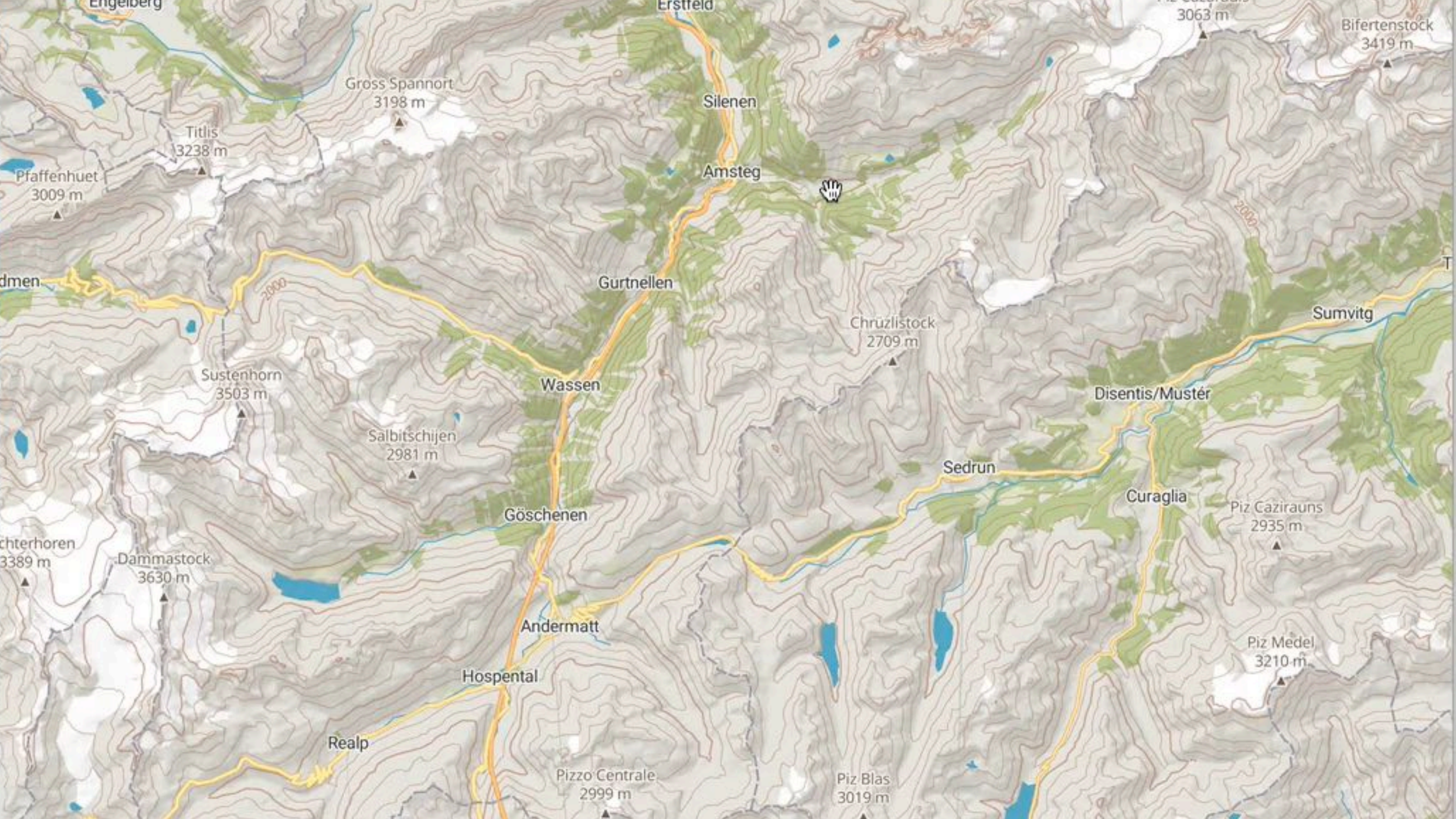
Bright

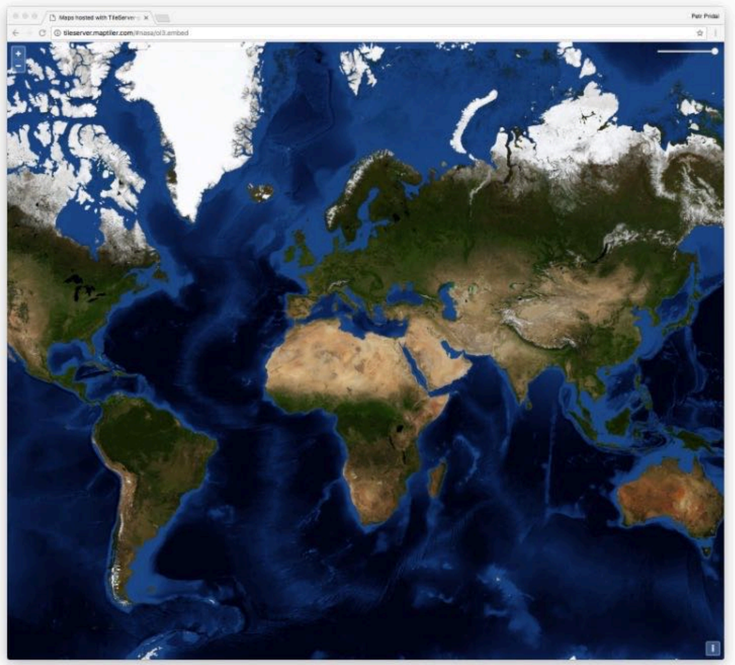
Positron

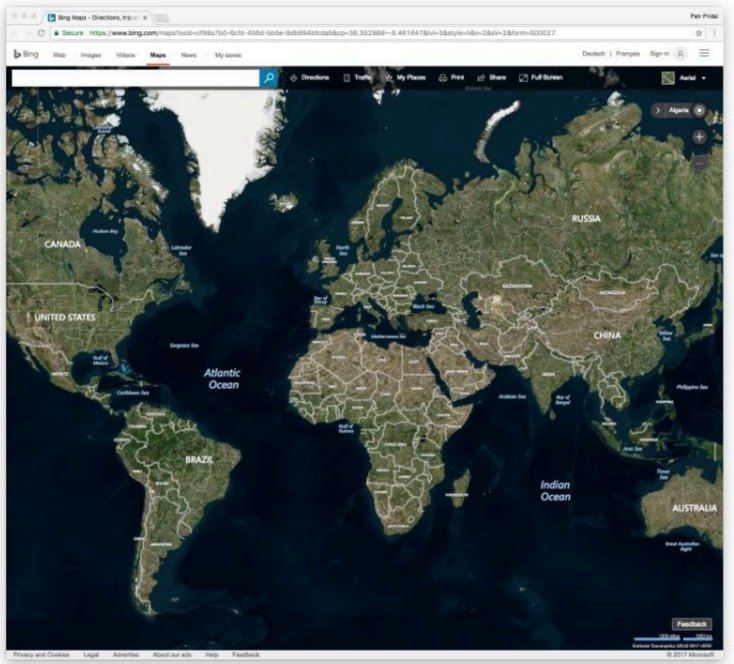
Dark Matter

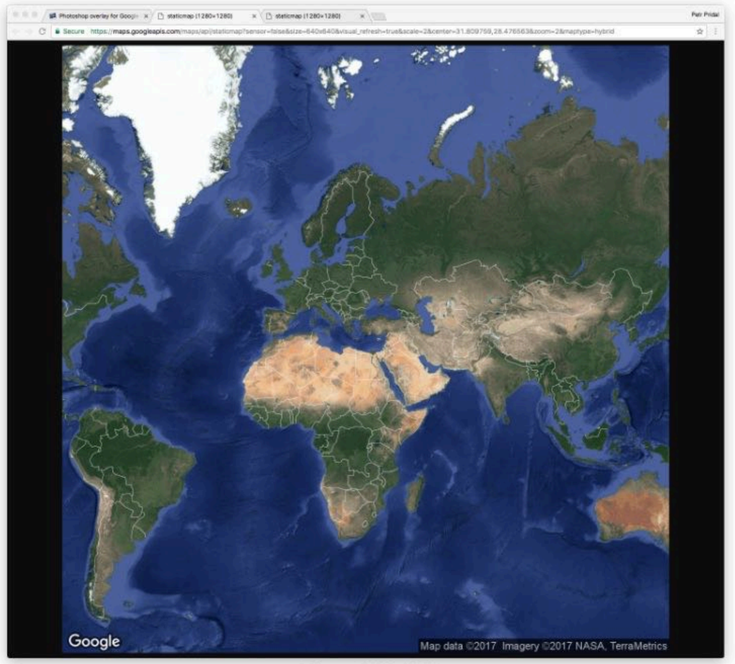


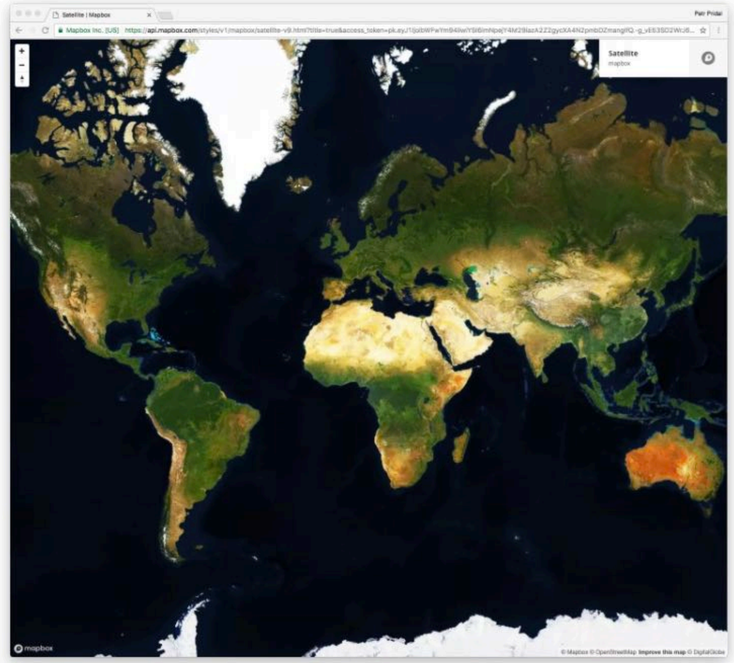
LATVIA
Glasgow
Copenhagen
Moscow
UNITED KINGDOM
LITHUANIA
Vilnius
Hamburg
BELARUS
IRELAND
THE NETHERLANDS
Berlin
POLAND
London
GERMANY
BELGIUM
Kyiv
LUXEMBOURG
CZECHIA
UKRAINE
Paris
SLOVAKIA
Munich
AUSTRIA
HUNGARY
TRANSNISTRIA
FRANCE
SWITZERLAND
Sea of Azov
ROMANIA
Lyon
Milan
CROATIA
BOSNIA AND HERZEGOVINA
Bucharest
SAN MARINO
Ligurian Sea
ABKH
ANDORRA
ITALY
KOSOVO
BULGARIA
Barcelona
Naples
