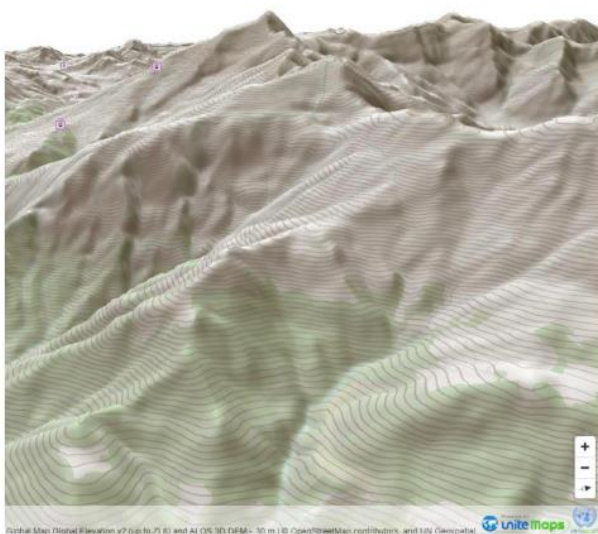


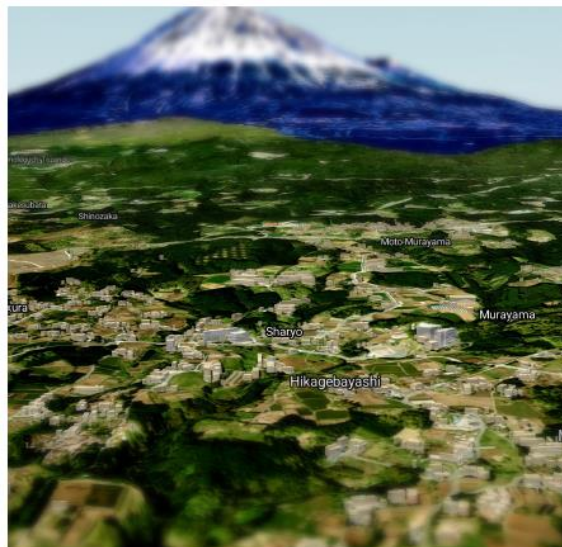
UNVT Progress report

UNVT supports various web map operations by each members.

 UNGSC
United Nations Global Service Centre



 GSI
Geo. Info. Authority of Japan



 ASIG
State Authority for Geo. Info.



Figures from Fujimura (2022)

Vector Tile Development in UN



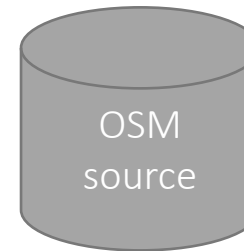
UN Open GIS
INITIATIVE



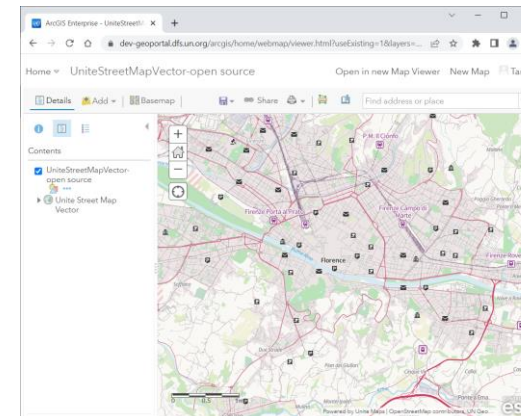
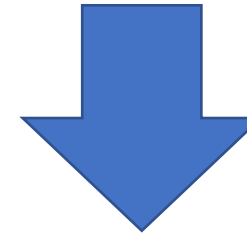
UN
Mappers

- Vector tile from PostGIS database
 - Use of nodejs scripts and tippecanoe
 - 841 mbtiles, up to ZL15 (**162 GB**)
- Automatic update
 - Daily or weekly update as scheduled task.
 - (**35 hours** for global data update if needed.)
- Style is prepared
 - Both 2D and 3D
- Hosting web map
 - Vector Tiles for Esri Arcgis Online.
 - Web Map APP with MapLibre

