

PYOSMEDITOR

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Lizenz: GPL

*Warning: This software is pre-alpha. Features may work now, but may brake in the next version.
Use carefully and on your own risk.*

Requirements:

OS running Python 2.4 and GTK (i.e. most Linux systems, perhaps CygWin with X server under Windows). Has anyone try it under a Linux Live-CD?

Dependencies:

- Standard Python 2.4 libraries
- PyGTK and libglade (for the GUI)
- EXIF.py (for geo-tagged pictures) (written by hierry Bousch, enhanced by Gene Cash)

Installation:

Copy pyosmeditr.py, pyosmeditor.glade, and EXIF.py into a subdirectory.

De-installation:

Delete the aforementioned files. Additional data is located at ~/.pyosmeditor

Feature list:

- Basic OSM access: downloading OSM nodes/segments/ways and tracks
- Basic editing: creating, modifying, deleting nodes/segments/ways
- Extended editing: creating segments from multiple points, extending ways, splitting segments, switch from/to. align segments
- Local GPX tracks: loading, editing, exporting GPX tracks, using helper tracks
- Saving OSM data
- Create, modify, delete bookmarks
- Display of geo-tagged Jpeg pictures
- Localization

Program start:

```
python pyosmeditor.py
```

This is a preliminary documentation. Some OSM knowledge is required to understand this manual (see <http://www.openstreetmap.org>).

First steps

In the beginning the screen was empty... To get you bearings load one of your GPX tracks (File – Load GPX file) and center it on the screen (View – Fit track to screen). You may want to “zoom in” or “zoom out”. You may move the view by clicking into an empty area, holding down the left mouse key and dragging it to the new position. The screen will be redrawn after you have released the button.

The system stores your current position (longitude, latitude, zoom factor) when you exit the program. On the right side of the toolbar additional icons will appear depending on the context.

The basics

- You can select nodes, segments and ways by clicking on them. If only one node/segment/way is selected, you can see their tags in the field on the left side of the window.
- Multiple nodes, segments and ways are selected by holding down the SHIFT key (only in Edit Mode).
- New nodes are created by holding down the ctrl-key and a click with the left mouse button.

The Display

- The tool bar on top is described later in this document.
- The fields on the left hand side:
 - On small field on top describes the currently selected item (node number, segment number, etc.)
 - The field below shows the associated tags, if any.
 - The three bottoms below are used when editing the tags.
 - The large white field shows additional info (e.g. which segments a way is made of, ...)
 - The check boxes below are during the selection process. Here you can select which items can be selected. If you want to select segments, but frequently “hit” nodes, you can disable the selection of nodes here.
- The status line shows the current coordinates (longitude, latitude, x, y, zoom factor)

The modes

- When the program is in a read-only mode. You can move around, select nodes/segments/ways and examine their information, but you can't change anything.
- In **Edit mode** you can change the settings, positions etc., but the changes will only be made locally.
- If you also activate **Live mode** the changes are also sent to the OSM server.
- In **View Mode**
 - You can click on nodes/segments/ways and see their information on the left side of the screen.

- You can move the screen.
- You can not accidentally change anything in this mode, only view the available information.
- You can **not** select multiple elements.
- In **Edit mode** you can also
 - You can move a node, by "dragging" it to its new position (click with left mouse button, keep the button pressed and move the mouse). Note: You have to "tear off" the node from its original position (at least 3 pixels) before you can position it freely.
 - You can select a node/segment/way by clicking on it. If a segment is "under" a way, use the options under "View" to disable the display of ways.
 - You can modify the associated tags in the tag editor.
 - You can create new nodes/segments/ways
 - You can delete a node/segment/way with the "remove" button in the menu.
 - You can select multiple elements.
- In **Live mode**
 - Any changes of the position of a node, deletions, tag changes etc. are sent to the OSM server.
 - If you change tags in Live Mode and press "Apply", these changes are sent to the OSM server.

Tool bar

- "Zoom in" and "Zoom out": guess.
- "Get OSM": Request nodes, segments, ways from the OSM server. Same as "Edit – Get OSM data"
- "Live" will connect you to the OSM server and any action you take here will also be carried out on the OSM server.
- "View" / "Edit": switch between View Mode and Edit Mode
- Context dependent buttons
 - "Remove": Delete an element.
 - "Create segments": draw segments between multiple selected nodes
 - "Create way": make a way out of a single or multiple segments
 - "From <> To": Switch "from" and "to" node of a single segment (i.e. reverse its direction)
 - "Align f->t": Align from/to nodes of multiple segments, so that they all point in the same direction

Basic editing

New nodes

Click into empty part of a screen while pressing the Ctrl-key. The node becomes selected (green). If you create more than one node in a row, all nodes become selected and can create the **interconnecting segments** with the button "create segments" that appears on the toolbar if more than one node is selected.

If "Live mode" is active, this node (and the segments, if applicable) will also be create on the OSM server.

New segment

Select two or more nodes. On left side, a list containing the IDs of selected nodes appears, as well as a button in the toolbar to create the segments.

If "Live mode" is active, these segments will also be create on the OSM server.

In order to create segments starting with an existing point:

1. Click on the existing point.
2. Create new points (Ctrl + LMB).
3. Press "Create Segments".

New way

Select multiple segments. And press the button "Create way" that has appeared on the left hand side.

