

OpenStreetMap

Day 1 – Mapping laboratory

DIGITARCH Summer School

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Course page



Course summary

Day 1

Getting started with mapping

WMI Tasking Manager

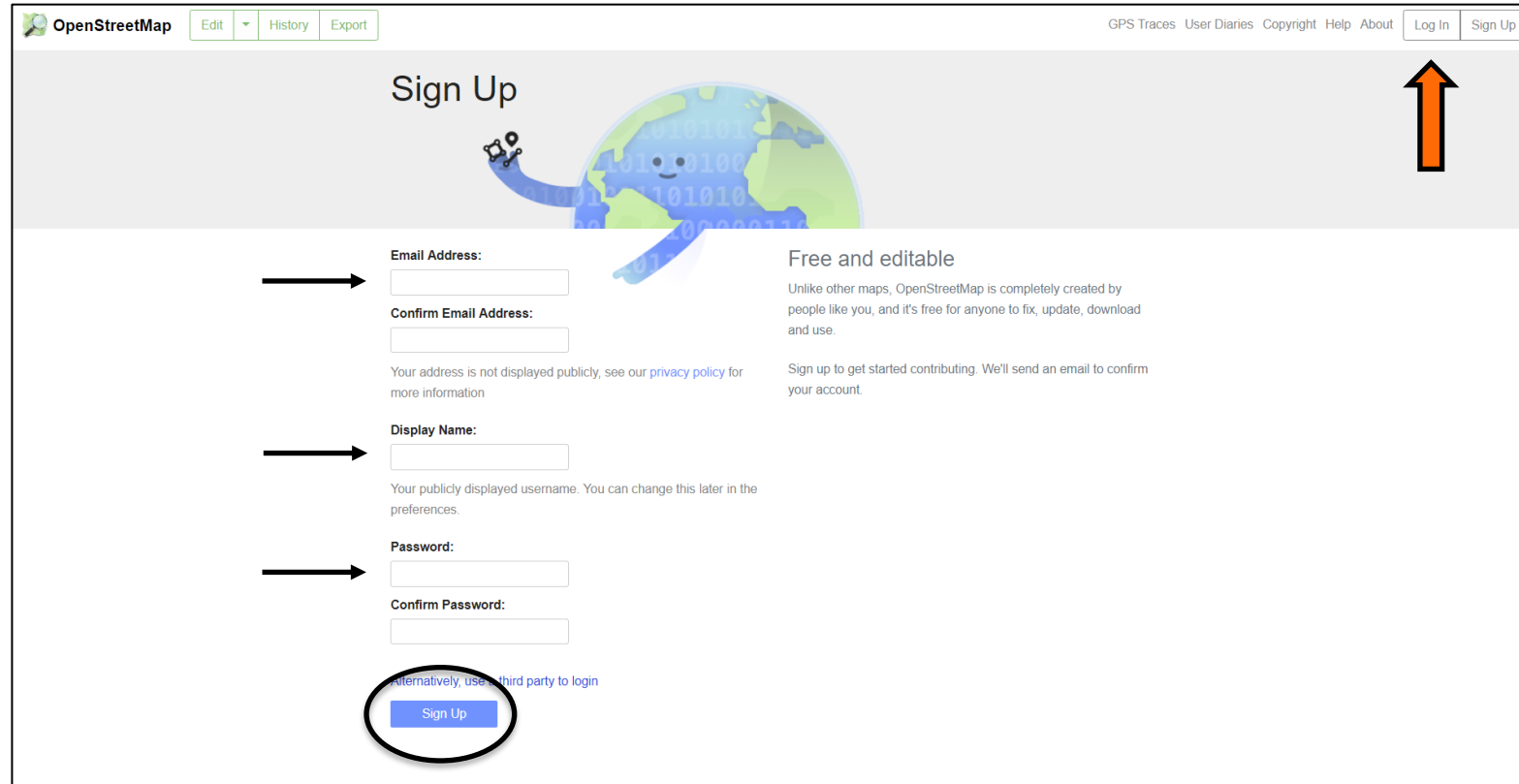
Mapping buildings

Checking personal contributions



Getting started

Go to the website (<https://www.openstreetmap.org>) and create a new user profile or log in by using personal credentials.

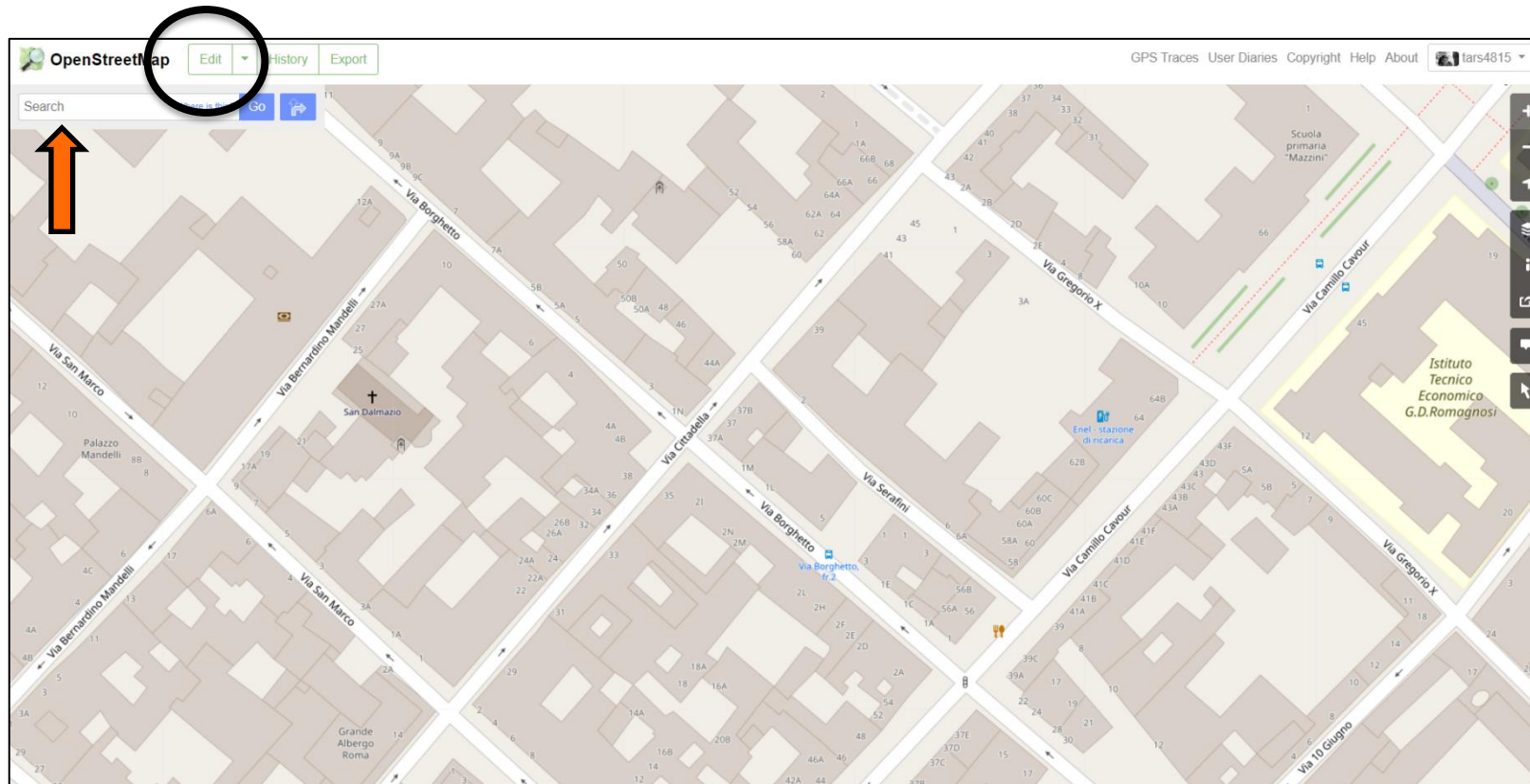


The screenshot shows the OpenStreetMap website's sign-up page. At the top left, the OpenStreetMap logo is visible, along with 'Edit', 'History', and 'Export' buttons. At the top right, there are links for 'GPS Traces', 'User Diaries', 'Copyright', 'Help', 'About', 'Log In', and 'Sign Up'. The main heading is 'Sign Up' next to a cartoon globe character. An orange arrow points to the 'Sign Up' link in the top right navigation bar. Below the heading, there are three input fields with arrows pointing to them: 'Email Address:', 'Confirm Email Address:', and 'Display Name:'. Below the 'Display Name' field, there are two more input fields for 'Password:' and 'Confirm Password:'. A blue 'Sign Up' button is circled in black. To the right of the form, there is a section titled 'Free and editable' with text explaining that OpenStreetMap is created by people like you and is free for anyone to use. Below this, there is a link to the privacy policy and a note that an email will be sent to confirm the account. At the bottom of the form, there is a link that says 'Alternatively, use a third party to login'.



