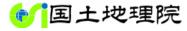## The United Nations Vector Tile Toolkit

Hidenori Fujimura

Lead, UN Vector Tile Toolkit

Executive Officer for Geospatial Information Policy, GSI

Former Senior Geospatial Expert, UNGIS

国土地理院

Geospatial Information Authority of Japan

UN Open GIS Initiative (2016-)
Aim: to identify and develop and open source GIS bundle for UN operations.
Co-chairs: Prof. Ki-Joune Li, Mr. Ricardo Arias (US AFRICOM), Mr. Kyoung-Soo Eom

Spiral 4: Data Collection (Leader: Prof. Ki-Joune Li)

UN Vector Tile Toolkit (2018-)
Lead: Hidenori

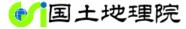Aim: to mainstream the use of vector tiles
    in public organizations.

Participants: UN Secretariat, GSI, OSGeo
    Japan Chapter, and *You*!

Data Conversion

Generalization

Quality Control

Multi-Media

Content of the Toolkit

Produce

Data source > GeoJSON Text Sequence > MBTiles

Using: Tippecanoe

Host

Custom Node.js script with server-side image tile rendering for wider interoperability

Using: @mapbox/mbtiles and @mapbox/mapbox-gl-native

Style

Small Node.js scripts for managing Mapbox GL Style
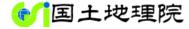
Using: maputnik in some cases

Optimize

Optimize the size of vector tiles by configuring vector tile schema.

Use gh:ibesora/vt-optimizer

Hands-on training materials
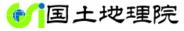For UN Global Service Centre, FOSS4G Asia 2018, FOSS4G Niigata 2019…

Current Status

	Project element	Current Status
1	Software development	Feasibility is well proven.
2	Deployment	Awaiting for UN infrastructure.
3	Community building	Good start by UNGIS, GSI and OSGeo.JP. Need to expand to make the project more reliable and more sustainable.
4	Technology transfer	Just started inside the UN and OSGeo community. Need to reach to the operational level.
5	Applications	Planning to demonstrate by specific applications.

UN Vector Tile Toolkit

Latest and optimal web mapping technology for UN operations and Member States

2019-06-25
Demonstrated to the Chief Information Technology Officer of the UN Secretariat and the Deputy Permanent Representative of Japan to the United Nations.

1. **Monthly teleconference of the UN Open GIS Initiative**
    ➢ In the middle of each month; Kyoung-Soo, Timur or Gakumin from UNGIS will invite you soon.
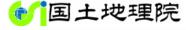2. **UN Open GIS Initiative annual workshop**
    ➢ 2019-08-26/27 in tandem with FOSS4G Bucharest
3. **FOSS4G 2019 Bucharest**
    ➢ 2019-08-28: Presentation on the UN Vector Tile Toolkit
4. **FOSS4G 2019 Niigata**
    ➢ 2019-09-13: Toolkit hands-on by Ayumi
    ➢ 2019-09-14: Toolkit hands-on by Hideori

1. We welcome you to the UN Vector Tile Toolkit community.
2. UNGIS will invite you to the Teleconference soon.
3. We would like to share any information about the Toolkit; please let us know if you have any question.
4. Contribution via GitHub or any other channels are always welcome.
5. Our ambition is to take the Toolkit to the **OSGeo Incubation process**; we might consult with you on how we can possibly collaborate in this issue.