Source DB
(PostGIS)



UN source

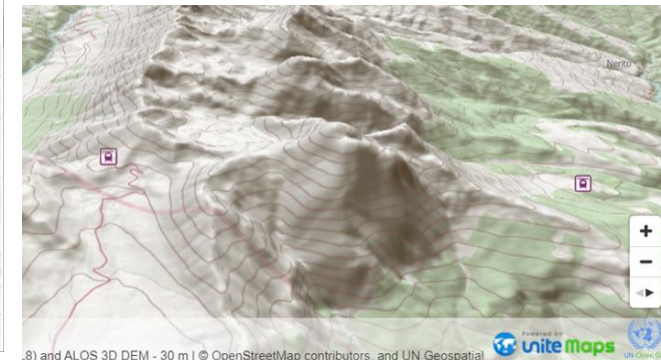


Users

- Web APP
- GeoPortal
- Etc.

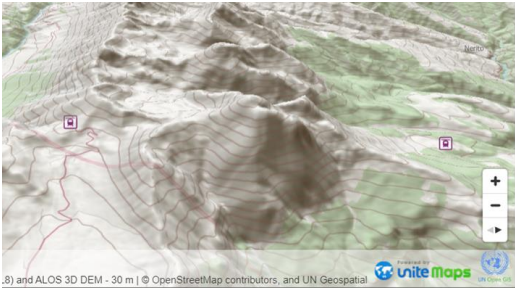
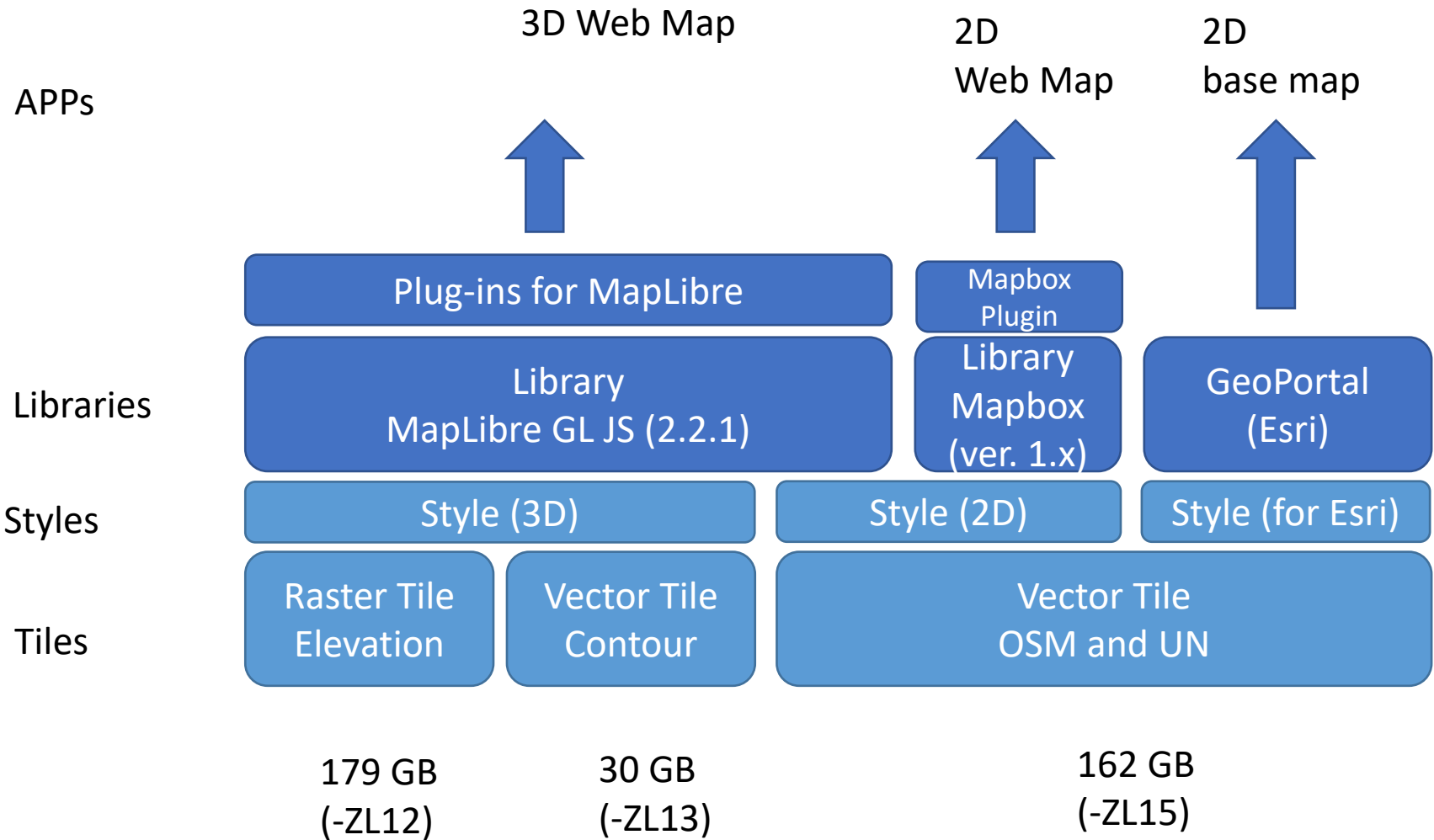