Extend way

- Select a way
- Hold the shift key and select additional segments at its end or beginning
- Press "add to way" in the toolbar

Align From -> To

Before you start, make sure that "Show arrows" option in the "View" menu is checked. "Zoom in" until you see the arrows. (The arrows are only visible if the magnification is high enough, configurable in the preference screen),

Select the segments you want to align (using the SHIFT key) and press "Align F -> T" in the toolbar. The first selected segment marks the beginning and the From/To entries of the following segments will be aligned accordingly. In order for this option to work, the selected segments must form one continues "way".

Split segment

- Select a segment
- use Ctrl+LMB to create a new node **on** the segment.

Note: At the moment this function only works, if the segment in not part of a way or any area.

Local GPX track / helper tracks

You can load tracks in GPX format from disk. It is displayed in red. Unreliable parts are shown in blue (acceleration too high, configurable in the preference screen). You can use "View – Fit track to screen" to change the zoom factor so that the entire track is being displayed.

Additional tracks can be loaded (helper tracks) to be superimposed over the first one. The helper tracks will not be loaded in their entirety but clipped to the visible area (+ 100%).

You can edit the local GPX track (not the helper tracks). Use the **right** mouse button to create a selection box (press, hold, move, release). Associated menu options:

- Edit – Remove selected GPX nodes
- Edit – Remove unselected GPX nodes
- Edit – Unselect all GPX nodes
- File – Save GPX data
This saves the local GPX track including any modification (i.e. without the deleted parts) and without way points or helper tracks
- File – Load GPX file
- File – Load GPX helper file(s)
- View – Show local track
- View – Fit track to screen

OSM Data

Nodes, segments and ways for the displayed view can be downloaded using “Edit – OSM data” of the “Get OSM” button. The covered area will get a white background.

It happened to me more than once that I created segments twice, when following a GPX track and wandering into seemingly undiscovered land, but only leaving the area covered by the downloaded OSM data.

The downloaded data can be written to disk with “File – Save OSM data” and read using “File – Read OSM data”

OSM Tracks

Track data can be downloaded from the OSM server via “Edit – Get OSM tracks” and will be displayed as green dots.

Associated menu options:

- View – Show remote track

Bookmarks

A bookmark stores the longitude and latitude as well as the zoom factor. This way you can navigate to a specific place directly. Bookmarks can be named, edited, and deleted. You can also add a description. The Bookmark Panel also allows you to change the order of the bookmarks in the Bookmark – Select – Submenu, by drag-and-drop the items in the bookmark list.

Geo-tagged pictures

Geo-tagged pictures are pictures that contain GPS information in their EXIF data. In order to use this feature, the file EXIF.py must be present. Otherwise these features are not available.

The pictures must be stored in the subdirectory `./geopics`. After you have scanned these directory using the command “Geotag – Scan directory”, the positions of those pictures are indicated by green triangles on the map.

In order to view picture, click onto the green triangle.

A picture viewer will open. You can zoom in and move the picture in the same way you move the OSM map. The current position and zoom factor will be stored, so that the same part of the picture (e.g. the street sign) is shown, the next time you click on the appropriate triangle.

Note: The index uses the name and size of a file to recognize the picture.

Menu structure

(will change, I'm sure)

- File
 - Set OSM password

Set your OSM credentials here. E.g. xyz@somewhere.com / 12345
You may choose to store the password on disk (unencrypted) or use it only during this session. If a function needs this information (Live mode) and the credentials are not set, a requester will pop up anyway. You can change the address of the OSM server as well (if this becomes necessary).
 - Load GPX File
 - Load GPX helper file(s)
 - Save GPX data
 - Load OSM data
 - Save OSM data
- Edit
 - Get OSM data
 - Get OSM tracks
 - Remove selected GPX nodes
 - Remove unselected GPX nodes
 - Unselect all GPX nodes
 - Preferences
Password, arrow threshold, GPX warn threshold
- View
 - Show ways
Show/hide ways – this way you can select segments “under” a way
 - Show local track
Shows/hides the local track (GPX file), its way points and helper tracks.
 - Show remote track
Shows/hides GPX tracks downloaded from the OSM server
 - Show arrows

Segments will be shown with arrows pointing from the “from” node to the “to” node, This function will be turned off automatically if you zoom out and reach a certain threshold. This threshold can be modified in “Preferences”.

- Fit track to screen
Change the zoom factor so that the entire local track is shown.
- Bookmark
Access to the bookmark dialog
 - Add
 - Edit
 - Select
- Geotag
 - Scan directory
You must scan directory before the markers are shown in the map.
- Help
 - Debug – Http communication
Outputs the communication to the terminal output.
 - Test
Don't use that – really. I usually put some test code behind this option.
- About
About box. Under construction.

Appendix

Mouse clicks and modifiers

Left mouse click

- select node/segment/way
- free area – click-hold-release: move visible area
- + ctrl key: create new node / split segment (if you click onto a selected segment)
- + shift key: select multiple elements

Right mouse

- click-hold-release: selection box for local GPX track

Known issues:

- Split segment is only partially implemented.

Q&A

Q: What purpose does the non Live mode have?

A: None at the moment other than playing with the data without polluting the OSM server. In a later state it might be used in some kind of off-line editing.

Q: The OSM server is contacted at every editing stage. This slows down the editing process. Can you accelerate it?

A: It is planned to decouple this process and let the machine contacting the OSM server in the background.

Version history

0.1.1 2006-08-29

New features:

- add segments to existing path
- buttons have moved from the tag editor to the toolbar (you can now also turn a SINGLE segment into a way, or change from/to node of a SINGLE segment)
- white box denotes area of OSM data
- Preference window

0.1 2006-08-08

first release