

Releasable Basemap Tiles GeoPackage
Sprint
Call for Participation (CFP)

Version 1.1 - January 15, 2024

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Chapter 1. Overview

The Open Geospatial Consortium (OGC) is releasing this Call for Participation (CFP) to solicit proposals for the OGC Releasable Basemap Tiles GeoPackage Sprint. This initiative builds on what was accomplished in OGC Vector Tiles Pilots and Testbeds, which resulted in the National System for Geospatial-Intelligence (NSG) Vector Tile Interoperability Standard (VTIS) Volume 1: Network Services, 29 April 2020 (NGA.STND.0075-01_1.0_VTIS). This Sprint is intended to test, implement, and develop a draft specification for the NSG VTIS Volume 2: **Basemap Tile Packages (BTP), which stores Mapbox Vector Tiles (MVTs) in a GeoPackage in the World Mercator Projection (EPSG:3395).**

RBT stands for Releasable Basemap Tiles. It is a prototype project aimed at creating a set of vector and raster map tiles using open-source data. These tiles are intended to be used as a basemap for US Army, Joint, and Coalition exercises and operations, augmenting and possibly replacing the current CADRG scanned maps.

Releasable Basemap Tiles (RBT) is a prototype project aimed at creating a set of vector and raster map tiles using open-source data. RBT tiles are intended to be used as a basemap for Army, Joint, and Coalition exercises and operations, and is being looked at as a replacement for the current CADRG scanned maps. The RBT prototype builds on other vector tile-related pilots and prototypes sponsored by AGC and National Geospatial-Intelligence Agency (NGA) dating back to 2019.

RBT features and styles are based on the NGA Data Product Specification (DPS) documents associated with the Operational Navigation Chart (ONC)/Topographic Pilotage Chart (TPC), the Joint Operational Graphic (JOG), and the Topographic Map™.

