



The content below was developed as part of the YouthMappers Academy module on 3D data and mapping in partnership with [Cesium](#). The entire module can be found on the [YouthMappers Academy](#) GitHub repository.

Mobile Data Collection

Today there are a host of different applications you can use to capture, edit and view OSM data using your mobile device. Some are platform dependent such as GoMap! (iOS) or Vespucci (Android) while others will work on almost any device you have like OSMAnd and Every Door. This is a very short list of the applications available. For the purposes of this module, we'll focus on using [Vespucci](#) as the primary application to capture, edit and update OSM data.

Vespucci (Android)











Vespucci is a free mobile app for Android that supports the full OpenStreetMap (OSM) data model. With Vespucci, you can perform almost all the editing operations available on a desktop directly from your mobile device. This section focuses on using Vespucci for building feature tagging in OSM.

Like other OSM tools, you'll need to log in with your OSM credentials to upload any edits. On your first upload, you'll be prompted to grant Vespucci permission to access your OSM account.

Requirements to get started with Vespucci:


- An Android device (or emulator). Vespucci version 20 supports Android 4.1+, and version 20.1 supports Android 5+.
- Vespucci app downloaded from Google Play or GitHub.
- A basic working knowledge of [OSM map features](#).
- An OSM account.

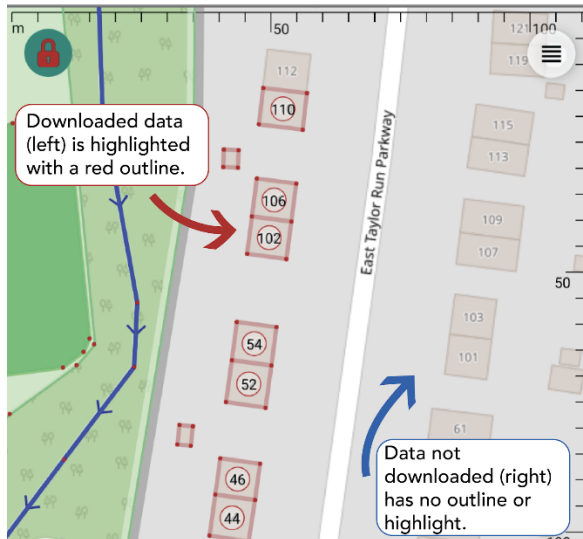
Key Vespucci Tools

Tool Name	Icon	Description
Undo		Tapping once will undo the last operation
Transfer		This will display several options including download current view and upload data to OSM
Camera		Start the camera app on your device and add photo to layer if enabled
Preferences		Shows user preferences for the application
Location		Uses the GPS of your device to locate you on the map. This tool will display several options such as follow your location, add a bookmark of current location and go to coordinates among many others
Tools		Provides access to a number of tools from imagery tools to importing data styles
Find		Search for locations and pan to it
Help		open the on device help documentation
Properties		Pens the property editor on the currently selected objects
Apply best preset		Apply the best matching preset to the existing tags



Vespucci Workflow for Field Mapping

The map you see in this application is taken from the latest version of OSM. Before heading into the field, review your Area of Interest (Aoi) in OSM. Determine if you need a preliminary mapathon to add any missing features. With your study area or Area of Interest (Aoi) identified and any preliminary mapping complete, it's time to download the data needed for your field work.

- Vespucci makes it very easy to get the needed data. **Zoom to your Aoi** using Vespucci's zoom tools or gestures.
- **Download OSM data** by selecting the Transfer icon, , and choosing 'Download current view.' This will download the current features from OSM to your device. Downloaded features will be highlighted differently from non-downloaded data.

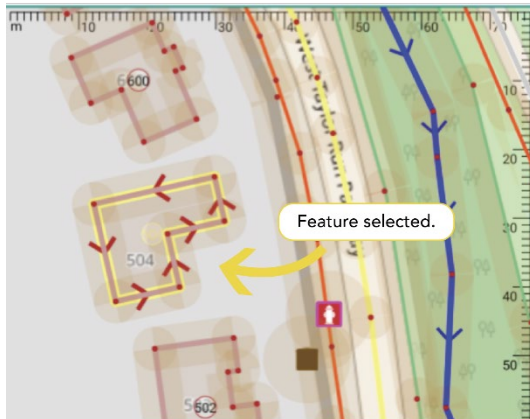



Editing with the Property Editor

By default, editing is locked when you open Vespucci. In the upper left corner you'll see the lock icon, . This indicates the data is locked and cannot be edited. Tapping this icon you can toggle between locked and unlocked mode, . While in unlocked mode, you can edit the downloaded data.