ALBANIA
Istanbul
SPAIN
Ankara
Valencia
GREECE
TURKEY
Lisbon
Palermo
Athens
Seville
Algiers
Tunis
Aleppo
Oran
Valletta
CYPRUS
SYRIA


Engelberg
Gross Spannort
3198 m
Titlis
3238 m
Pfaffenhuet
3009 m
Erstfeld
Silenen
Amsteg
3063 m
Bifertenstock
3419 m
Gurtnellen
Chrüzlistock
2709 m
Sumvitg
Sustenhorn
3503 m
Wassen
Disentis/Mustér
Salbitschijen
2981 m
Sedrun
Curaglia
Piz Cazirauns
2935 m
Göschenen
Dammastock
3630 m
Andermatt
Piz Medel
3210 m
Hospental
Realp
Pizzo Centrale
2999 m
Piz Blas
3019 m
2000

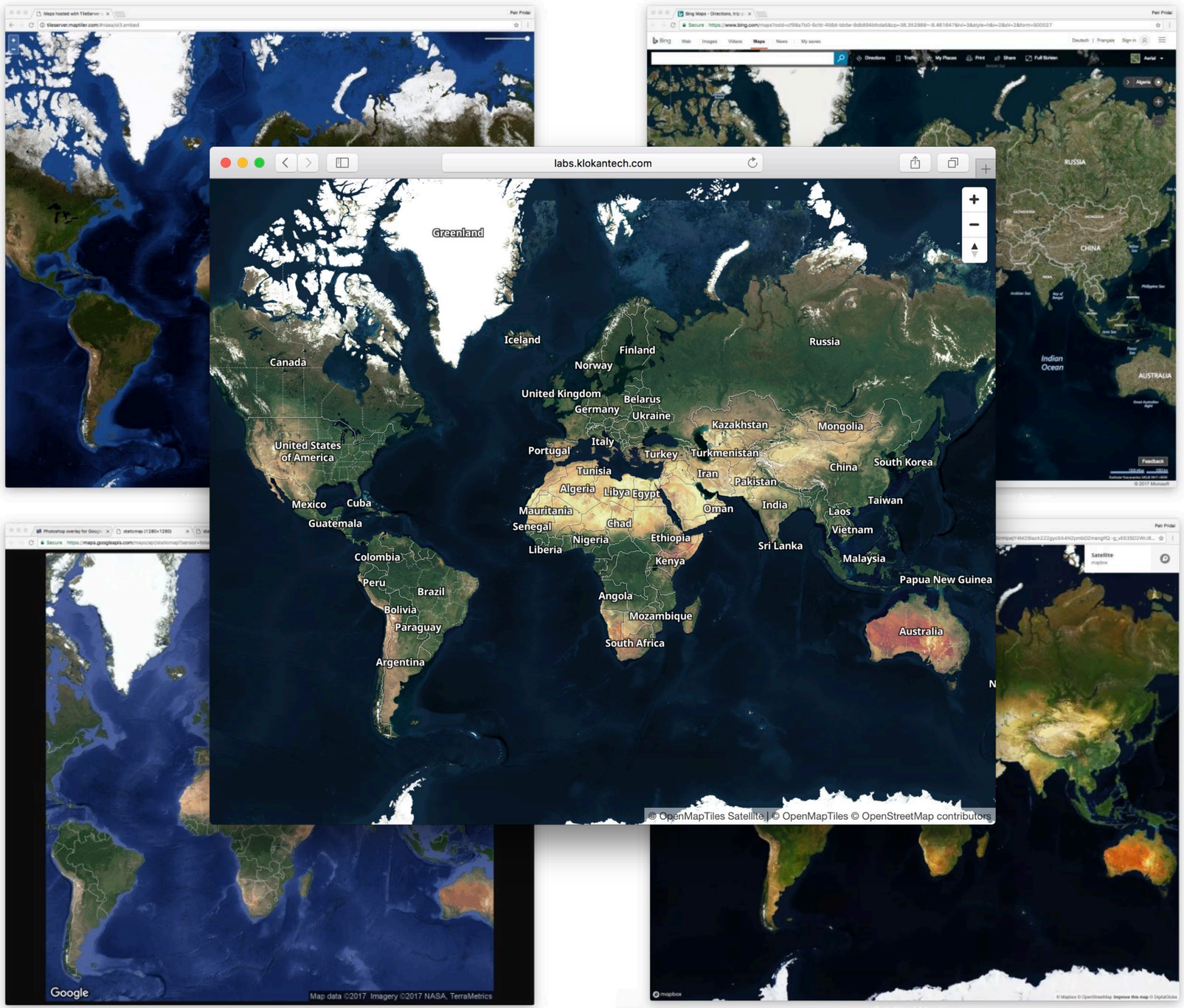



RUSSIA
CANADA
UNITED STATES
CHINA
Atlantic Ocean
BRAZIL
Indian Ocean
AUSTRALIA
Feedback