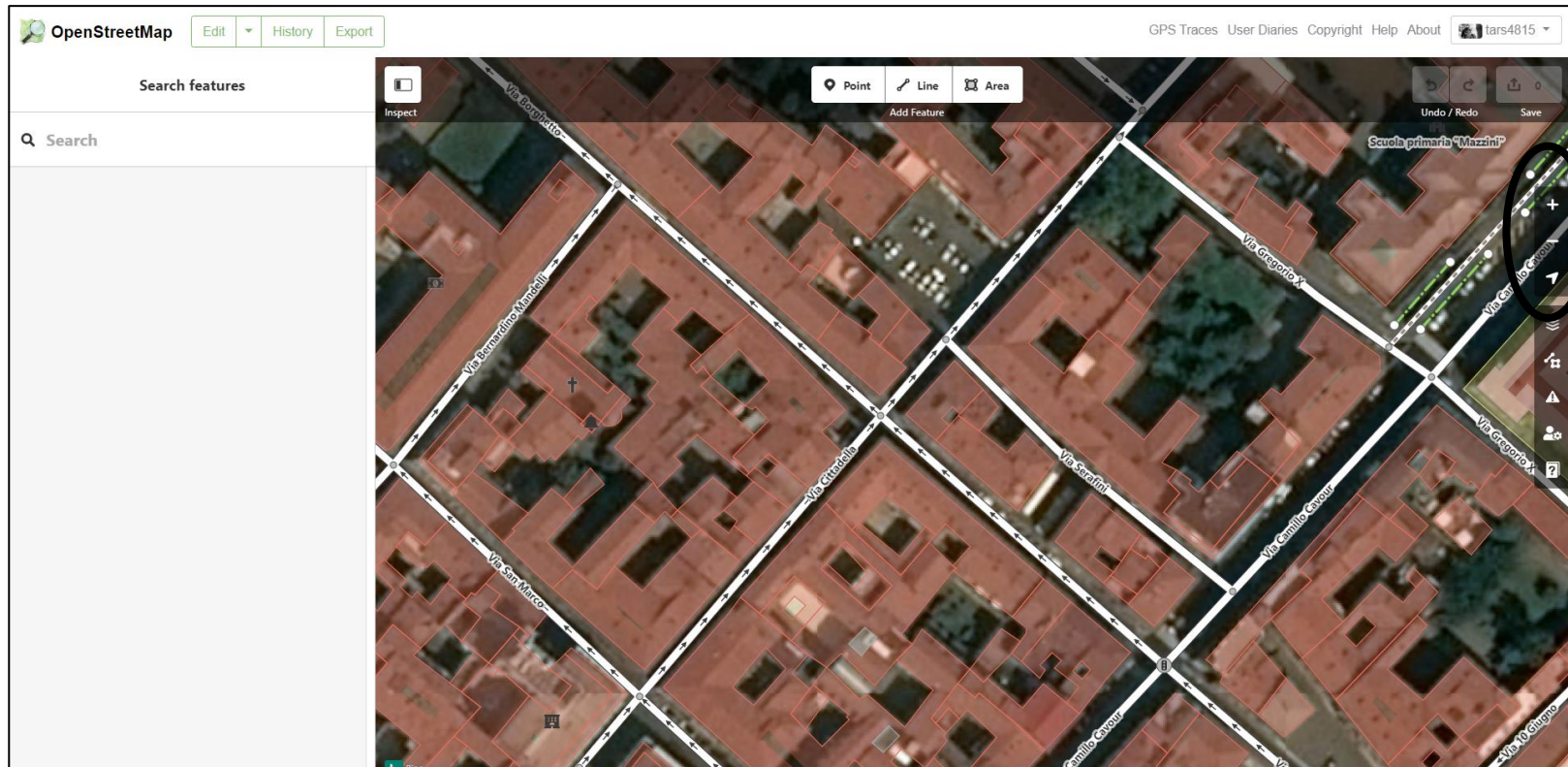
Getting familiar

After logging in on OSM website, you can search a specific location and then enter editing mode by clicking on the Edit button.




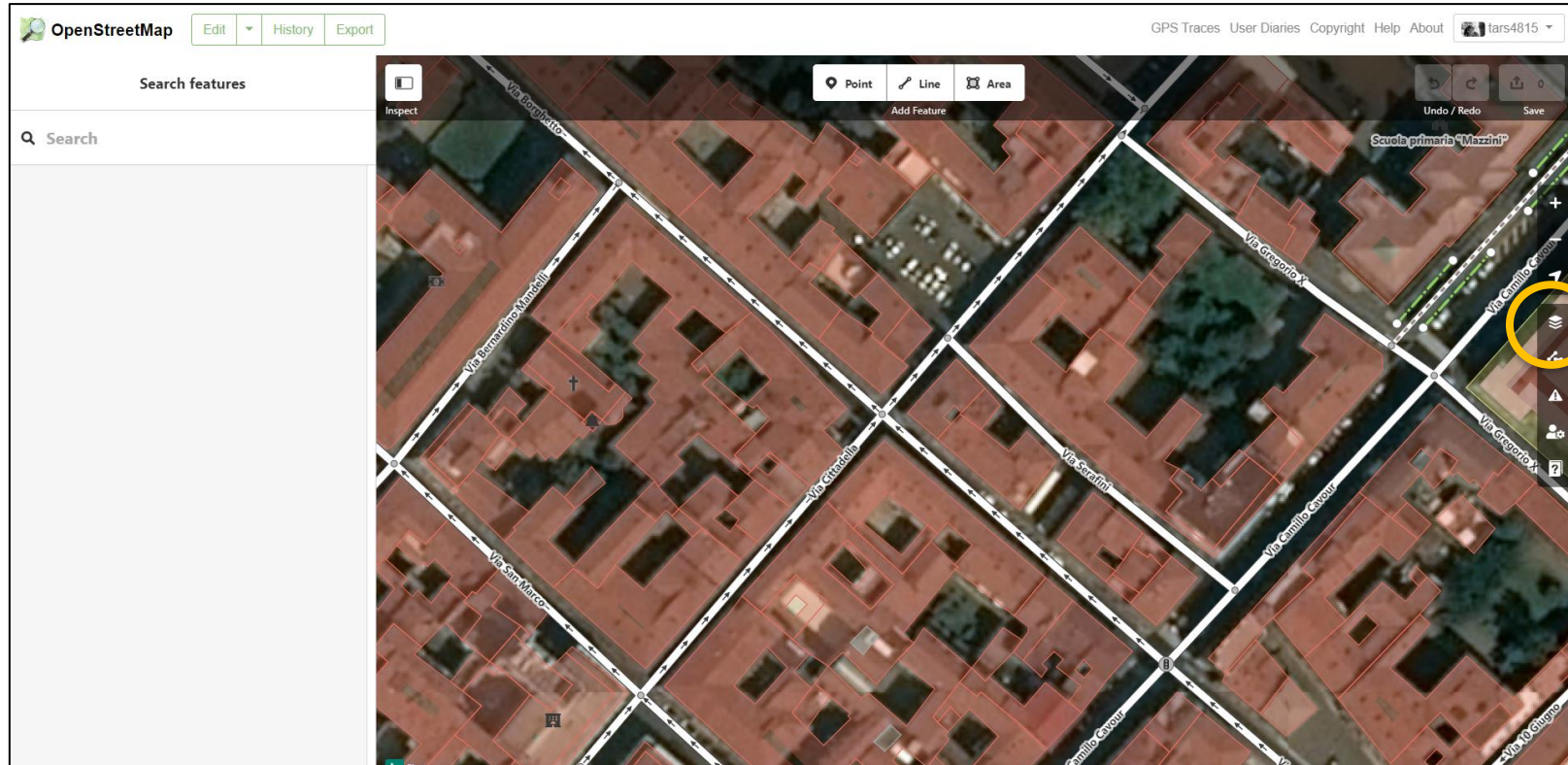
Getting familiar

From the lateral menu, it is possible to zoom in, zoom out and look for the current user position on the map.



Getting familiar

Clicking on the  icon, you will enter **Background Options** view where it is possible to define specific settings.



Getting familiar

Background Options

Background

Backgrounds

- Bing aerial imagery
- Esri World Imagery
- Esri World Imagery (Clarity) Beta
- Mapbox Satellite
- Maxar Premium Imagery (Beta)
- Maxar Standard Imagery (Beta)
- OpenStreetMap (Standard)
- OpenTopoMap
- Stamen Terrain
- Thunderforest Outdoors
- Lombardia - Italy (CTR DBT)
- Lombardia - Italy (CTR)
- PCN 2006 - Italy
- PCN 2012 - Italy
- None
- Custom ...