Powered by
unite maps



The United
Nations
Vector Tile
Toolkit

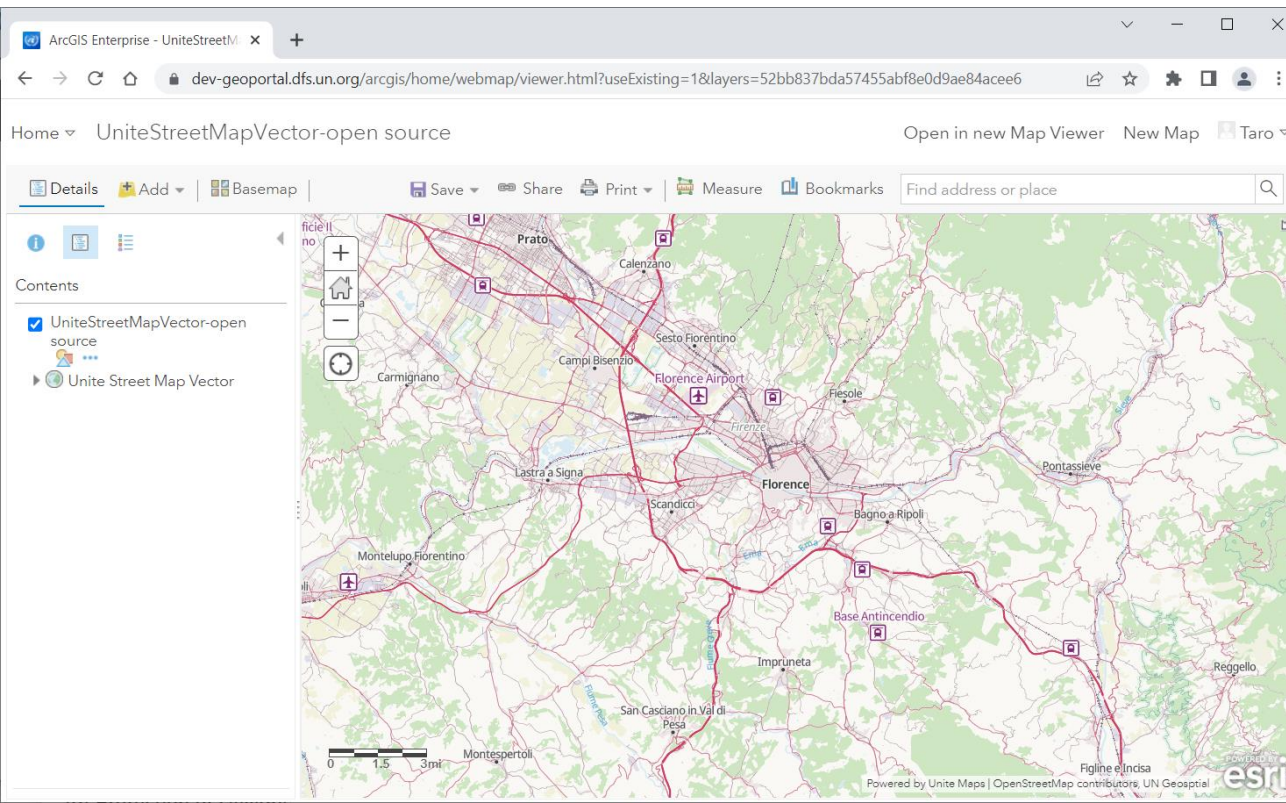
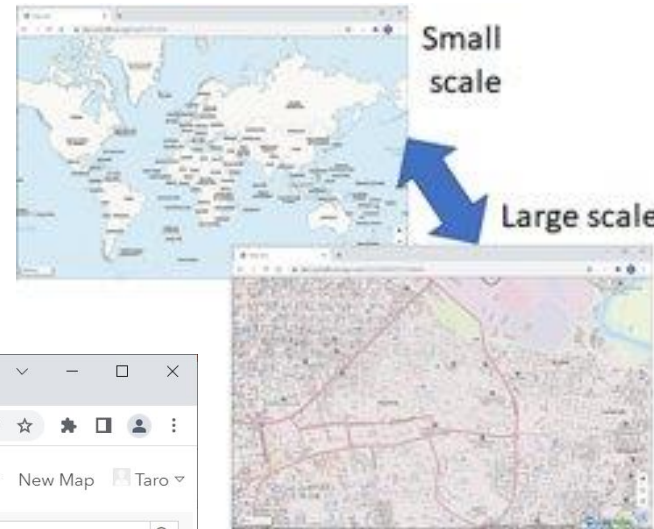
UN experience: Vector Tile in ArcGIS Online



UN experience: Vector Tile in ArcGIS Online

We have developed some interface with ArcGIS online for vector tile consumption.

We struggled and have a lot of lessons.



What we developed for our nodejs server:

- Interface with ArcGIS REST API
 - Style
 - Index
 - Tilemap (for OverZoom)
- Azure AD authentication
- CORS setting (enabled)