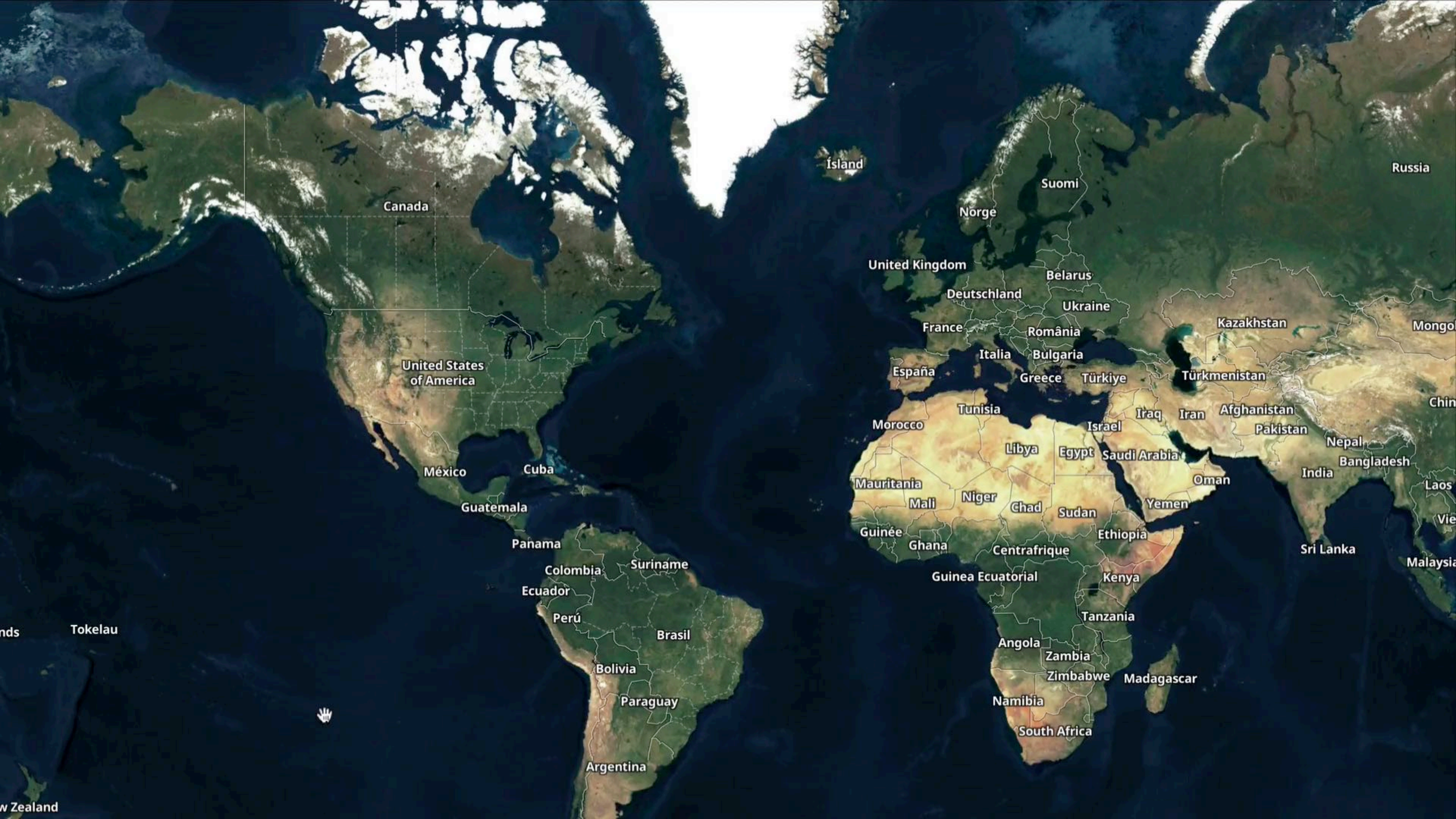

Google
Map data ©2017 Imagery ©2017 NASA, TerraMetrics

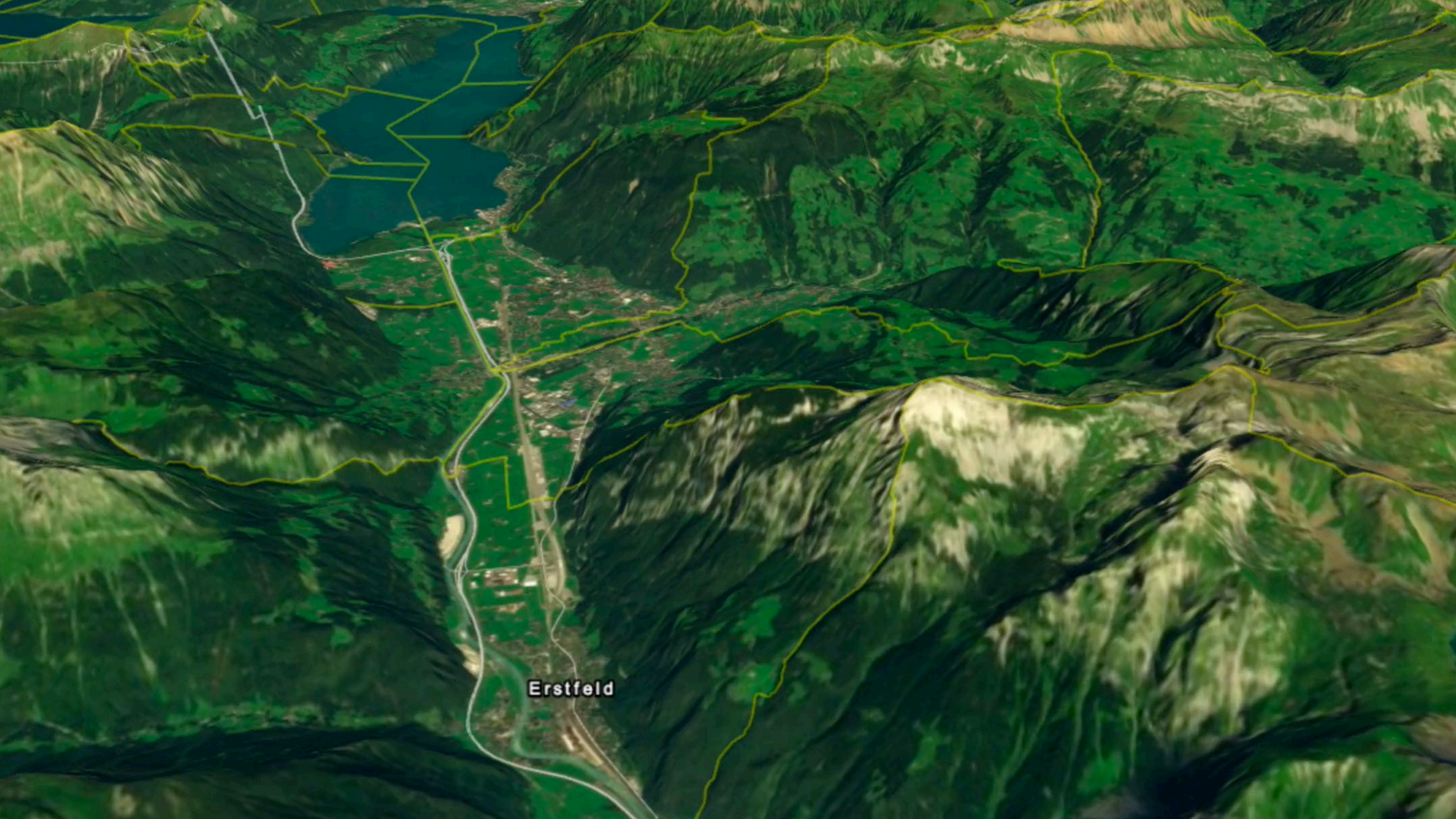

Satellite
mapbox

maptiler


labs.klokantech.com
Greenland
Iceland
Canada
Finland
Norway
Russia
United Kingdom
Belarus
Germany
Ukraine
Kazakhstan
Mongolia
United States of America
Italy
Portugal
Turkey
Turkmenistan
China
South Korea
Tunisia
Iran
Pakistan
Algeria
Libya
Egypt
Taiwan
Mexico
Cuba
Guatemala
Mauritania
Oman
India
Laos
Senegal
Chad
Vietnam
Nigeria
Ethiopia
Sri Lanka
Liberia
Kenya
Malaysia
Colombia
Peru
Brazil
Papua New Guinea
Angola
Bolivia
Mozambique
Paraguay
Australia
South Africa
Argentina
RUSSIA
CHINA
Indian Ocean
AUSTRALIA
© OpenMapTiles Satellite | © OpenMapTiles © OpenStreetMap contributors
Google
Map data ©2017 Imagery ©2017 NASA, TerraMetrics

maptiler


Ísland
Russia
Suomi
Canada
Norge
United Kingdom
Belarus
Deutschland
Ukraine
Kazakhstan
France
România
Italia
Bulgaria
United States
of America
España
Greece
Türkiye
Türkmenistan
Tunisia
Iraq
Iran
Afghanistan
Morocco
Israel
Pakistan
Nepal
Libya
Egypt
Saudi Arabia
Bangladesh
México
Cuba
India
Oman
Mauritania
Laos
Niger
Mali
Chad
Sudan
Yemen
Guatemala
Guinée
Ethiopia
Panama
Ghana
Centrafrique
Sri Lanka
Suriname
Colombia
Guinea Ecuatorial
Kenya
Ecuador
Perú
Tanzania
Tokelau
Brasil
Angola
Zambia
Bolivia
Zimbabwe
Madagascar
Paraguay
Namibia
South Africa
Argentina


Erstfeld

Maps API

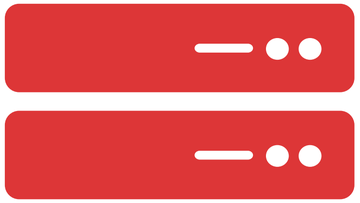
Powered by Copernicus Open Data

Key pain points

Map services such as Google Maps API:

- Not free (soon $25k+ / year) for commercial use
- Leaking sensitive data about visitors
- Restricted usage (not behind login or offline)
- Extra fees for asset tracking (IoT!)
- No derivative data
- Very limited customization