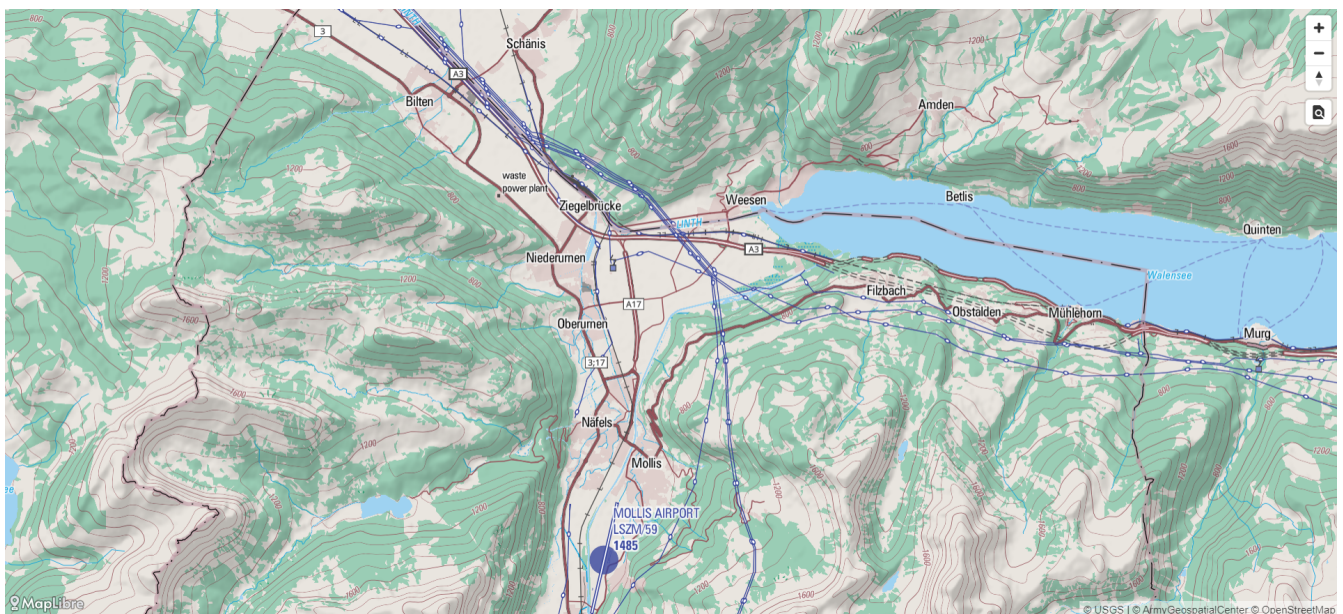


Figure 1. Releasable Basemap Tiles sample

Figure 1 presents a sample of Releasable Basemap Tiles (RBT). In late 2022, RBT was introduced as a prototype with next-generation basemaps, which are now publicly accessible services. For instance, Releasable Basemap Tiles for Kyiv, Ukraine can be accessed through the following URL: <https://tileserver-rbt-agc-dev.apps.kubic.dev.ngaxc.net/styles/RBT-TLM-SATELLITE-3395/?vector#10/50.2485/30.4584> By zooming in and out on this example, one can observe the shift in style from a satellite imagery overlay to an operational style.

A set of complete RBT services can be accessed at [this URL](#). Some RBT videos with titles such as "Why Releasable Basemap Tiles?", "We Have Got You Covered", "What is New?" , and "RBT Prototype Map Viewer" are available on [Defense Visual Information Distribution Service\(DVIDS\)](#).

Another relevant resource would be the [OGC Two Dimensional Tile Matrix Set and Tile Set Metadata](#) standard

This initiative is being conducted under the [OGC Collaborative Solutions and Innovation Program](#). A PDF version of this CFP can be Downloaded [Here](#).

Chapter 2. Master Schedule

Table 1. Master Schedule

Milestone	Date	Event
<i>M01</i>	January 17, 2024	Release of Call for Participation (CFP)
<i>M02</i>	February 09, 2024	<i>CFP Proposal Submission Deadline (11:59pm EDT)</i>
<i>M03</i>	February 16, 2024	All Participation Agreements signed
<i>M04</i>	February 21, 2024	Half-day <i>Kickoff</i> Workshop (Virtual)
<i>M05</i>	March 04, 2024	3 weeks sprint to develop TIEs, implementations, and demos
<i>M06</i>	March 22, 2024	<i>End of the Sprint (11:59pm EDT)</i>
<i>M07</i>	March 25-29, 2024	Demonstration of results at OGC Member Meeting
<i>M08</i>	May 24, 2024	<i>Submit the the Engineering Report to Pending Documents</i>
<i>M09</i>	June 17-21, 2024	TC vote at OGC Member Meeting
<i>M10</i>	June 24, 2024	End of initiative

Chapter 3. Scope

3.1. Overview

OGC Innovation's main goal is to improve the Technical Readiness Level (TRL) of geospatial interoperability solutions, regardless of their form, whether it's standards, software, or services. To achieve this, OGC conducts applied research through practical experimentation and evaluation of the complete environment of specifications, standards, software, and operations, working collaboratively.

During the sprint, all participants will be actively involved in the process of developing, testing, and validating interface and data specifications and standards.

This Sprint will be structured as an operational experiment event to simulate real operational settings. The objective is to refine and validate how to put RBTs in a GeoPackage against products, plans, policies, agreements, procedures, and real user activities. This Sprint will be virtual.

The overall purpose of this Sprint is to assist in the completion of a National System for Geospatial-Intelligence (NSG) Vector Tile Interoperability Standard (VTIS) Volume 2: Basemap Tile Packages (BTP). Volume 2 will provide implementers with the specific knowledge on how to properly store VTs in a GeoPackage. The Sprint will ensure that the NSG implementation is consistent with one or more of the [OGC GeoPackage Vector Tiles](#) Community Extensions. **This work will help to ensure that this standard is vetted against Army requirements. Not only does this ensure that the GeoPackage VT implementation is fully evaluated and ready for inclusion as requirements within Army, but also other acquisition programs.**

3.2. Mandatory Meetings

Sprint Participants shall participate in meetings between AGC, OGC, and relevant stakeholders on a basis to be determined by the progress and status of the planning and execution of the Sprint. All meetings for this project will be held virtually. The following meetings are the minimum expectations of this project:

- A Kickoff Meeting between Participants, OGC, AGC, and relevant stakeholders;
- Regular (anticipated to be twice weekly) telecons for the Releasable Basemap Tiles (RBT) GeoPackage Sprint.

