

# STDM Code Sprint: Call for Participation

## Introduction

The Social Tenure Domain Model (STDM) is a pro-poor, gender responsive and participatory land information system which has been developed to bridge the gap between formally-registered land and land that is not registered. It is an affordable land tool for representing people-to-land relationships along the continuum of land rights. The tool has been developed by UN-Habitat through GLTN and other partners in recognition of the need for legal pluralism and a broader recognition of people-to-land relationships. It is based on open source technologies thus making the tool available to all and the concept adheres to some underlying principles of the ISO Land Administration Domain Model (LADM). More information about STDM is available [here](#).

The STDM software components have reached a level of maturity and are being used in production by a growing number of organizations. The source code has been published under a GNU General Public License v2.0 and is publicly available on [GitHub](#).

To improve long term sustainability of the project and disseminate know-how, the Global Land Tool Network (GLTN) is organizing a code sprint that will bring together geospatial experts to further support the enhancement of the STDM ecosystem. The Professional Cluster of the Global Land Tool Network (GLTN) has allocated a budget to organize and conduct the code sprint and support travel and accommodation of selected participants. The Open Source Geospatial Foundation (OSGeo) also supports the code sprint financially.

The objectives of the code sprint are threefold:

1. Improve the STDM software.
2. Jump-start potential new contributors.
3. Train and educate Open Source concepts and software.

Code Sprints (also known as Hackathons) are a proven method to achieve these objectives.

## Benefits for the Participants

Participants of the code sprint will get hands-on development experience with STDM, the OSGeo projects (i.e. QGIS and PostGIS), the Open Source Geospatial flagship database PostgreSQL and the web based disaster relief platform Sahana Eden used for the new STDM Online prototype. Two experienced instructors and the core STDM developers will be available throughout the workshop. Participants will also learn about Open Source collaboration, development, licensing and business models.

## Application

Please note that **all** participants have to apply by **Friday 31<sup>st</sup> March 21:00 UTC** using this form: <http://bit.ly/stdm-code-sprint>

This process is **mandatory** in order to be able to participate. After thorough evaluation the event organizers will inform selected participants by Wednesday 5<sup>th</sup> April 2017.

## Event Schedule and Organization and Sponsorship

The code sprint will take place from April 24 to 27 at the Regional Centre for Mapping of Resources for Development (RCMRD) in Nairobi, Kenya. It is organized by Metaspatial (Germany) in close cooperation with UN-Habitat and Kartoza (South Africa).

The event is financially supported by GLTN and OSGeo and is supported by the RCMRD, UN-Habitat, Kartoza and Metaspatial. If you are also interested in sponsoring the code sprint please contact [stdm@metaspatial.net](mailto:stdm@metaspatial.net) for more information.



Technical expertise will be provided by STDM's code developers. The invited technical expert Etienne Trimaille from Paris, France (employed by Kartoza, South Africa) is a core QGIS contributor, as well as an internationalization and documentation expert. Arnulf Christl from Metaspatial (Germany), President Emeritus of the Open Source Geospatial Foundation (OSGeo), will facilitate the code sprint and provide background information on Open Source development and associated business models.

## Code Sprint Objectives

The code sprint will focus on five main objectives including:

- Internationalization of the tool's user interface;
- Improve the end-user manual of the tool;
- Incorporate prototype support for the OGC GeoPackage standard;

- Evaluate the level of effort that will be required to incorporate a production-ready GeoODK or QField extension;
- Feedback and support to the QGIS core development.

During the Code Sprint participants will acquire all the know-how needed to operate, maintain and improve all the Open Source tools around the STDM project.

## Internationalization of the User Interface

The current STDM plugin is available in English language. The software QGIS which forms the basis for the STDM plugin contains all the functionality required for internationalization of the software. The target of the code sprint is to internationalize the Plug-In for at least 3 additional languages amongst French, Spanish, Arabic and Portuguese. The Sahana Eden platform implements i18n, is available in several languages and will be extended for STDM vocabulary.

## Improvement of User and Training Manuals

Most help and documentation files of STDM have been written in English. The goal is to make the documentation available in at least three other languages (e.g. French, Spanish, Arabic etc.).

## Extension of STDM Functionality with the OGC GeoPackage Standard

The STDM desktop architecture uses a PostgreSQL database to allow multiple users in a network to use the same data. This network requires online access.

Extending STDM functionality to mobile platforms requires a common data storage which simplifies the process of moving data sections around. A common standard for offline data storage is GeoPackage based on Spatialite/SQLite.

The Code Sprint will build on existing tools (for example QGIS handling of GeoPackage) and develop prototype code to be able to estimate the cost and evaluate the effort to implement full support in STDM software.

## Evaluation of the Cost and Effort for a GeoODK Extension

GeoODK is a mobile platform focused on supporting geospatial functionality and data import and export. QField allows you to efficiently work on your GIS data outdoor.

During the Code Sprint a prototype will be implemented as proof of concept based on GeoODK and / or QField to better understand the scope and limitations of the platforms and evaluate cost and effort of a full-scale implementation.

## Feedback and Support QGIS Core Development

New developers in the Open Source world need some time to get used to how things work here. This event is an ideal environment to introduce Open Source concepts (publish early, release

often) and learn how collaboration works in general. QGIS is a showcase open source project to learn all aspects concerning development, collaboration and governance.

## Funded Participation

The Global Land Tool Network (GLTN) is an alliance of global, regional and national partners contributing to poverty alleviation through land reform, improved land management and security of tenure particularly through the development and dissemination of pro-poor and gender-sensitive land tools. The Professional Cluster of GLTN financially supports the STDM code sprint. The Open Source Geospatial Foundation (OSGeo) also supports the sprint both financially and through an in-kind contribution.

## Application for Funding

All participants wishing to apply for the travel grant program have to apply through this form: <http://bit.ly/stdm-code-sprint>. Up to 10 applicants preferably from Africa, South America and Asia will be selected by the organizers for the grant program depending on their skills, location and affiliation. Participants are strongly encouraged to include attachments or links to support skills and expertise in the preferred area of work (listed under the objectives above).

## Self-Sponsored Participation

Up to ten applicants who have not been selected for funding can participate in the event for free but have to organize for their own travel and accommodation costs. Application through the form <http://bit.ly/stdm-code-sprint> and confirmation by the organizers is still required in order to be able to order catering. Catering is included for all participants. The selection is subject to a case-by-case review of all applications.

## Participant Profile

Applicants must have prerequisite skills: either a background in software development (Python, Qt, ODK, SQL, XML etc.), geospatial expertise (QGIS, GDAL/OGR) or language and technical documentation skills (Qt Linguist, Adobe Robohelp).

## Language

All sessions will be carried out in English

## Contact Information

For more information please contact [stdm@metaspatial.net](mailto:stdm@metaspatial.net) or directly:

**Arnulf Christl** from Metaspatial    OR    **Byron A. Okubasu Anangwe** from RCMRD