MapTiler Cloud

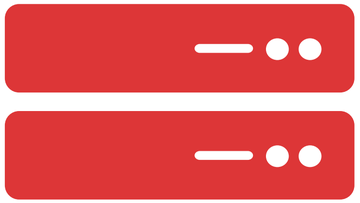


MapTiler Server

MapTiler Cloud

FREE personal plan

Commercial use from $20 / mo



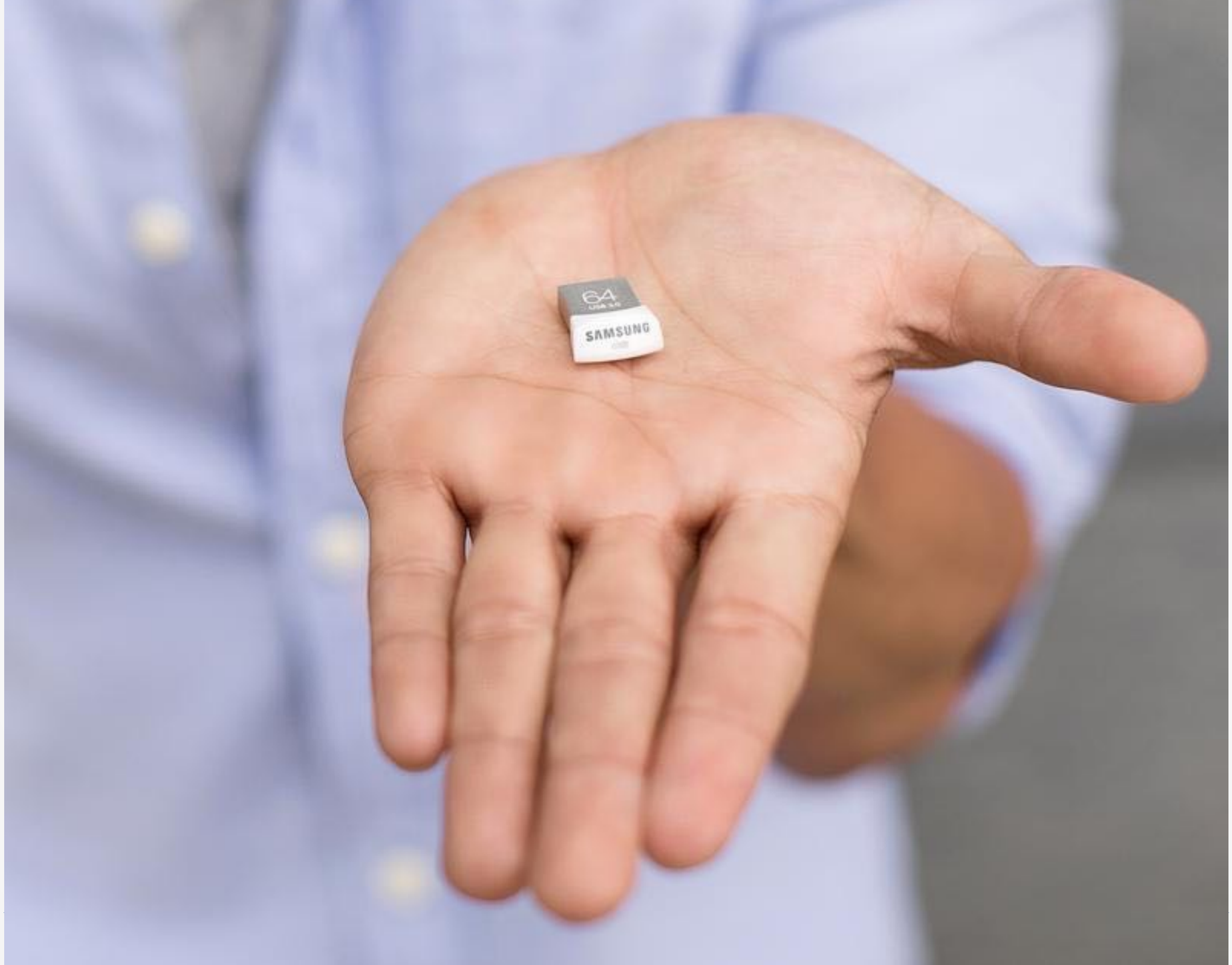
MapTiler Server

Self-hosting

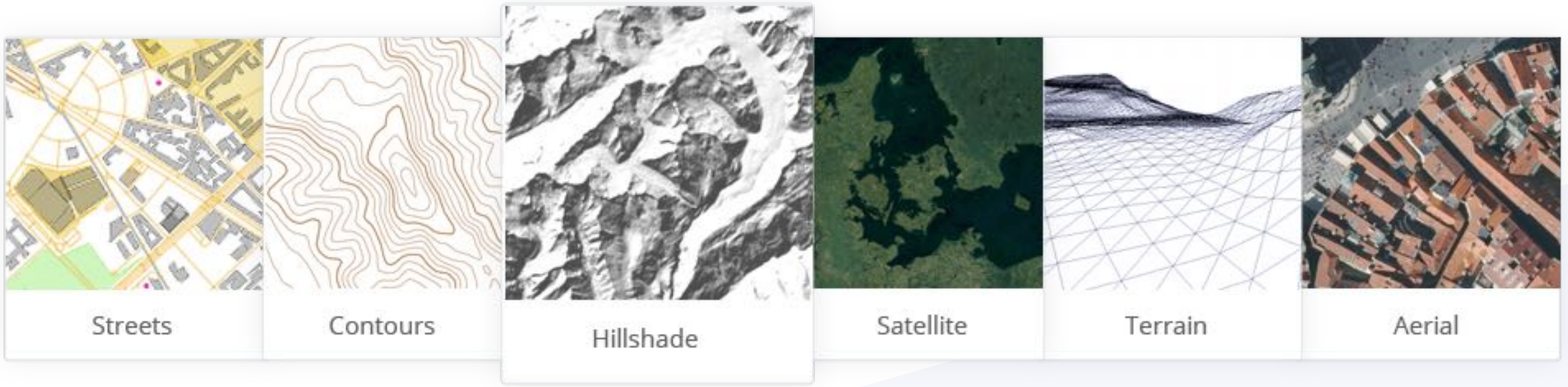
Packages from $1024 / year

MapTiler Cloud: server infrastructure

maptiler


64
SAMSUNG

Self-hosting data packages



Extra map tiles and preprocessed geodata

Ready to use OpenStreetMap VT with weekly updates

Support + development + assistance with production deployment

maptiler

SIEMENS

swisstopo

IBM

SBB CFF FFS

amazon

BOSCH

AIRBUS
DEFENCE & SPACE

GEOCACHING

In about a year and a half:

25.000 registered accounts

millions of people see our maps every month

400+ companies and institutions subscribed

maptiler

Monthly fees for commercial application with dynamic zoomable maps

	Google	MapTiler
1,500 views/day	$125	$20
3,000 views/day	$445	$20
10,000 views/day	$1,650	$56
30,000 views/day	$5,000	$178
100,000 views/day	$17,000	$605
Targeting ads to you visitors	yes	no
Customization	limited	full
Self-hosting	no	available

www.maptiler.com

maptiler

FREE account

Just a few clicks to start…

cloud.maptiler.com

maptiler

Get started | MapTiler Cloud

https://cloud.maptiler.com

maptiler CLOUD

Products How-to Blog Sign in

Get started

Maps

Tiles

Welcome to MapTiler Cloud

Start building and using your maps. Select one of our base maps, customize them or upload your own.

Read more about MapTiler Cloud or about infrastructure.

Recommended maps

Basic

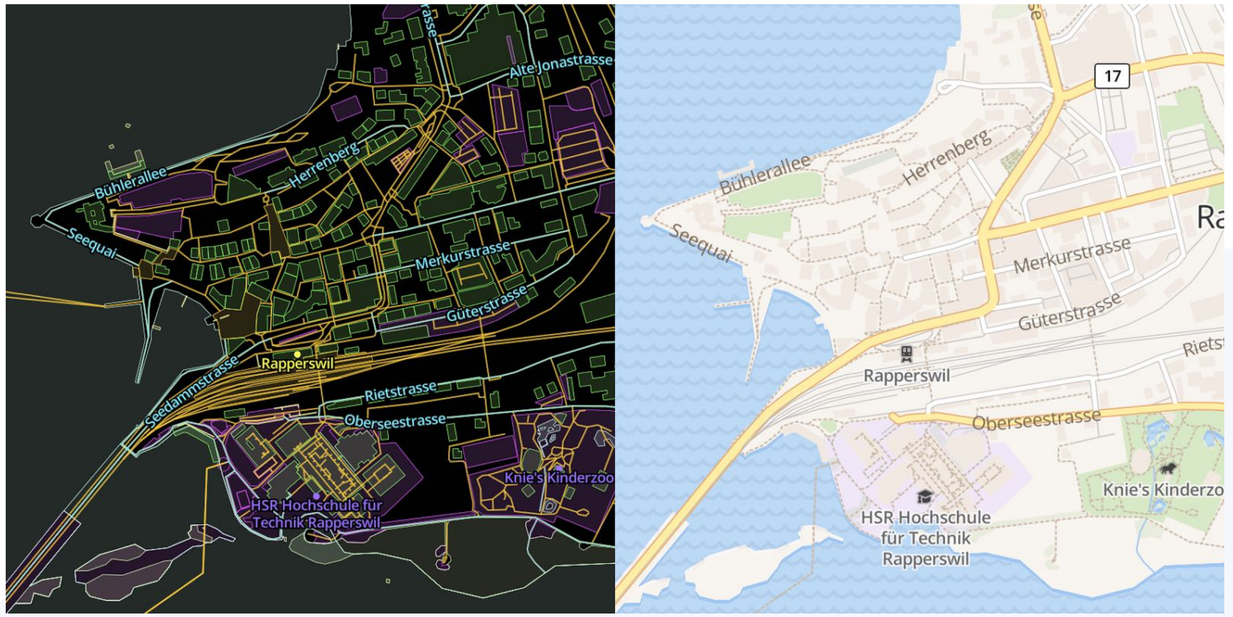
Satellite Hybrid

Streets

Topo

What do you want to do with the map?