3.3. Initiatives Goals and Requirements

The following activities will address the requirements of the initiative:

1. Participation in an RBT GeoPackage Sprint will involve evaluating the feasibility of implementing and documenting a community extension to the OGC GeoPackage Standard for RBT vector tiles as an OGC Engineering Report. The Sprint will be conducted according to a standards-based geospatial architecture, providing processes for defining, developing, validating, and verifying geospatial standards and emerging specifications for implementing operational systems.

2. Technology Integration Experiments (TIE) will be undertaken to evaluate, demonstrate, and finalize how to incorporate MVTs into a GeoPackage. These TIEs shall result in an NSG Standard and be published as an OGC Engineering Report.
3. During and after the end of the Sprint, an Engineering Report will be prepared, documenting a draft specification for NSG VTIS Volume 2: Basemap Tile Packages (BTP) that has been incorporated into a GeoPackage in the World Mercator Projection (EPSG:3395). This Engineering Report will be suitable for approval as an OGC Engineering Report. It will serve as a basis for an NSG Standard and potentially lead to standardization in the OGC.

Chapter 4. Deliverables Summary

The Initiative deliverables are summarized in the following table. This initiative includes one Engineering Report and two or more implementation instances. Technical details can be found in section [Scope](#).

Table 2. Deliverables

ID	Description
D001	Engineering Report documenting an OGC draft specification for putting RBT vector tiles within a GeoPackage
D100-101	Implementation of Releasable Basemap Tiles EPSG 3395 MVTs stored in GeoPackage

Chapter 5. Guidelines and Cost-share

5.1. Submission Guidelines

- Proposals must be submitted **by 11:59pm EST** in accordance with the [Master Schedule, M02, CFP Proposal Submission Deadline](#) .
- Proposals from non-members or individual members will be considered provided [OGC Membership](#) (or a letter of intent) is provided with *Proposal Submission*
- Each selected proposing organization will be required to enter into a Participant Agreement (PA) contract with OGC, regardless of receipt of cost-share funds
- Proposals should be submitted in PDF format and should contain an overview of planned implementations, desired cost-share, and in-kind contributions (if any)
- It should be clear how each planned deliverable relates to the [core scope](#)

5.2. Cost-share

- Cost-share of funds are to be negotiated upon receipt of the proposal if the proposal is chosen
- Stipends are available and Each stipend should be directly related to an implementation or editing/completing documentation of the candidate standard

5.3. How to Submit

Email the PDF Proposal prior to the submission deadline to innovation@ogc.org. [Technical Proposal Template](#) and [Cost Proposal Template](#) are accessible here.

5.4. Participation Requirements

- Each Participant agrees to provide a detailed description and planned implementation of the assigned deliverables and to coordinate with other initiative Participants at the Kickoff Workshop ("Kickoff").
- The Initiative will be conducted within the framework of OGC's Bylaws and Intellectual Property Rights Policy ("IPR Policy"), as agreed to in the Participant's Membership Agreement, and in accordance with the OGC Innovation Program Policies and Procedures and the OGC Principles of Conduct, the latter governing all related personal and public interactions.
- Remote Teleconference Meetings: Regular telecons will be conducted to accelerate understanding and action, particularly the status of any risks (or issues) that might block (or are blocking) progress toward timely delivery of work item results.
- Each Participant agrees to provide at least one Technical Point of Contact (POC) to attend both regularly scheduled and ad hoc telecons that involve an assigned deliverable.

5.5. Correspondence and Collaboration

Each Participant agrees to utilize the following correspondence and collaboration tools:

- Participate in telecons using the GoToMeeting tool;
- Edit Engineering Report source files in the AsciiDoc format using the OGC Engineering Report template (to be provided);
- Upload Engineering Report source files to the designated GitHub or Gitlab repository;
- Use the designated GitHub/Gitlab repository for communication and reporting;
- Utilize the OGC Web Portal, with modules for calendaring, contact lists, file storage, timeline, action items, and meeting scheduling; and
- Send and receive emails to/from Initiative email broadcast list(s).

5.6. Reporting

There will be an Engineering Report that will be due 60 days after the end of the Sprint.