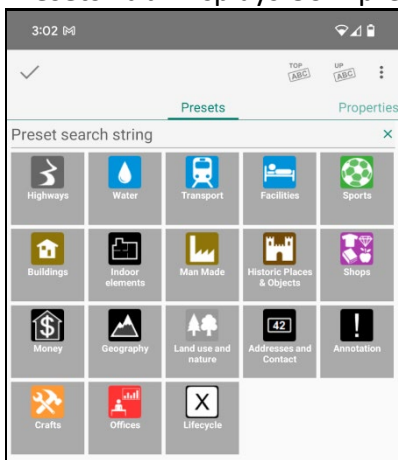
When you have enabled unlock mode, you can now select any downloaded feature by tapping the orange area around it to begin editing.



Select a feature by tapping it, then open the **Property Editor** by selecting the Property Icon, , to add or modify tags. To exit the Property Editor tap the check mark icon in the upper left corner. This will also save any changes you've made. (NOTE: at this time any changes are only saved to your phone and not to OSM.)

The editor offers several tabs. You can navigate across the tabs by swiping left or right.

- **Presets Tab:** Displays OSM presets for the selected object.



- **Properties Tab (default):** A simplified view showing key-value pairs for the selected feature. This preset driven display shows the description rather than the raw keys.

3:02

✓ 42 ABC + ABC

Presets Properties Details

Building

Building	Detached
Levels above ground	2
Levels below ground	Tap for values
Height (meters)	Type value
Min. level	Tap for values
Max. level	Tap for values
Building use	Tap for values
Building colour	Type or tap for values
Building material	Tap for values

- **Details Tab:** Shows the raw key-value attributes for advanced editing.

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✓ 42 ABC + ABC

Properties Details Relations

<input type="checkbox"/> Key	Value
<input type="checkbox"/> addr:housenumber	504
<input type="checkbox"/> addr:postcode	22314
<input type="checkbox"/> addr:street	West Taylor Run Parkway
<input type="checkbox"/> building	detached
<input type="checkbox"/> building:levels	2
<input type="checkbox"/> start_date	1955
<input type="checkbox"/> building:levels:und	Levels below ground
<input type="checkbox"/> height	Height (meters)
<input type="checkbox"/> min_level	Min. level
<input type="checkbox"/> max_level	Max. level
<input type="checkbox"/> building:use	Building use
<input type="checkbox"/> building:colour	Building colour
<input type="checkbox"/> building:material	Building material

- **Relations Tab:** Displays any relations the selected feature is part of.

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Details Relations

<input type="checkbox"/> Role	Member of relation

- **Member Tab:** Visible only if the object is part of a relation.

Uploading Your Edits to OSM

In the Properties tab, you can edit an item (tag) by tapping the 'Value' column on the right to enter or modify a value. If predefined values exist for that key, a selection list will appear for you to choose from.

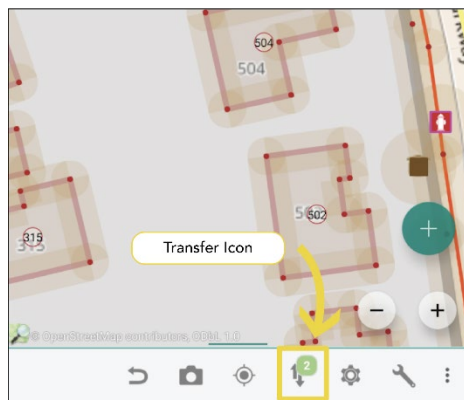
If the tag you need isn't visible, tap the Apply best preset with optional tags icon, , to load additional preset options that may better fit the selected object.

