

OpenStreetMap

Getting Data

- Download Extract
 - [Planet.osm](#)
 - OpenStreetMap data in one file
 - New version weekly
 - Worldwide extract sources
 - Regional extract sources
 - Global thematic extracts
 - BitTorrent
 - [XAPI](#)
 - [API](#)
 - [Overpass API](#)

Format

- Main
 - [PBF](#)
 - [OSM_XML](#)
 - [OSM](#)
 - [OSM_JSON](#)
- Other formats

Editors

- Desktop editors
 - [iOSM](#)
 - [Merkaartor](#)
- Browser editors
 - [ID](#)
 - Programmed in [JavaScript](#)
 - Uses d3.js as rendering layer
 - [Potlatch 2](#)
 - Flash-based (requires plugin)

OSM based services

- General
- Art
- Biking, geocaching, hiking, sport
- 3D
- Routing
- Compare
- Edits
- Accessibility for persons with disabilities
- Live/real-time edits to OSM data
- Quality Assurance

Topological data Structure

- Nodes**
 - Points with geographic position
- Ways**
 - Ordered lists of nodes representing a polyline or polygon
- Relations**
 - Ordered lists of nodes, ways and relations (together called "members"), where each member can optionally have a "role" (a string).
- Tags**
 - Key-value pairs (both arbitrary strings). They are used to store [metadata](#) about the map objects (such as their type, their name and their physical properties). Tags are not free-standing, but are always attached to an object (node, way, relation, or member of a relation).

OpenStreetMap Foundation
UK registered not-for-profit company

- Membership**
 - Communication
 - Data
 - Licensing
- Working Groups**
 - Local Chapters
 - Operations
 - Engineering
 - StateOfTheMap Organizing Committee
 - Strategic

License

- Open Data**
 - [Open data Commons Open Database License \(ODbL\)](#)
- Cartography**
 - [Creative Commons Attribution-ShareAlike 2.0 \(CC BY-SA\)](#)
- Attribution**
 - You must credit OpenStreetMap with the same prominence that would be expected if you were using a commercial provider.
 - © OpenStreetMap contributors
 - linking to [this copyright page](#)
- ShareAlike**
 - If you remix, transform, or build upon the material, you must distribute your contributions under the [same license](#) as the original.
- Policies**
 - [API usage](#)
 - [Tile usage](#)
 - [Nominatim Usage](#)

Code

- Leaflet**
 - Open-source JavaScript library for mobile-friendly interactive maps
- OpenLayers**
 - an open-source implementation of a "Slippy Map" interface.
 - JavaScript library released under the BSD license.
 - One of several libraries you can use to [deploy your own slippy map](#) on a website.

APIs

- Mobile Platform
 - [Route-Me \(iOS\)](#)
 - [OSMDROID \(Android\)](#)
- MapQuest Open API

Databases

- Schema**
 - [Osm2pgsql](#)
 - [apidb](#)
 - [pgsnapshot](#)
 - [imposm](#)
 - [nominatim](#)
 - [ogr2ogr](#)
 - [osmsharp](#)
 - [overpass](#)
 - [monqosm](#)
 - [node-mongoosm](#)
- [PostgreSQL](#) - [PostGIS](#)
- [MySQL](#)
- [SQLite](#)
- [MonetDB](#)
- [CouchDB](#)
- [MongoDB](#)

Tile servers

- Mapnik**
 - Open source Rendering Engine for developing mapping applications
- [Mapserver](#)
- [GeoServer](#)
- [Tile Drawer](#) is a free, quick-start, out-of-the-box renderer and server using the standard OSM toolchain for Amazon EC2

Mapbox

- [TileMill](#)
 - Open Source map design studio
- [CartoCSS](#)
 - A Mapnik stylesheet pre-processor used by TileMill
- [MBTiles](#)
 - Tile Storage schema for mobile apps
- [Mapbox.js](#)
 - Open source library built on top of Leaflet
- [Maps on a Stick](#)
 - Deprecated and no longer supported

Conferences

- [State of the Map](#)
 - Annual
 - Started in 2007
- [State of the Map - Europe](#)
 - Annual
 - Stated in 2011
- [State of the Map - US](#)
 - Annual

Contributors

- Over 1 million contributors
- Free user account