Show Minimap

Show Detail Panel

Report an Imagery Problem

Overlays

- Locator Overlay
- OpenRailwayMap Maxspeeds
- OpenRailwayMap Signalling
- OpenStreetMap GPS traces

Display Options

- Brightness 100%**
 ↺
- Contrast 100%**
 ↺
- Saturation 100%**
 ↺
- Sharpness 100%**
 ↺
- [Reset All](#)


Adjust imagery offset

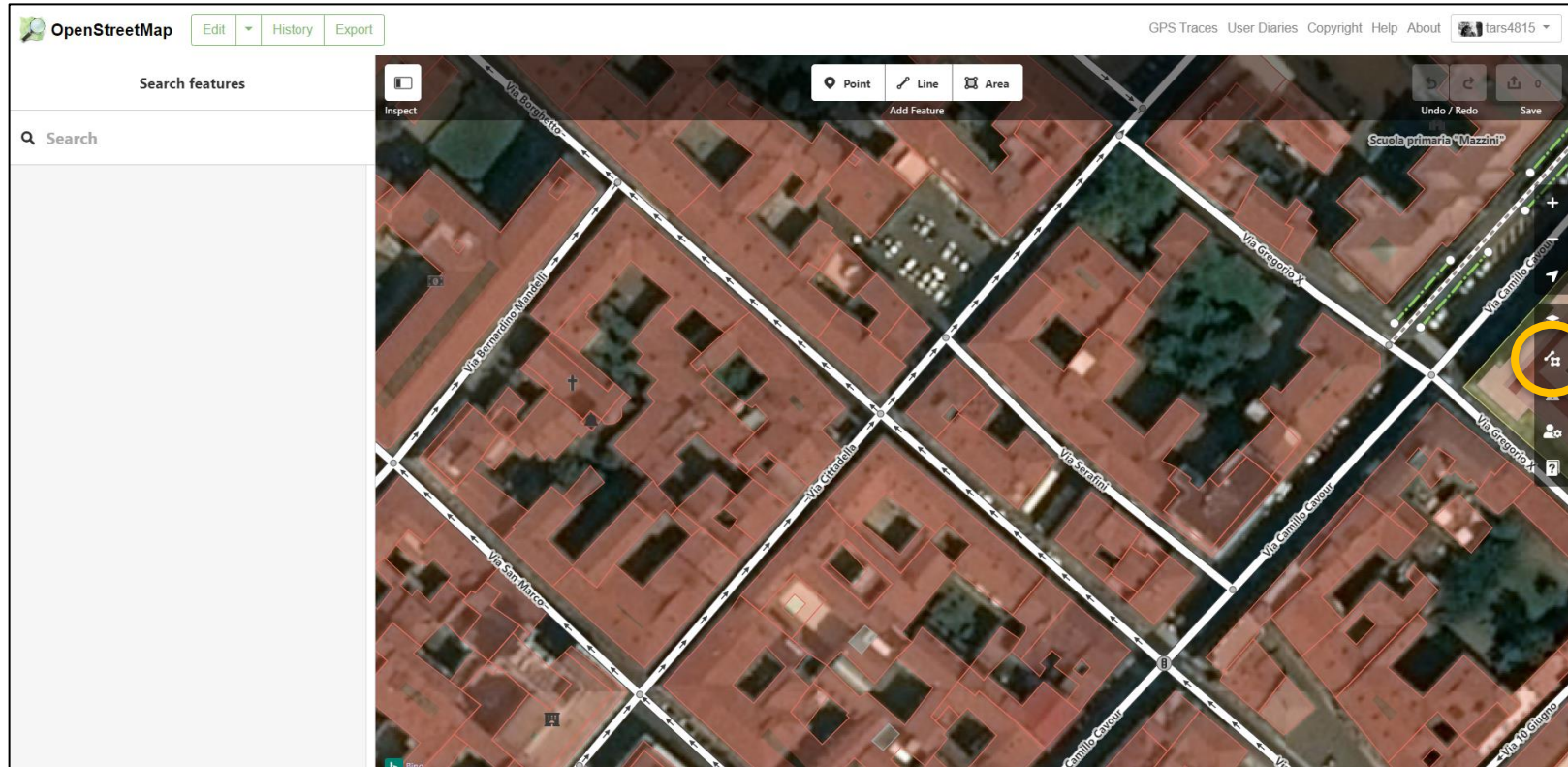
Drag anywhere in the gray area below to adjust the imagery offset, or enter the offset values in meters.

0.0



Getting familiar

Clicking on the  icon, you can decide which map data and layers are visible on the current map view.



Getting familiar

Map data settings

Map Data

▼ Data Layers

OpenStreetMap data

OpenStreetMap notes

KeepRight Issues

ImproveOSM Issues

Custom Map Data



▼ Photo Overlays

Bing Streetside

Mapillary

Map Features

[Request Data](#)

Traffic Signs

OpenStreetCam

▼ Style Options

No Fill (Wireframe)

Partial Fill

Full Fill

Highlight Changes

▼ Map Features

Points

Traffic Roads

Service Roads

Paths

Buildings

Building Parts

Indoor Features

Landuse Features

Boundaries

Water Features

Rail Features

Pistes

Aerial Features

Power Features

Past/Future Features

Other Features

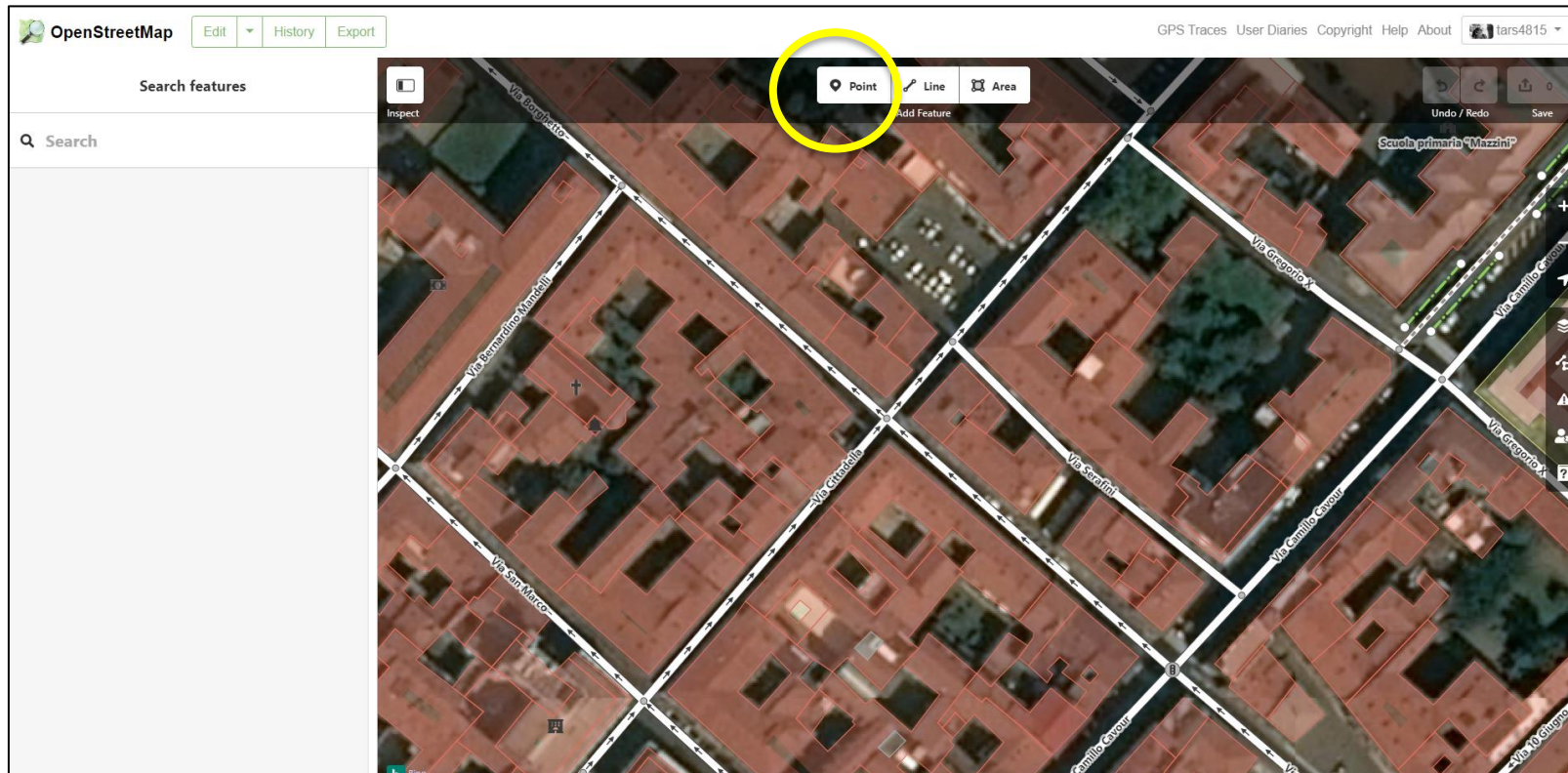
[Disable All](#) [Enable All](#)



Create and edit features

Points

To create a new point feature you have to activate the **Point** button and to click on its position on the map. To edit an existing one, you only have to drag it.



Create and edit features

Points

On the right side you can search the **feature type** that corresponds to the point.