Vector tile technology



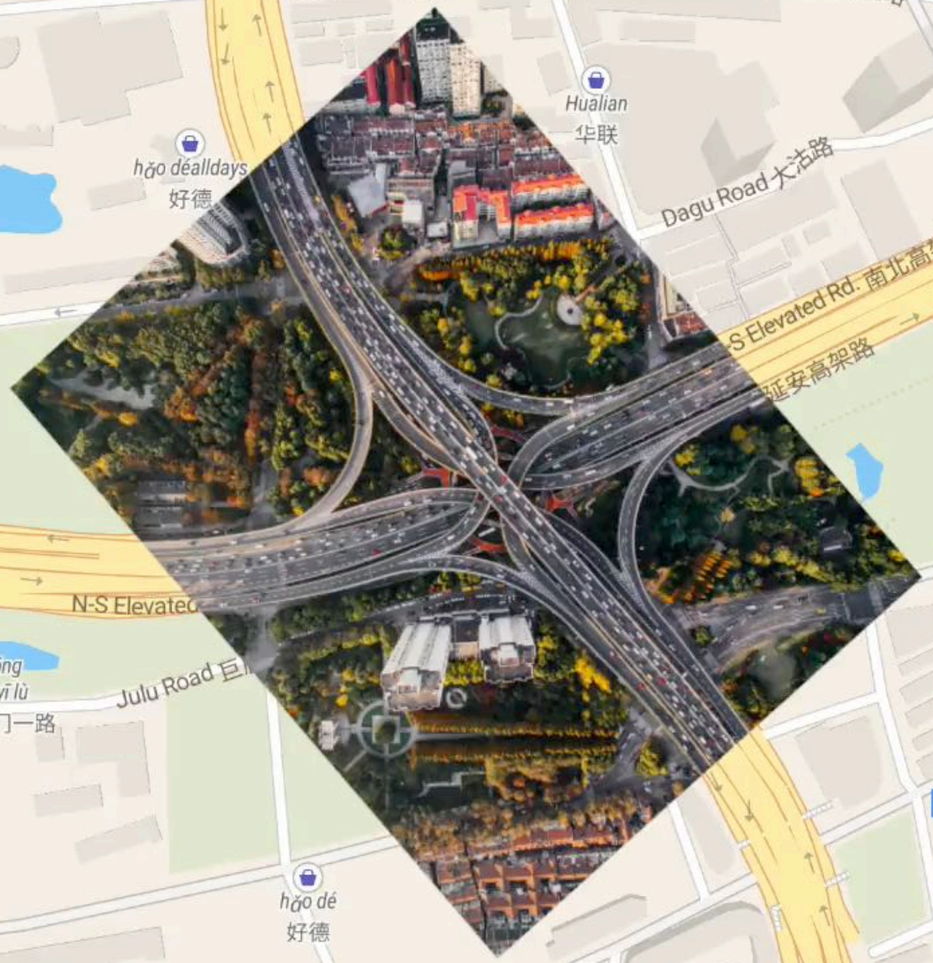
OpenMapTiles.org

open source™

maptiler

Google: (14,10)
TMS: (14,21)
QuadTree: 03130
Zoom 5
Google: (15,10)
TMS: (15,21)
QuadTree: 03131
Zoom 5
Google: (16,10)
TMS: (16,21)
QuadTree: 12020
Zoom 5
Google: (17,10)
TMS: (17,21)
QuadTree: 12021
Zoom 5
Google: (18,10)
TMS: (18,21)
QuadTree: 12030
Zoom 5
Google: (14,11)
TMS: (14,20)
QuadTree: 03132
Zoom 5
Google: (15,11)
TMS: (15,20)
QuadTree: 03133
Zoom 5
Google: (16,11)
TMS: (16,20)
QuadTree: 12022
Zoom 5
Google: (17,11)
TMS: (17,20)
QuadTree: 12023
Zoom 5
Google: (18,11)
TMS: (18,20)
QuadTree: 12032
Zoom 5
Google: (14,12)
TMS: (14,19)
QuadTree: 03310
Zoom 5
Google: (15,12)
TMS: (15,19)
QuadTree: 03311
Zoom 5
Google: (16,12)
TMS: (16,19)
QuadTree: 12200
Zoom 5
Google: (17,12)
TMS: (17,19)
QuadTree: 12201
Zoom 5
Google: (18,12)
TMS: (18,19)
QuadTree: 12210
Zoom 5
United Kingdom
Isle of Man
Ireland
Edinburgh
Glasgow
Manchester
Liverpool
Dublin
London
North Sea
Denmark
Copenhagen
Hamburg
Germany
Netherlands
Belgium
Luxembourg
Frankfurt
Berlin
Poland
Warsaw
Prague
Czechia
Lithuania
Vilnius
Minsk
Минск
Belarus
Latvia
Riga
Moscow
Москва
Kharkiv
Харків
Kiev
Київ
Ukraine
Paris
France
Switzerland
Milan
Munich
Austria
Vienna
Slovakia
Budapest
Hungary
Moldova
Chisinau
Odessa
Одеса
Romania
Bucharest
Croatia
Zagreb
Slovenia
Belgrade
Београд
Bosnia and Herzegovina
Serbia
Sarajevo
Montenegro
Podgorica
Подгорица
Kosovo
Bulgaria
Sofia
София
Macedonia (FYROM)
Albania
Tirana
Rome
Italy
Monaco
Andorra
Barcelona
Black Sea
Tyrrhenian Sea
Portugal
Lisbon
Porto
Madrid
Spain
Valencia
Seville
Malaga
Gibraltar
Algiers
مدينة الجزائر
Tunis
تونس
Greece
Athens
Αθήνα
Izmir
Bursa
Ankara
Istanbul
Turkey
Antalya
Adana
Cyprus
Mediterranean Sea
Map data ©2017 GeoBasis-DE/BKG (©2009), Goo

OSM Bright - TileServer GL
Coordinate systems
Petr Pridal
labs.klokantech.com/openmaptiles-wgs84-demo/#1.99/71.4/-13.7
WGS84
Custom Coordinate Systems
openmaptiles.com/coordinate-systems/
© OpenMapTiles © OpenStreetMap contributors


Tap House Bar
West Nanjing Road
南京西路
West Nanjing Road
南京西路
Weihai Road 威海路
Weihai Road 威海路
North Maoming Rd. 茂名北路
Shimen No. 1 Rd. 石门一路
Dagu Road 大沽路
Middle Yan'an Rd. 延安中路
N-S Elevated
Julu Road 巨鹿路
Julu Road 巨
Changle Road 长乐路
Middle Huaihai Road
淮海中路
yán ān zhōng lù shí mén yī lù
延安中路石门一路
hǎo dé
好德
hǎo déalldays
好德
xiǎo lì biàn lì chāo shì
小丽便利超市
Yu Massage
Hualian
华联
Wusheng Road 武胜路
Dagu Road 大沽路
S Elevated Rd. 南北高架路
延安高架路
Yan'an Elevated Rd. 延安高架路
East Yan'an Rd. 延安东路
Huzhu express line
BĀ XIAN
八仙
Middle Jinling Rd. 金陵中路
Pu'an Road 普安路
McDonald's
huái hǎi zhōng lù sōng shān lù
淮海中路嵩山路
Songshan Road 嵩山路
South Huangpi Road
黄陂南路
Huaihai Park
淮海公园
Xingan Road 兴安路
Taicang Road 太仓路
Wèixiāng Zhāi
味香斋
Windows Scoreboard
Weald Outfitters

MapTiler Desktop Free 9.1 - Generate raster map tiles for web and mobile

maptiler DESKTOP

PURCHASE UPGRADE

Standard Tiles

Spherical Mercator
for GIS & mobile apps

Advanced Tiles

Custom coordinate systems
Geodetic, Baidu, S-JTSK / Krovak
UK Ordnance Survey, Swiss CH1903

