

Figure 1: Display basemap settings in OpenMapKit

## 4.3 Using OpenMapKit

This guide provides **surveyors, mappers and field supervisors** with the skills to:

- Configure OpenMapKit on devices for individual use and data collection
- Operate *OpenMapKit* for field data collection

### Overview

**OpenMapKit (OMK)** is an additional application that is used to support *ODK Collect* in determining the position of objects found during precise and precise field surveys. *OpenMapKit* can be run through *ODK Collect*, after you open and select one of the available forms. In determining the location of an object, *OpenMapKit* requires a map background in the form of a satellite imagery or OSM map. If you use the OSM as the map background, the thing to note is that the data must be available on the OSM server.

Prior to learning how to use **OpenMapKit**, users should know how to use *ODK (OpenDataKit) Collect*, an android-based application to replace paper form for surveys as *OpenMapKit* is an extension of *ODK Collect*. This extension is used to add information on the position or location of the object surveyed.

\*If you have not yet completed the initial set-up *OpenMapKit*, see 3.2.2 Setting up *OpenMapKit* before proceeding.

### Resources and Training Materials

This section features a selection of resources targeted at project managers, trainers, or even self-learners on the topic(s) outlined above.

*The following section is designed to serve as a self-paced guides for project managers, supervisors, or others in setting up the application.*

### Configuring OpenMapKit

Before you use *OpenMapKit*, you must first make sure each device is configured. The following are step by step instructions of the initial *OpenMapKit* Configuration:

- On the home page of *OpenMapKit*, press **the settings button** located in the upper right corner. This will allow you to download deployments (if applicable), select a basemap, and select the OSM buildings layer.

**1. Deployments** If using *OpenMapKit* Server and deployments, follow these steps to download files needed for field mapping. If not using deployments, skip to 2. *Basemap*.

- Open the *OpenMapKit* app, tap on the Settings button in the top right corner, and select Deployments [1].
- Select the appropriate deployment (i.e. census-versalles). Select the black download button in the lower right corner.

**2. Basemaps** By default, *OpenMapKit* will display the *Online Humanitarian OpenStreetMap* that can be accessed using an internet connection. However, if manually added to the device or downloaded through a deployment, an offline basemap can be opened without an internet connection.

Select and change the *OpenMapKit* basemap by pressing **the settings button** located in the top right corner and pressing **Basemap** then select the *.mbtiles*. Then press **OK**.

Display basemap settings in *OpenMapKit*

Navigate to the current location in OpenMapKit

Figure 2: Navigate to the current location in OpenMapKit

Building colors

Figure 3: Building colors

**3. OSM Buildings Layer** **Selecting an installed OSM File** Open the OpenMapKit app, tap on the Settings button in the top right corner, and select OSM XML Layer [3]. Select the correct .osm layer for the locality that is being worked in.

**Downloading OSM file** If your device does not have an OSM buildings layer (.osm file) pre-loaded or a file was not downloaded with a deployment, users can still download an OSM buildings layer with an internet connection. Users will need to complete the following steps:

- Navigate the map to your current location (for example, you are already on the survey location) by pressing **the round button** in the lower right corner of the screen until the round button is colored blue. A black dot will appear at your current location.

Navigate to the current location in OpenMapKit

- Press the **settings button** in the top right corner
- Select **OSM XML Downloader** to start download OSM data according to the view on the screen of your smartphone (the duration depends on the size of the area). Make sure you are connected to an internet connection when downloading OSM data. Note the color of the building, the building on the OSM \_basemap \_have brown color and the building from **OSM XML Downloader** is purple.

Building color on the OSM basemap (left) and downloaded building color (right)

- Your new downloaded OSM data will be saved in the format .osm which can be activated or deactivated via **the settings button → OSM XML Layer**.

OSM XML Downloader menu and OSM XML Layers menu

**4. Enter OSM Username** Select **OSM User name** OSM and enter your *User Name*

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Once you have configured your basemap and OSM layer, you can add the building information by:

- Select the building to which the information will be added. Make sure the building is purple which indicates that the building has been downloaded from OSM. If the building is selected, the color will change to orange.
- You can fill the building information in accordance with the form you have chosen before in the *ODK Collect* application, with press the information tag in the first row located below.

Fill out building information using a form from ODK Collect.

- When done, at the end of the page select **Save** to save the form to *ODK Collect*. If you have completed filling in the form, the building that you fill in the information will look like this:

Building that has been filled in the information

If the building data for location of your survey is not yet available in the OSM, you can map the building before conducting the survey. If you don't have time to do the mapping, you can use points to mark the object in the *OpenMapKit* by:

OSM XML Downloader menu and OSM XML Layers menu

Figure 4: OSM XML Downloader menu and OSM XML Layers menu

## Display settings menu OpenMapKit

Figure 5: Display settings menu OpenMapKit

Fill out building information using a form from ODK Collect

Figure 6: Fill out building information using a form from ODK Collect

- Press the **plus (+) icon** in the lower right corner of your screen until it turns green. It will appear green marker with the words *Add Node* on it. Slide the map until the location of the marker is accurate with the object in the field.

Add markers using the plus (+) icon

- Press **Add Node** if the point is accurate

Add note button when add point

- If the point you add turns out to be in a position that is not in represent with the object in the field, you can move the point that has been added by clicking on the point to move then press the two arrow icon in the top right corner. The color of the point will turn orange and above it will be appear *Place Node*.

Swipe points that have been added

- Slide the map to the accurate point position, then press **Place Node**.

Place node button when shifting a point

- After the position is accurate as the object in the field, you can fill out the form the same as the previous step.
- Enter information that matches the conditions in the field. Swipe the screen right or left to change the page question on the form.
- At the end of the page, select **Save** to save the form to *ODK Collect*. If you finished to fill in forms, the marker that you fill in the information will look like this:

Point of objects already loaded with informations

- Now you can see the form has been successfully saved on the *ODK Collect*.

*Note: all OpenMapKit surveys will be launched from the ODK application.*

The building that has been filled in the information

Figure 7: The building that has been filled in the information

Add marker using plus icon

Figure 8: Add marker using plus icon

Add node button when adding a point

Figure 9: Add node button when adding a point

Swipe points that have been added

Figure 10: Swipe points that have been added

Place node button when shifting a point

Figure 11: Place node button when shifting a point

the point of objects already loaded with informations

Figure 12: the point of objects already loaded with informations