Create and edit features

Points

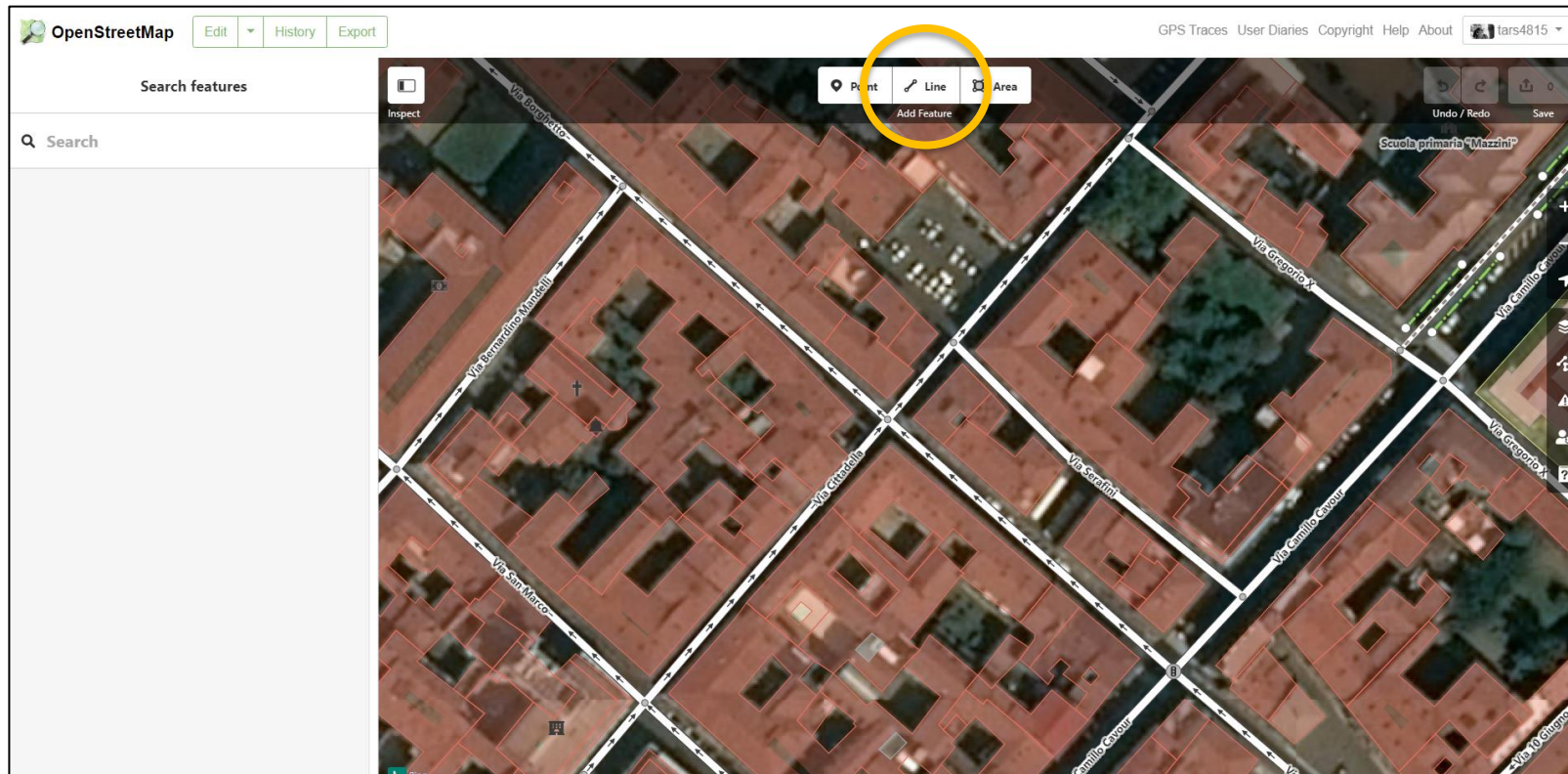
Then you can define the values of the **tags** requested for the activity. If not all of them are visible you can add them by clicking on **Add Field**.



Create and edit features

Lines (Way)

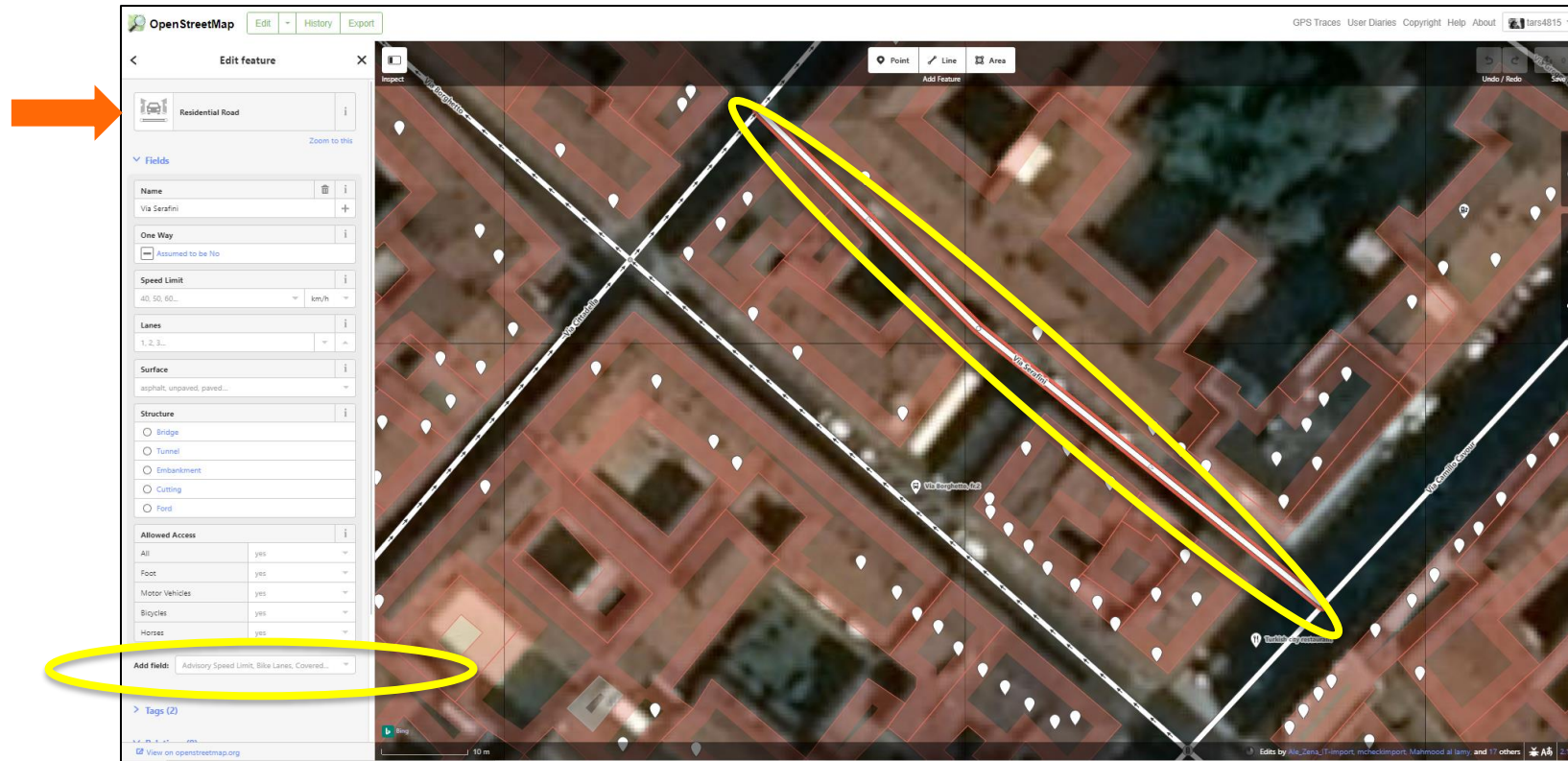
To create a new line feature you have to activate the **Line** button and then to track it on the map by defining its nodes. To edit an existing one, you only have to change the position of nodes or adding new ones to an existing line.



Create and edit features

Lines (Way)

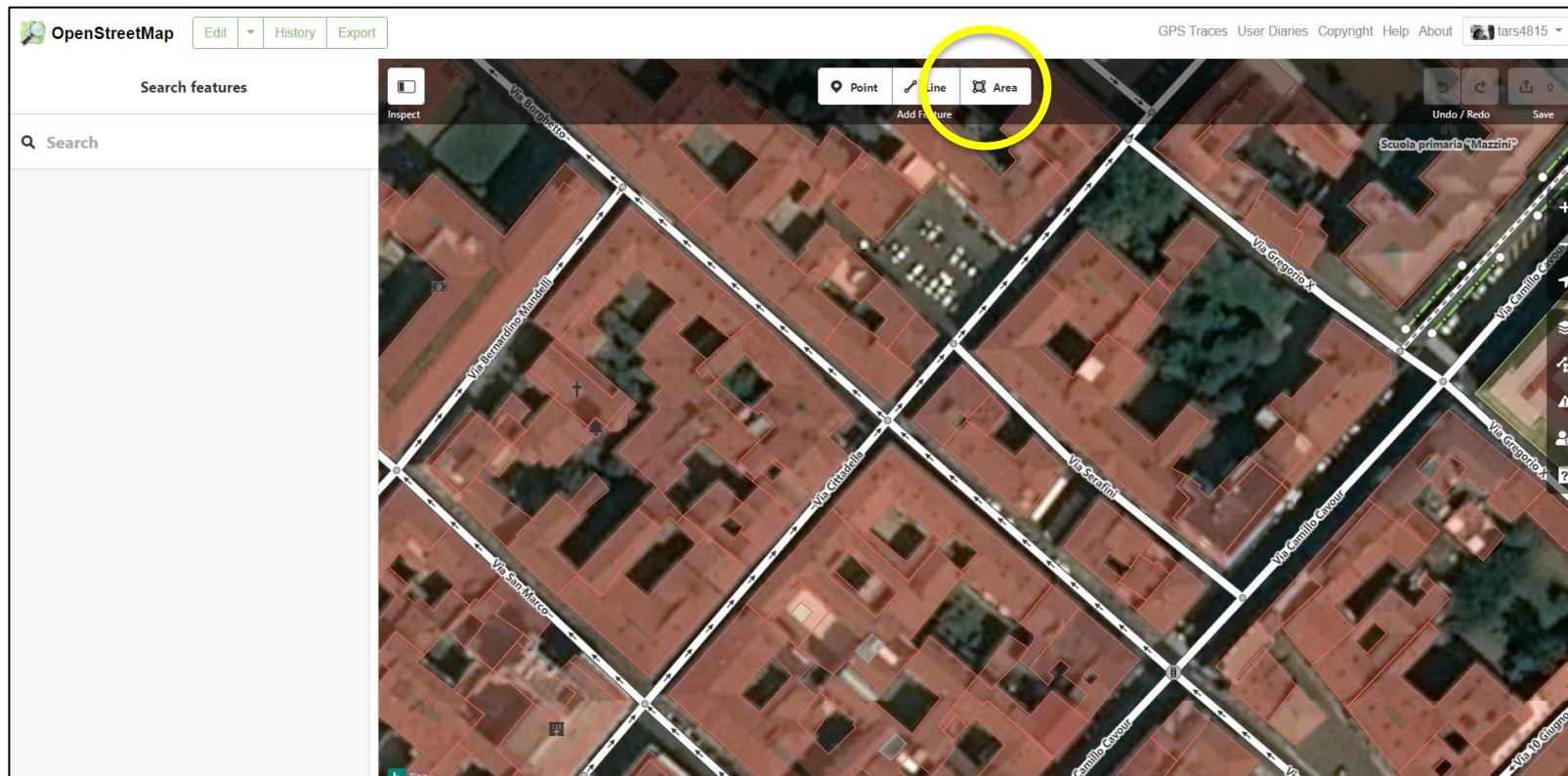
After having selected the **line type**, you can define the values of specific tags. If not all of them are visible you can add them by clicking on **Add Field**.