Google Earth

KML SuperOverlay & Garmin

Raster Tiles

Not georeferenced images

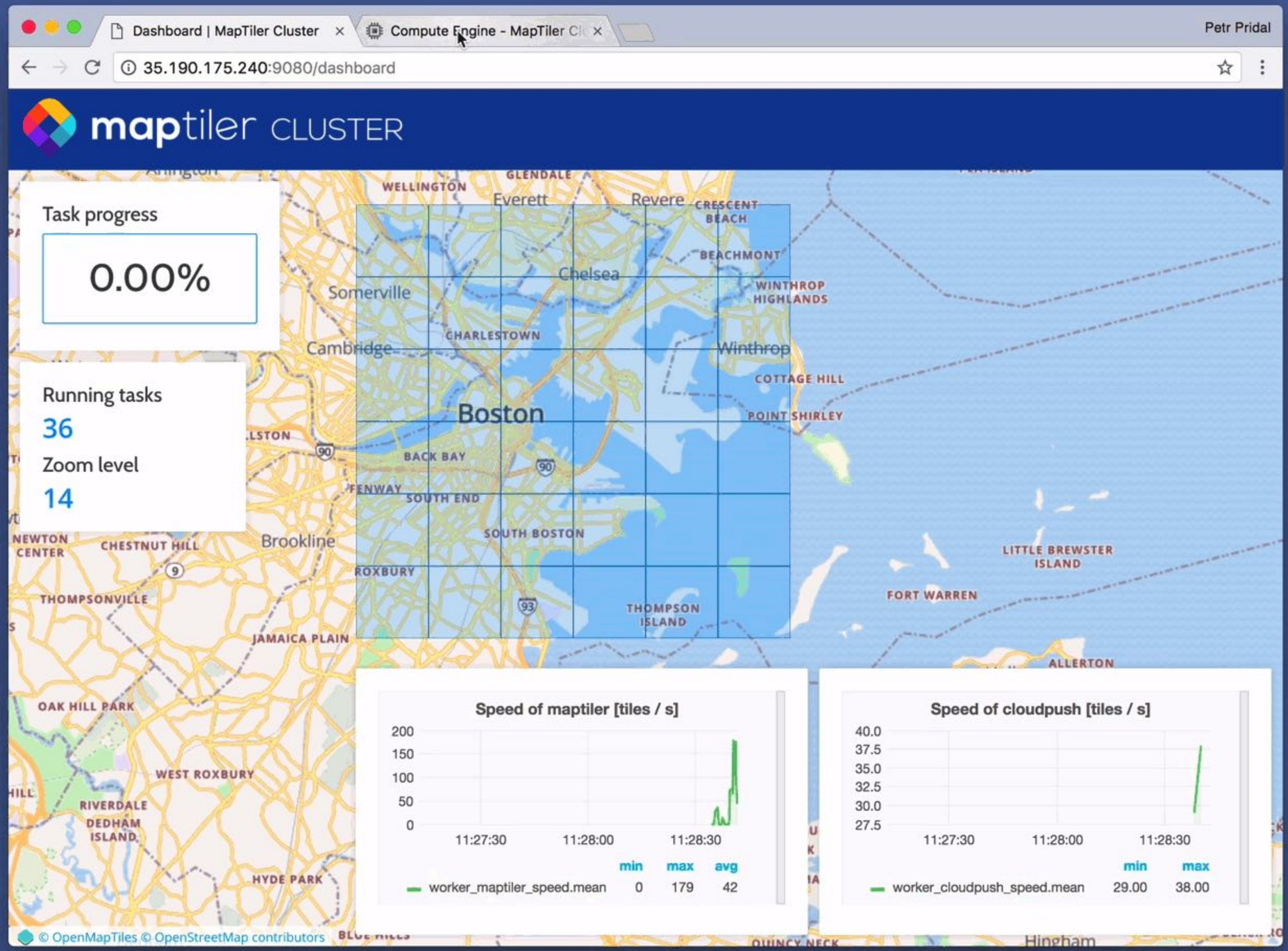
☐ Retina / HiDPI Tiles

KLOKAN TECHNOLOGIES

GO BACK

CONTINUE

maptiler


Dashboard | MapTiler Cluster
Compute Engine - MapTiler Cl
Petr Pridal
35.190.175.240:9080/dashboard
maptiler CLUSTER
Task progress
0.00%
Running tasks
36
Zoom level
14
Boston
Cambridge
Somerville
Chelsea
Everett
Revere
Brookline
Speed of maptiler [tiles / s]
200
150
100
50
0
11:27:30
11:28:00
11:28:30
min max avg
worker_maptiler_speed.mean 0 179 42
Speed of cloudpush [tiles / s]
40.0
37.5
35.0
32.5
30.0
27.5
11:27:30
11:28:00
11:28:30
min max
worker_cloudpush_speed.mean 29.00 38.00
© OpenMapTiles © OpenStreetMap contributors