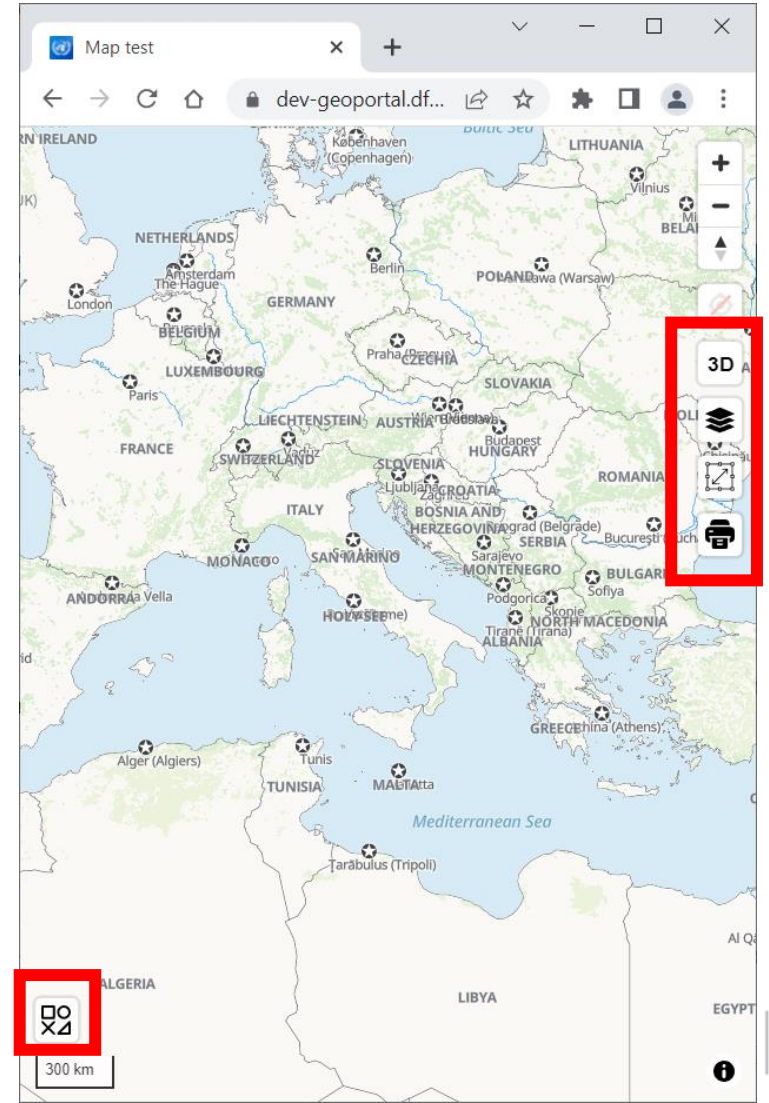
UN Open GIS
INITIATIVE

UN experience: Use of various plug-in

- We learn various plug-ins from partners' projects.

In particular, thank you **watergis** (Jin Igarashi) for sharing your knowledge!

Plug-in	MapBox	MapLibre
StyleSwitcherControl	el/style-switcher, watergis/style-switcher	N/A (ver 1.14 or prior)
PopupControl	watergis/mapbox-gl-popup	N/A
PitchToggleControl	tobinbradley/mapbox-gl-pitch-toggle-control, watergis/mapbox-gl-pitch-toggle-control	N/A
AreaSwitcherControl	watergis/mapbox-gl-area-switcher	N/A
LegendControl	watergis/mapbox-gl-legend	watergis/maplibre-gl-legend
ExportControl	watergis/mapbox-gl-export, geolonia/mbgl-export-control	watergis/maplibre-gl-export
ElevationControl	watergis/mapbox-gl-elevation	N/A
Geocoder	mapbox-gl-geocoder	maplibre-gl-geocoder



Partner's effort: UNVT Portable

- Efforts by Furuhashi lab.

The United Nations Vector Tile Toolkit

UNVT Portable

with Crisis Mappers Japan and Aoyama Gakuin Univ.

- For disaster damage assessment by Municipality Governments.
- Collaborative project of governments, academia and civic tech communities.
- Raspberry Pi implementation of UNVT will be used to provide orthoimages overlaid with basemap vector tiles on mobile devices through Direct Wi-Fi Connection.

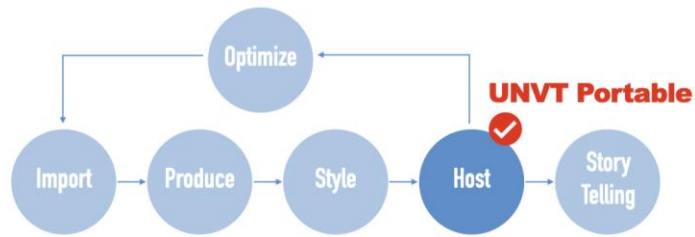


Fig. UNVT Structure



Way Forward & Our vision

- We continue web map and vector tile related activities at each circumstance.
- We are and will be a community of sharing our technical know-how on vector tile implementation and helping each other.
- (Please refer to the presentation by Mr. Hidenori Fujimura in the morning for our vision.)