Create and edit features

Areas (Closed way)

For a new area feature you have to activate the **Area** button and then to track the boundaries of the polygon shape defined by its nodes placed on the map. To edit an existing area, you only have to change the position of nodes or adding new ones.



Create and edit features

Areas (Closed way)

After having selected the **line type**, you can define the values of specific tags. If not all of them are visible you can add them by clicking on **Add Field**.



Save changes

You can move between your changes history by clicking on the **undo/redo** buttons. Once you're okay with your edits, you can **save** the changeset by clicking the upload button.



Save changes

Before uploading, write a comment about your edits and include the specific hashtags associated to the activity. Then click on **Upload**.

OpenStreetMap Edit History Export GPS Traces User Diaries Copyright Help About lars4815

Upload to OpenStreetMap

Changeset Comment
Modified a Residential Road #PoliMappers #YouthMappers

Hashtags
#PoliMappers #YouthMappers #example...

Add field: Sources

The changes you upload will be visible on all maps that use OpenStreetMap data.
 I would like someone to review my edits.

Cancel Upload

> Tags (7)

1 Changes
Modified Residential Road: Via Serafini
Download osmChange file

Insert here a short description of your edits and put the hashtag associated to your work (e.g. #DIGITARCH23Mappers #UniBo)



Wikimedia Italia Tasking Manager

Wikimedia Italia together with the Italian OpenStreetMap community has implemented the so-called **Tasking Manager** that allows the coordination of nationally active OSM projects both for emergencies (earthquakes, etc.) and for the organisation of updating data.

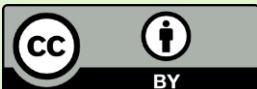
<https://osmit-tm4.wmcloud.org/>

The screenshot displays the Wikimedia Italia Tasking Manager interface. At the top, it features the slogan "Mappiamo insieme il nostro mondo" and the URL "www.wikimedia.it/wikimedia-per-la-conoscenza-libera/wikimedia-per-open-mapping/". The main navigation includes "Tasking Manager", "ESPLORA I PROGETTI", "IMPARA", and "A RIGUARDO". There are also options for "Italiano", "Accesso", and "Registrazione".

Below the navigation, there are filters for "Livello di difficoltà", "Progetti da mappare", "Più filtri", and "Ordina per", along with a "Search Projects" input field and a "Mostra la mappa" toggle switch.

The main content area shows a grid of 10 project cards, each with a unique ID, title, description, and progress bar. The projects are:

- #98: **Mappatura Borghi #MappyBDayOSMIT 2022** (URGENTE). In occasione del 6° compleanno di Wikimedia Italia come Local Chapter. 29 contributori totali. Mappatore Principiante.
- #75: **CAIOSM - Piemonte** (ALTA). Mappatura dei percorsi CAI in Piemonte. 17 contributori totali. Mappatore Intermedio.
- #76: **Improve Asti** (ALTA). Miglioramento della mappatura della provincia di Asti. 97 contributori totali. Mappatore Intermedio.
- #95: **CAIOSM-Calabria** (ALTA). Mappatura dei sentieri del CAI per la regione Calabria. Ultimo contributo 9 mesi fa. Mappatore Intermedio.
- #7: **Campania strade** (Carbone rettangolare). Mappatura delle strade della regione Campania. 26 contributori totali. Mappatore Principiante.
- #13: **Terremoto Centro Italia 24-08-2016**. <https://osmit-tm4.wmcloud.org/projects/7>
- #25: **Mapathon 4 Cultural Heritage - Corte Sant'Andrea (LO) e dintorni**. 30 marzo dalle 18 alle 22. A breve.
- #28: **#OsmGeoWeek 2017 - 1**. La partecipazione alla OSMGeoWeek.
- #29: **PerugiaOSM**. Task di esercitazione per la giornata.
- #30: **ITI Avogadro (Turin, Italy) for India**. Esercitazione degli studenti dell'ITI.



Tasking Manager

Step 1: log in to the Tasking Manager with OpenStreetMap credentials.

Tasking Manager

ESPLORA I PROGETTI IMPARA A RIGUARDO

Italiano Accesso

MAPPA PER LE POPOLAZIONI BISOGNOSE

Unisciti a una comunità globale per mappare i luoghi più colpiti da disastri e povertà e per sostenere gli aiuti umanitari e lo sviluppo sostenibile in tutto il mondo.

Inizia a mappare Unisciti alla comunità

123.4M 2.7M 161.2M 733 0

OpenStreetMap

Entra

Non hai un'utenza? [Registrati ora](#)

Indirizzo email o nome utente:

tars4815

Password:

••••••

Penso la password?

Ricordati di me

Entra

In alternativa, effettua l'accesso tramite terze parti

[d](#) [G](#) [f](#) [W](#) [W](#)

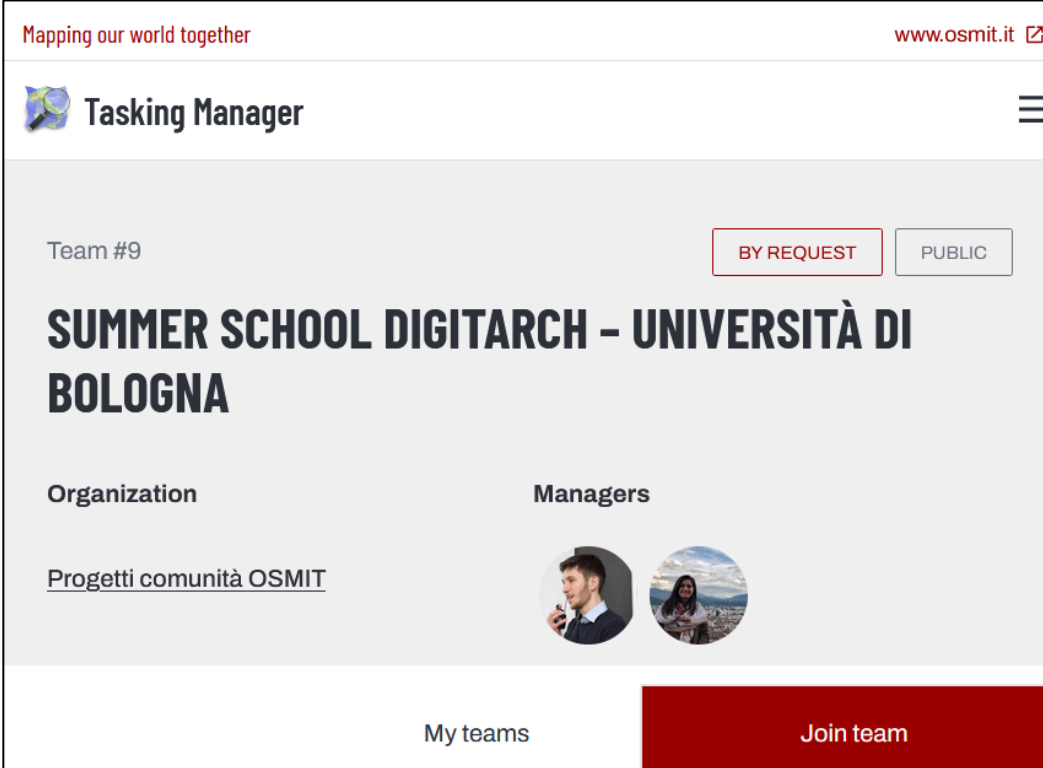
[Aol](#)



Wikimedia Italia Tasking Manager

Before starting with the mapping operation, it is necessary to join the mapping team named **Summer School DIGITARCH – Università di Bologna** at the following link, after logging in with your credentials.

<https://osmit-tm4.wmcloud.org/teams/9/membership/>



The screenshot shows the 'Tasking Manager' interface for Team #9. At the top, it says 'Mapping our world together' and 'www.osmit.it'. The page title is 'Tasking Manager'. Below that, it indicates 'Team #9' and has two buttons: 'BY REQUEST' (highlighted in red) and 'PUBLIC'. The main heading is 'SUMMER SCHOOL DIGITARCH - UNIVERSITÀ DI BOLOGNA'. Underneath, there are sections for 'Organization' (with a link to 'Progetti comunità OSMIT') and 'Managers' (with two circular profile pictures). At the bottom, there are two buttons: 'My teams' and 'Join team' (highlighted in red).