Swiping to the Details tab will display a raw list of all available keys. To add a tag, check the box next to the desired key and enter the appropriate value.

Whether you're working in the Properties or Details tab, you can update existing tags or add new ones as needed.

Once your edits are complete, tap the check mark icon in the upper-left corner to exit the Properties window and save your changes.



After making several edits, return to the main screen. You'll see a number above the transfer icon indicating the total number of edits made. Tap the transfer icon to begin the upload process to OSM.




Uploading Your Edits to OSM (Step-by-step)

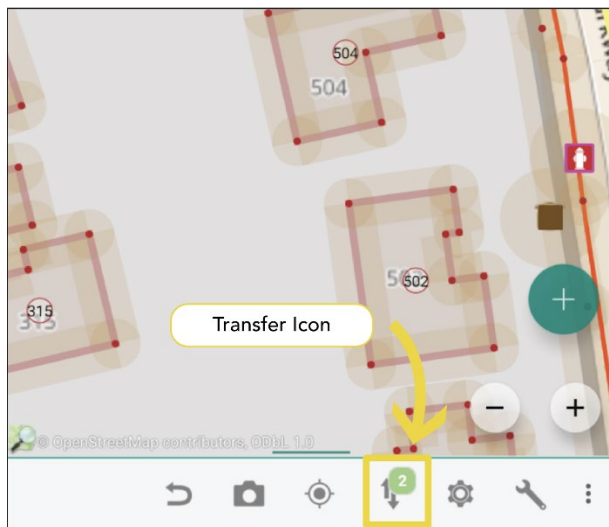
Let's give this a try. Before you go into the field you should test it while you have a stable internet connection and in an area you are very familiar with, such as your own neighbourhood.

1. Zoom to an area of interest, one that you are familiar with, such as your neighbourhood.

2. Download data using the transfer icon  .
3. Toggle to unlock mode to start an edit session.
4. Select a building that you know well by tapping on it.
5. Tap the Properties icon in the bottom left,  .
6. The Properties tab will appear and show the current tags. It may be as simple as 'Building = Yes' or have many more tags including the full address.
7. Try including some or all the following tags, if they are not already assigned and you are confident in their answer:
 - Levels above ground
 - Height (meters)
 - Building use
 - Building colour
 - Building material
 - Roof type

*Remember that you can tap the cell to the right of the key/attribute you are trying to populate to get possible values.
8. When finished editing the tags, tap the check mark in the upper left corner. This will take you back to the map showing the building you currently have selected.
9. Let's try this again but using the 'Details tab'.
10. Select another building you are familiar with then tap the Properties icon.
11. When the Properties window appears, swipe to the left to bring up the Details tab.
12. From this screen you'll add a check mark next to the tag you wish to edit or include. Tap the box to the left of the tag you wish to edit or add. This will enable the check mark.
13. Review the existing tags and as before, identify and update and/or include a few additional tags for this feature.
14. When finished editing the tags, tap the arrow in the upper left corner and then tap the check mark. This will take you back to the map showing the building you currently have selected.

15. Now that you have edited a couple of buildings, it's time to upload those edits to the OSM platform.
16. Tap the arrow in the upper left corner of the screen. This will take you back to the main page for the app. You'll now see the transfer icon  with a bubble and number. This number indicates the total number of edits you have made and are ready to be uploaded to OSM.



17. Tap the Transfer icon to bring up its menu.
18. Tap 'Upload data to OSM Server...' to start the upload process. In the Upload changes window, you have 2 tabs: Changes and Properties
- **Changes tab:** review the features you edited/changed.
 - **Properties tab:** this is where you leave your Changeset comment and source information. In the Comment section leave a short description of your edits, such as 'updated building level tags'. Under the Source section leave a comment identifying how you determined these edits such as 'personal knowledge' or 'field survey'.
19. When ready, click 'Upload' in the bottom right of the screen to initiate the upload to OSM. *NOTE: if this is your first using the Vespucci App, you will now be asked to enter your OSM credentials.*
20. As noted at the beginning of this tutorial, you can use the Vespucci mobile app to do almost everything you can from a desktop computer. To dive deeper on the tools and uses of this app, please review the [Vespucci User's Guide](#).