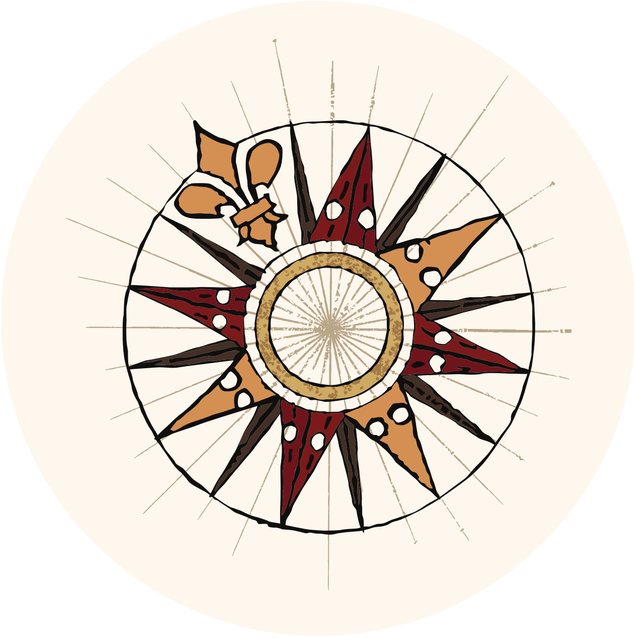
Company story

From cultural heritage to space and EO…

KLOKAN TECHNOLOGIES

MapTiler.com

OldMapsOnline.org



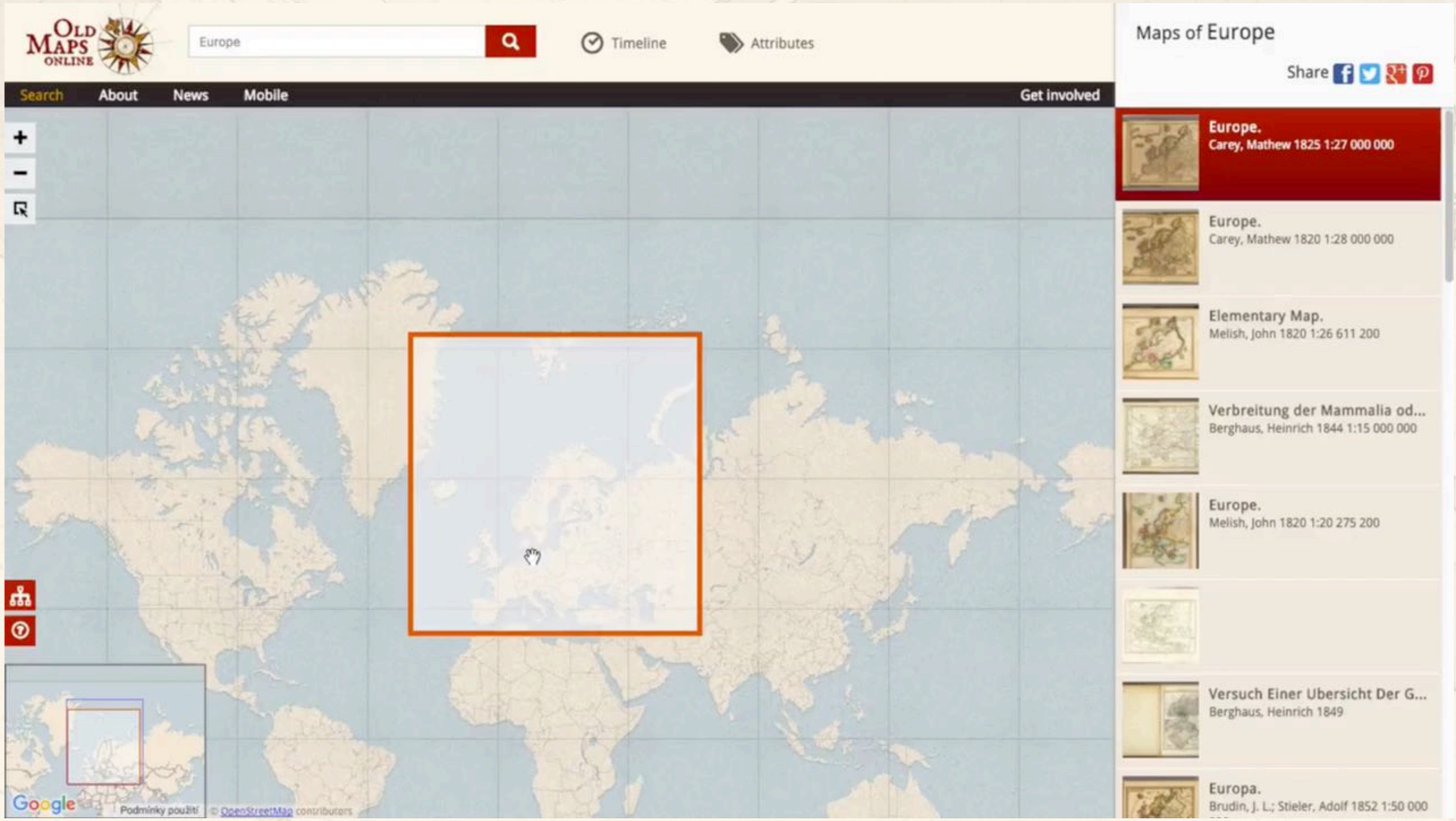
KLOKAN TECHNOLOGIES

Old Maps Online

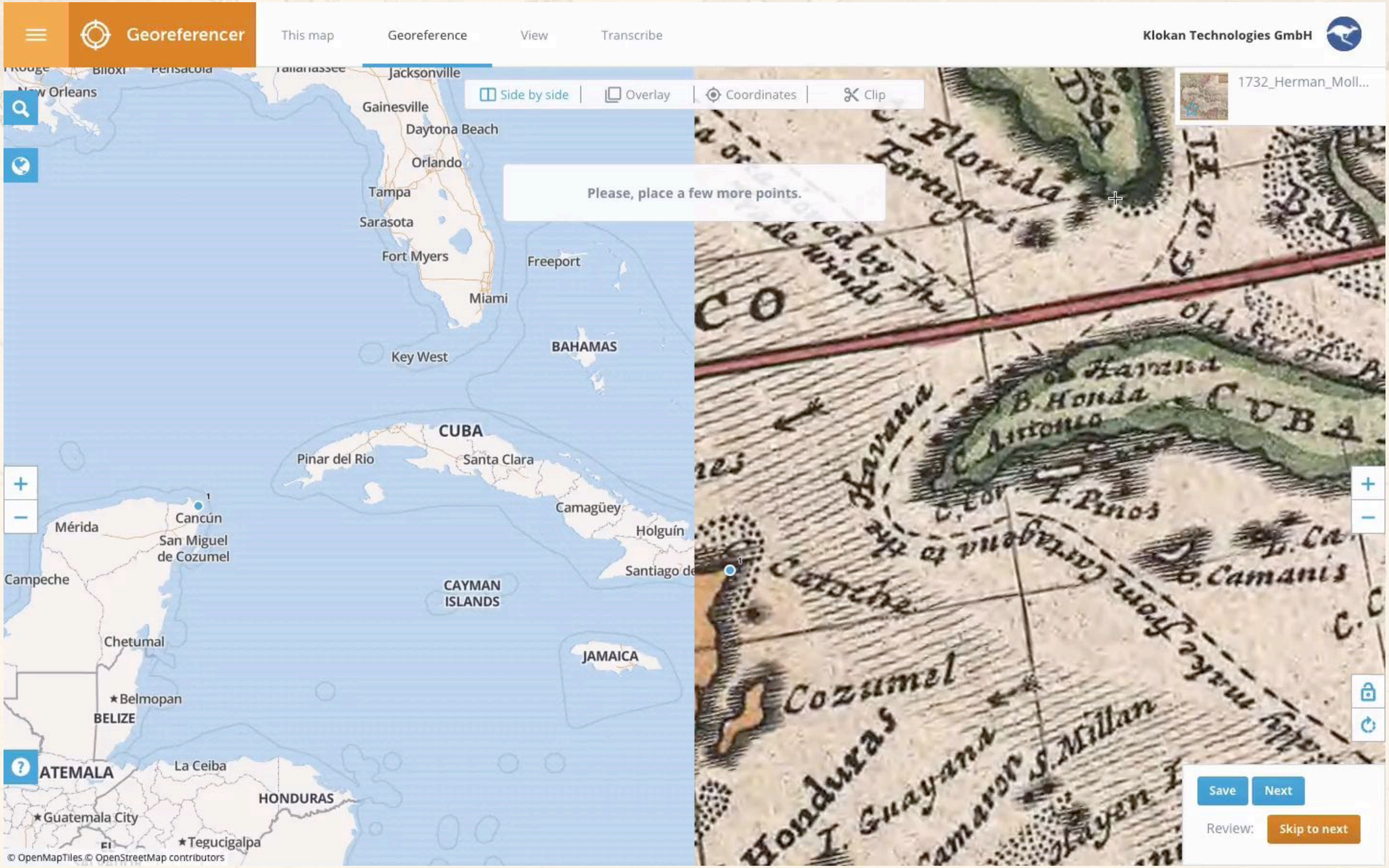
www.oldmapsonline.org

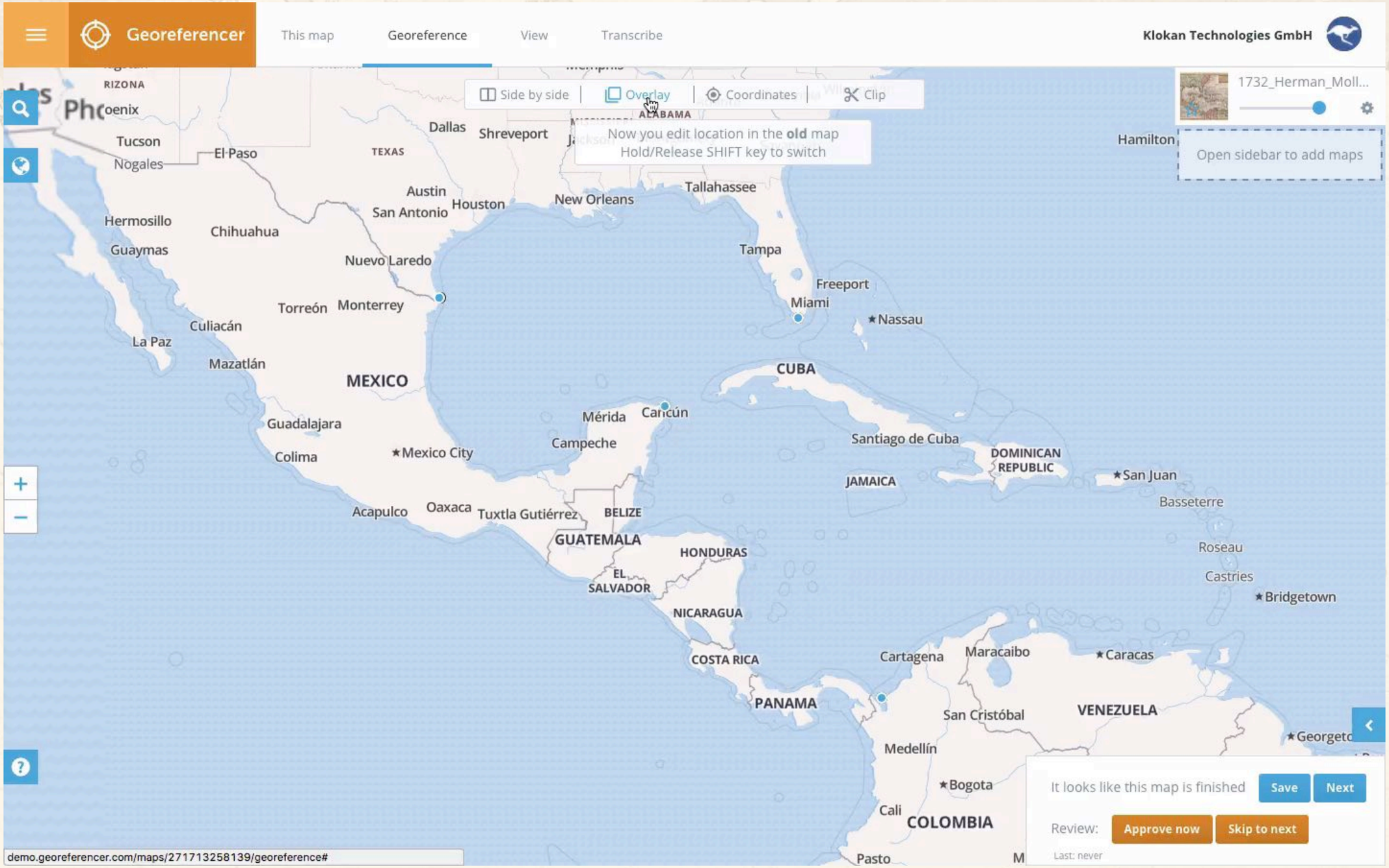
The search engine for historical maps

www.oldmapsonline.org

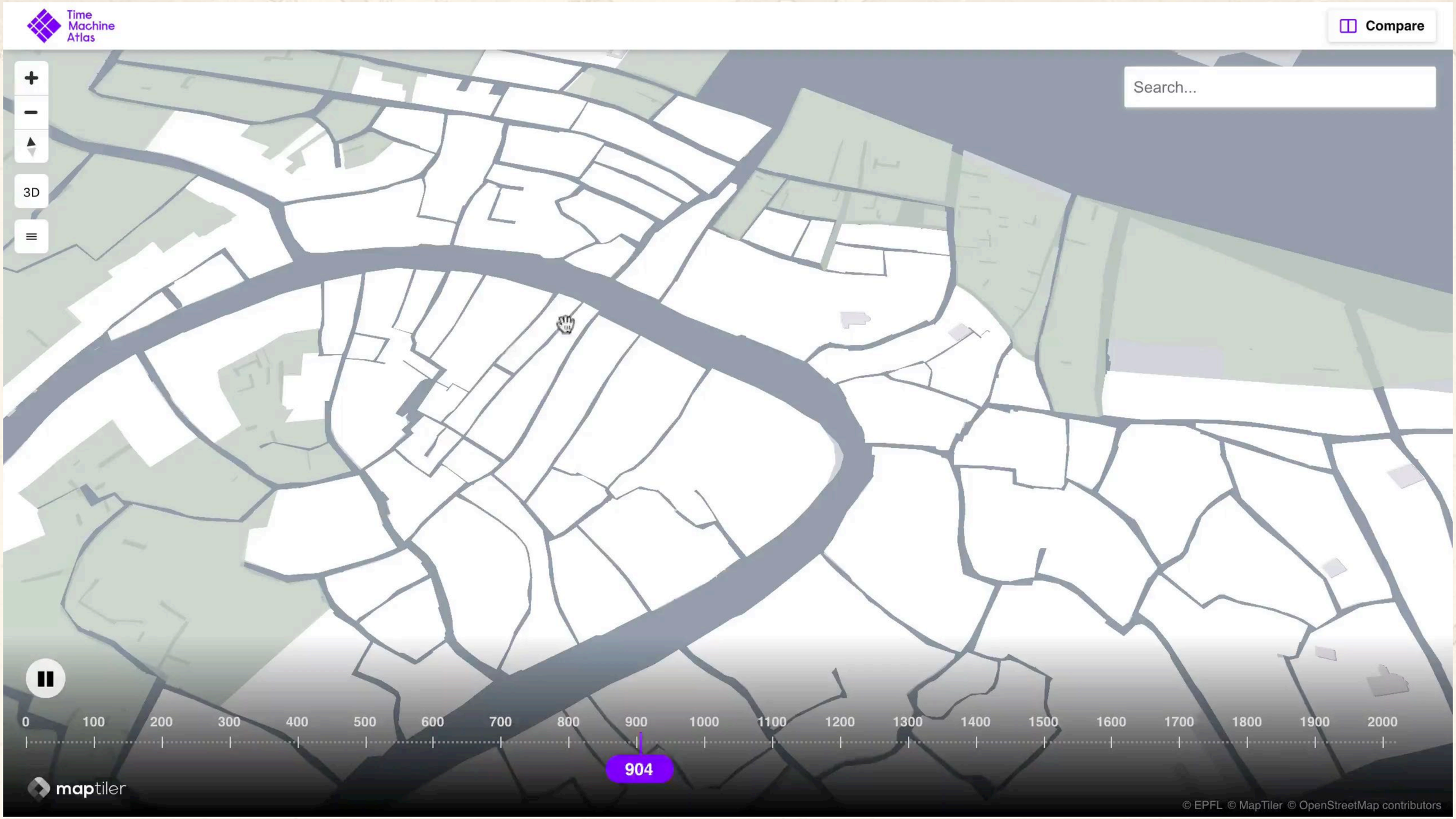


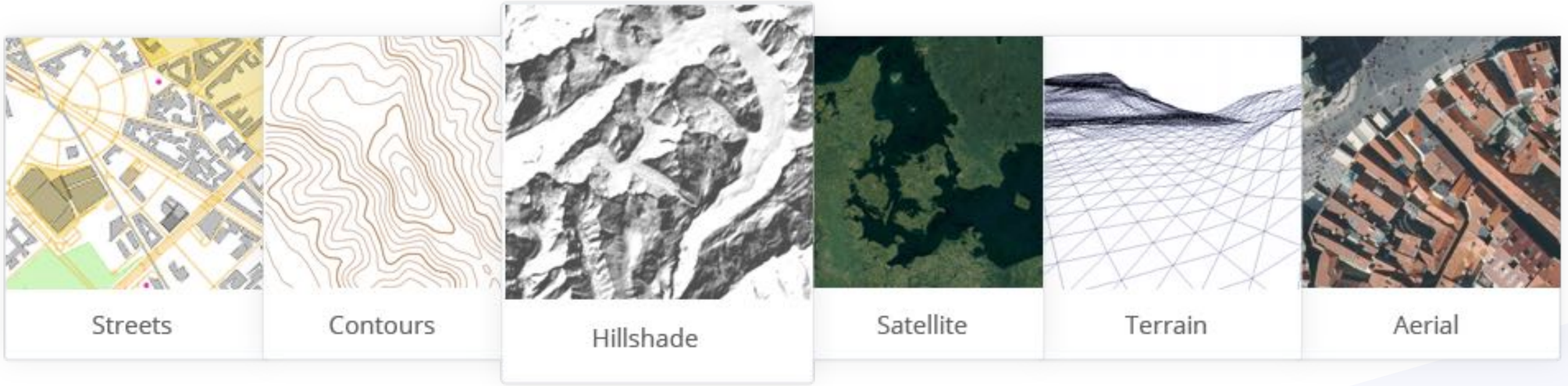
www.oldmapsonline.org


Georeferencer
This map
Georeference
View
Transcribe
Klokan Technologies GmbH
Side by side
Overlay
Coordinates
Clip
1732_Herman_Moll...
Please, place a few more points.
Jacksonville
Gainesville
Daytona Beach
Orlando
Tampa
Sarasota
Fort Myers
Freeport
Miami
Key West
BAHAMAS
CUBA
Pinar del Rio
Santa Clara
Camagüey
Holguín
Santiago de
CAYMAN ISLANDS
JAMAICA
Cancún
Mérida
San Miguel de Cozumel
Campeche
Chetumal
Belmopan
BELIZE
La Ceiba
HONDURAS
Guatemala City
Tegucigalpa
© OpenMapTiles © OpenStreetMap contributors
Florida
Havana
B. Honda
C. Antonio
C. Corr.
T. Pinos
C. Camanis
Cozumel
Honduras
I. Guayana
Save
Next
Review:
Skip to next


Georeferencer
This map
Georeference
View
Transcribe
Klokan Technologies GmbH
Side by side
Overlay
Coordinates
Clip
Now you edit location in the old map