Tasking Manager

Step 2: in the "Explore Projects" section, search for project #98 **Mappatura Borghi #MappyBDayOSMIT 2022** (<https://osmit-tm4.wmcloud.org/projects/98>) and make sure you are correctly logged in.

The screenshot displays the Wikimedia Italia Tasking Manager interface. At the top, the header includes the logo and name "Tasking Manager", navigation links for "EXPLORE PROJECTS", "MY CONTRIBUTIONS", "LEARN", and "ABOUT", a notification bell, and the user profile "tars4815". Below the header is a filter bar with options for "Difficulty level", "Any project", "More filters", "Sort by", a search box containing "98", and a "Clear filters" button. A "Show map" toggle is also present. The main content area shows "showing 1 of 1 projects" and a single project card for "#98 Mappatura Borghi #MappyBDayOSMIT 2022". The card includes a "HIGH" difficulty badge, the project title, a description: "In occasione del 6° compleanno di Wikimedia Italia come Local Chapter dell...", "45 total contributors" with a progress bar, and a difficulty level of "Easy". A pagination control at the bottom shows "1" of 1 pages.



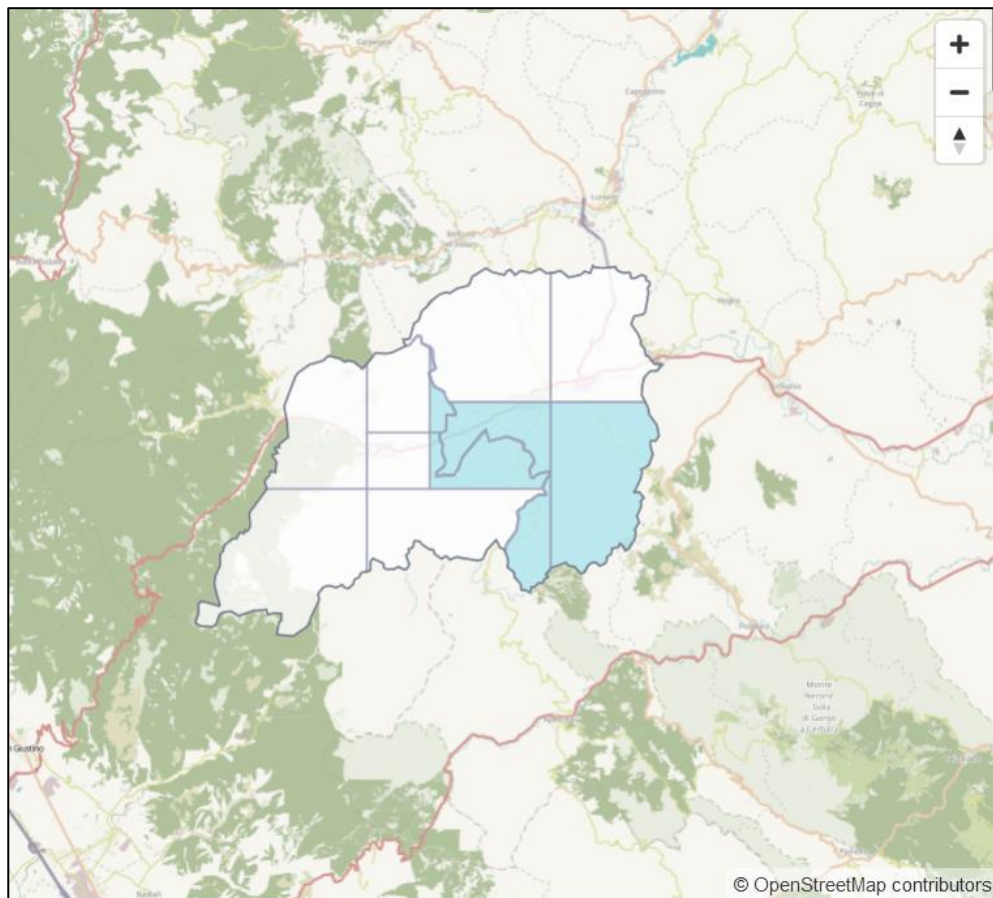
Tasking Manager

Step 3: on the project page, read the description and information carefully. In the Tasking Manager, these sections report the following characteristics of the project including the type of mapping for which it is indicated, the type of feature and geometry to be mapped and the satellite image to be used.

The screenshot shows the OpenStreetMap Tasking Manager interface for a project titled "MAPPATURA BORGHI #MAPPYBDAYOSMIT 2022". The page includes a navigation bar with "Tasking Manager" and links for "EXPLORE PROJECTS", "MY CONTRIBUTIONS", "LEARN", and "ABOUT". The project details section shows it is a "HIGH" priority task, located in Italy, and is part of the "#98 | OSM-IT" series. The description states that the project is for the 6th anniversary of Wikimedia Italia and involves mapping 24 small towns in Italy. The "TYPES OF MAPPING" section lists icons for buildings, water, and other features. The "IMAGERY" section is set to "Custom WMS Layer". The page also shows 9 contributors, a progress bar, and a "Contribute" button. The bottom navigation bar includes links for "Overview", "Description", "Coordination", "Teams & Permissions", "Questions and comments", and "Contributions".



Tasking Manager



Step 3: By clicking on “Zoom to tasks” in the map pane, you can assess the current progress of the project divided into “tasks,” areas of a regular grid that allow the mapping and validation to different users, which, by “blocking” one, avoid conflicts related to multiple mapping activities in the same areas. Areas with a padlock symbol are not selectable because they are already occupied by other users. The white areas are the ones that can be used while the blue ones are waiting for validation and the green ones have been validated. Yellow areas, on the other hand, are areas that during validation were not found to be complete in the mapping and therefore need to be reused to complete the tasks. Gray areas can also be identified in the task area where mapping is not possible because a user previously reported that the satellite image in that area is not of good quality.



Tasking Manager

Step 4: clicking "Contribute" (1) takes you to the task selection screen. Select an unlocked task (2) and begin to mapping by clicking "Map selected task" (3).

The screenshot displays the Wikimedia Italia Tasking Manager interface for a task titled "MAPPATURA BORGHI #MAPPYBDAYOSMIT 2022". The interface includes a navigation bar with "EXPLORE PROJECTS", "MY CONTRIBUTIONS", "LEARN", and "ABOUT". The task details section shows instructions for mapping buildings. A map view on the right shows a task area highlighted in light blue, with a legend indicating its status as "Ready for validation". A red circle on the map indicates a specific location. The bottom navigation bar includes "Overview", "Description", "Coordination", "Teams & Permissions", "Questions and comments", and "Contributions". The "Contribute" button is highlighted with a red box and labeled "1". The "Map selected task" button is highlighted with a yellow box and labeled "3". A red box labeled "2" highlights a task area on the map.

Mapping our world together www.osmit.it

Tasking Manager EXPLORE PROJECTS MY CONTRIBUTIONS LEARN ABOUT tars4815

#98 | OSM-IT HIGH

MAPPATURA BORGHI #MAPPYBDAYOSMIT 2022

Italy

TASKS INSTRUCTIONS **CONTRIBUTIONS**

- Scegli l'immagine satellitare più recente che si allinea meglio con gli elementi già mappati e con l'immagine di default PCN2012;
- Per la mappatura degli edifici, cerca di disegnare ogni poligono visibile, anche se parzialmente coperto da alberi o l'immagine satellitare non è di ottima qualità; 3. In alcuni centri storici, gli edifici risultano essere attaccati l'un l'altro, evita la loro sovrapposizione e dopo aver disegnato ogni edificio assicurati che presenti il tag corretto e le geometrie siano perfettamente ortogonali, utilizzando il tasto "Q" in ID Editor.
- Prima di chiudere un Task come completamente mappato, assicurati che non ci siano aree non mappate, qualora tu abbia una conoscenza approfondita della zona, puoi integrare il tag degli edifici con il loro nomi (nel caso di Scuole, palazzi storici, Musei ecc.);
- Commenta le modifiche utilizzando l'hashtag: #MappyBDayOSMIT

Per maggiori dettagli, consulta la guida di LearnOSM: <https://learnosm.org/it/beginner/id-editor/>

TYPES OF MAPPING IMAGERY EDITOR

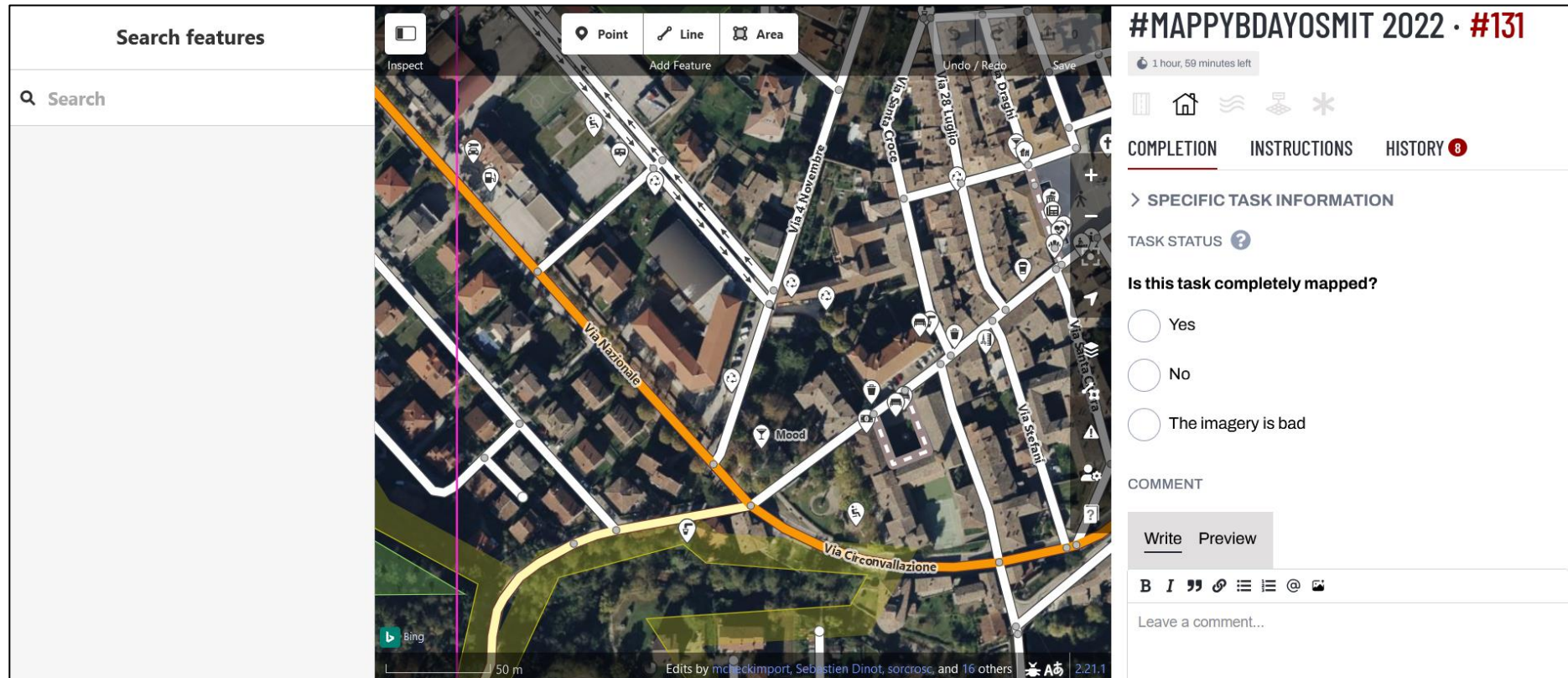
🏠 🌊 🌳 ✳️ Custom WMS Layer iD Editor

Overview · Description · Coordination · Teams & Permissions · Questions and comments · Contributions Share Add to Favorites Contribute



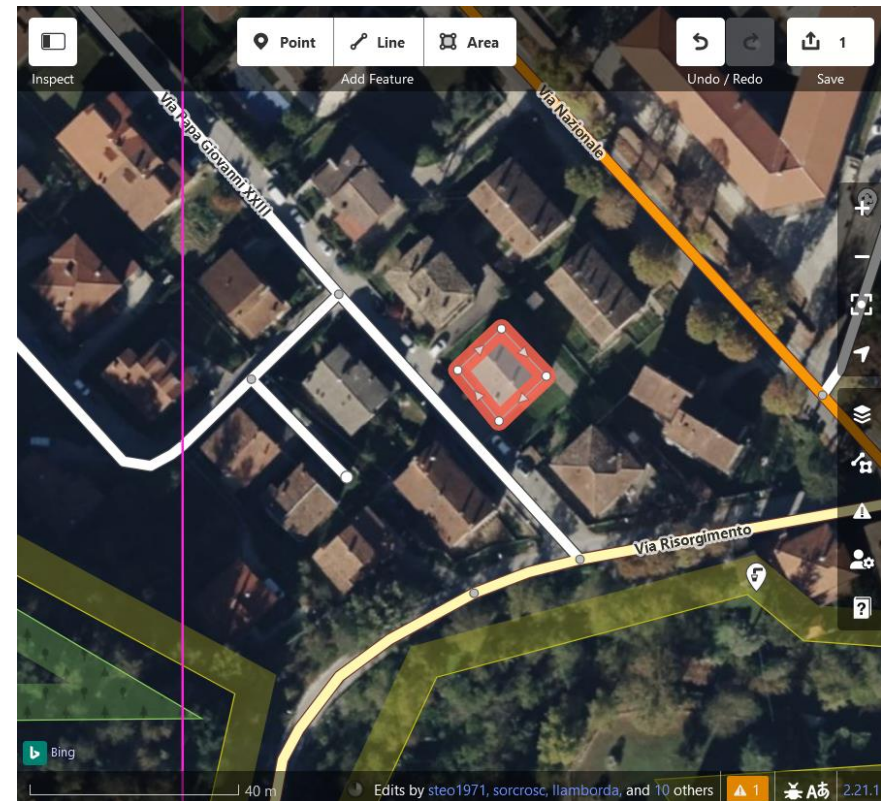
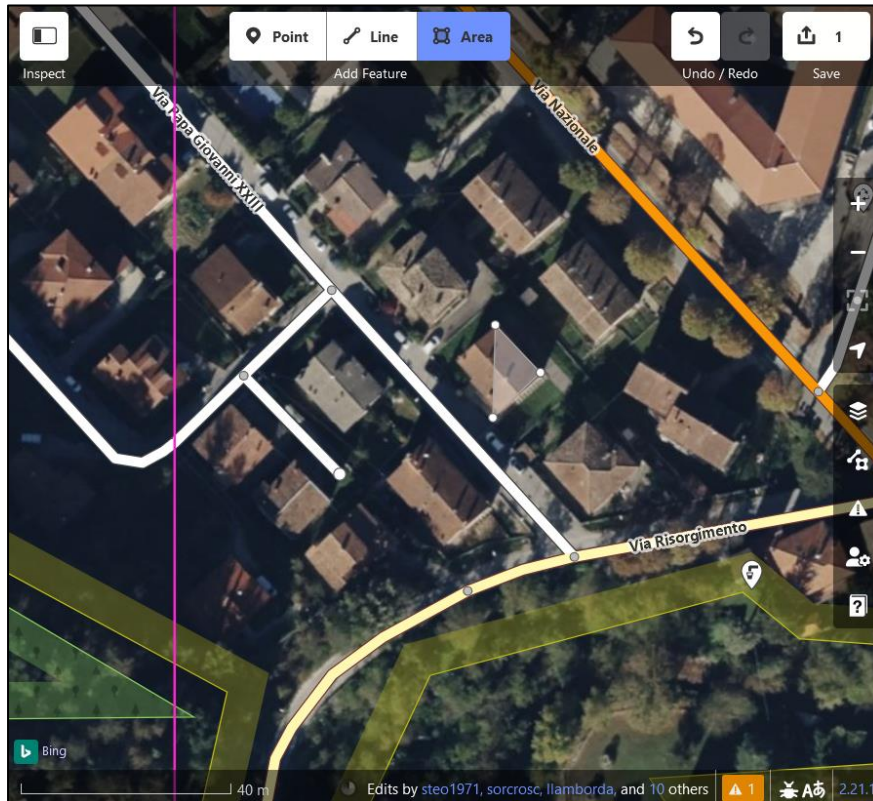
iD Editor

Step 5: The iD Editor will appear on the new screen. In the left panel the TM options including the instructions remain visible to be consulted if you have any doubts. The area within which you can map is indicated by a violet perimeter.



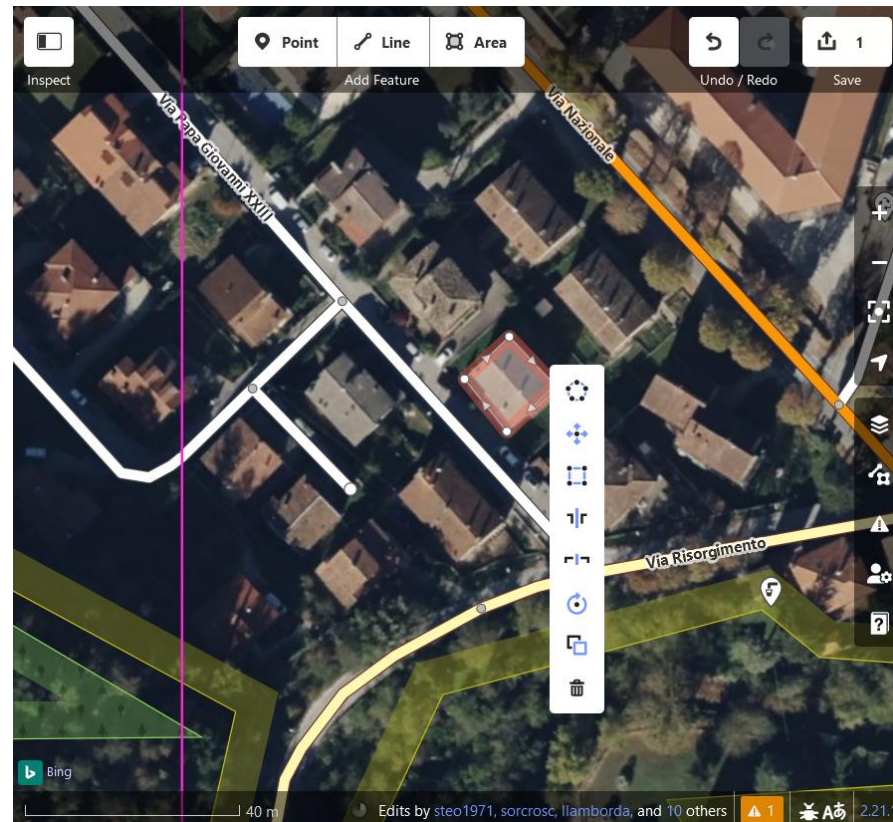
iD Editor

Step 6: Click on the "Area" icon (key shortcut "1") to activate digitization. After having identified a building, left-click on its vertices. Double-click on the last vertex to finish the insertion.