Hold/Release SHIFT key to switch
1732_Herman_Moll...
Open sidebar to add maps
Hamilton
Tucson
Nogales
El Paso
TEXAS
Dallas
Shreveport
ALABAMA
Tallahassee
Austin
San Antonio
Houston
New Orleans
Hermosillo
Chihuahua
Guaymas
Nuevo Laredo
Tampa
Freeport
Miami
Nassau
Torreón
Monterrey
Culiacán
La Paz
Mazatlán
MEXICO
CUBA
Mérida
Cancún
Guadalajara
Campeche
Santiago de Cuba
Colima
Mexico City
DOMINICAN REPUBLIC
JAMAICA
San Juan
Basseterre
Acapulco
Oaxaca
Tuxtla Gutiérrez
BELIZE
GUATEMALA
HONDURAS
Roseau
Castries
EL SALVADOR
Bridgetown
NICARAGUA
COSTA RICA
Cartagena
Maracaibo
Caracas
PANAMA
San Cristóbal
VENEZUELA
Medellín
Bogota
Cali
COLOMBIA
Pasto
It looks like this map is finished
Save
Next
Review:
Approve now
Skip to next
Last: never
demo.georeferencer.com/maps/271713258139/georeference#

Time Machine Atlas
Compare
Search...
3D
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2018
maptiler
© EPFL © MapTiler © OpenStreetMap contributors


Time Machine Atlas
Compare
Search...
3D
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
904
maptiler
© EPFL © MapTiler © OpenStreetMap contributors



Let’s build great maps together…

www.maptiler.com

maptiler

maptiler

Revolution in web cartography.

Powered by Copernicus open data!

www.maptiler.com

maptiler