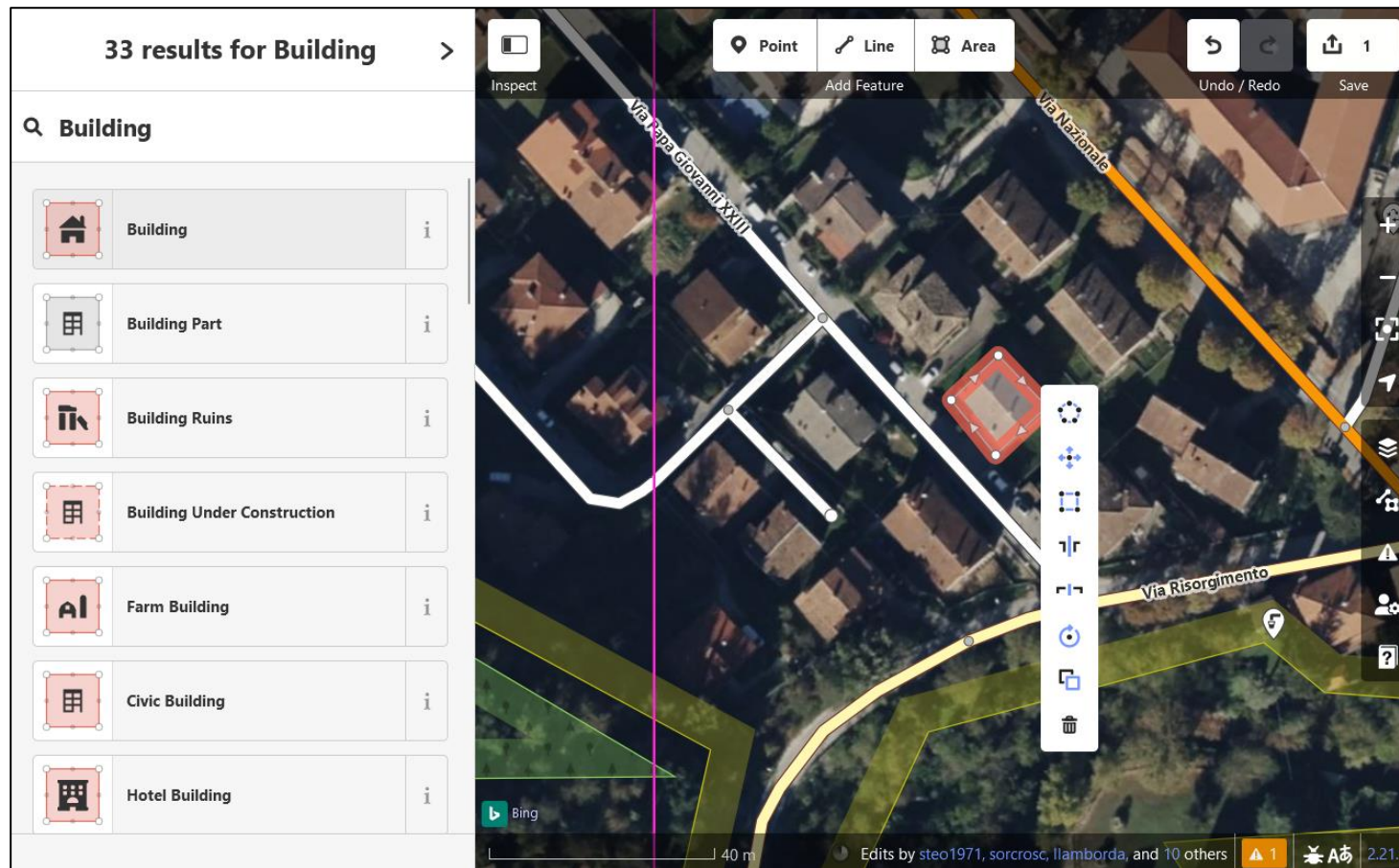
iD Editor

In case the building is a regular shape, make sure that the corners of the shape you have just drawn are correctly orthogonalized. For this operation, you must first select the perimeter of the building and then right-click by selecting the appropriate "Square" command (shortcut from the "Q" key). A similar operation can also be performed for buildings that are circular in shape by clicking the "Circularize" or the "O" key.



iD Editor

Step 7: After defining the geometry of the element, the correct tag must be entered to associate a meaning. In the search bar on the left, then search for "Building." Click on the corresponding item.



iD Editor

▼ Tipo di elemento

 Edificio i

▼ Campi

Nome i
Nome proprio (se presente) +

Edificio 🗑️ ↺ i
yes ▼

Piani i
2, 4, 6... ▼ ▲

Altezza (Metri) i
Sconosciuto ▼ ▲

Indirizzo i
123 Strada ▼
Città ▼ Codice postale ▼

Aggiungi campo: Accesso in carrozzina, Architetto, C...

▼ Etichette (1) 📄 🗑️

building ▼ yes ▼ 🗑️ i
+

▼ Relazioni (0)

+

The option just selected will allow the **building = yes** tag to be automatically associated with the element.

Under "Labels," it is additional tags can be added to associate other features with the element just entered on OpenStreetMap.



iD Editor

Step 8: After finishing the task in the iD editor and uploading the changeset, you need to unlock the task in the Tasking Manager, indicating what you have done with your mapping and updating the status of the task. Indicate that the task is complete only when all buildings in the area are mapped. Click "Submit Task" to confirm task completion.

The screenshot displays the iD Editor interface. The main map area shows a residential neighborhood with buildings and roads. A vertical purple line is on the left, and a yellow line is at the bottom. The top toolbar includes 'Inspect', 'Add Feature' (Point, Line, Area), 'Undo / Redo', and 'Save' buttons. The right sidebar contains a form for task completion with radio buttons for 'Yes', 'No', and 'The imagery is bad', a 'COMMENT' section with 'Write' and 'Preview' tabs, a text area, and a '#managers, #author, #contributors' field. At the bottom of the sidebar are buttons for 'Submit task', 'Split task', and 'Select another task'. The bottom of the map shows 'Edits by steo1971, sorcross, llambordia, and 10 others' and '2.21.1'.



Buildings - Common mistakes to avoid

Initial operations on OpenStreetMap and building mappings are generally affected by some common errors related to unfamiliarity with the editor or Tasking Manager interface.

Before saving your changes, always make sure that you have:

- Correctly **orthogonalized buildings with a regular shape** and made circular those that require such an operation
- Mapped the buildings by following their "**footprint on the ground**" and **avoiding including shadows** or changing the perimeter with hovering vegetation
 - Inserted **buildings corresponding to what is visible** in the satellite image
 - **Avoided adding duplicates** of buildings already in OSM
- Plotted the perimeters of **buildings without causing overlapping with other elements** (other buildings and/or roads etc.)
 - Added the required tag (**building=yes**)



Checking personal contributions

Copyright © [Pascal Neis](#) | Map data © [OpenStreetMap](#) contributors | More? See [ResultMaps](#)-overview | [Logout](#)

How did you contribute to OpenStreetMap?

Name: [tars4815](#)
Registered: 2016-11-18
Active contributor: [Yes & Yes](#)
Mapping days: 523 (18%)
Map changes: 507,770 (2,503)
Reverted changes: 24 (0.0%)
Discussed changesets: 3 (1)



OSM-related accounts:
1. [OSM Wiki](#): Editcount 269

Type? Great Mapper (Active)

Recent changesets ([details](#)): Italy (62) Egypt (6) Jamaica (2)

Recent ranks: Italy #36 Jamaica #48 Egypt #200

OSM Notes: Closed w/ [comment](#) 0 (w/o 1), commented 1 and opened 2

Changeset discussions: Participated in 87 and [created](#) 89 [comments](#)

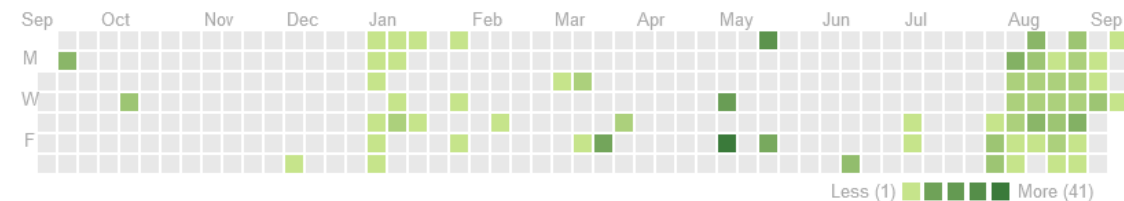
Rollbacks performed: Reverted 15 changesets w/ [27](#) changes of 13 contributors

[iD editor](#): Resolved issues=9

Quality assurance: [OSMI issues](#) ([details](#)): routing=40, tagging=11

[Osmose issues](#): [Level 1](#)=5, [Level 2](#)=68, [Level 3](#)=170

64 mapping days with 199 changesets in the last year



<https://hdyc.neis-one.org/>

