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Real-time OSM

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**openroute
service**

 **HeiGIT** | HEIDELBERG INSTITUTE
FOR GEOINFORMATION
TECHNOLOGY

**Klaus Tschira Stiftung
gemeinnützige GmbH**





openrouteservice (ors)

- around since ~ '08 and now part of the **Heidelberg Institute for Geoinformation Technology**
- free API for Routing (+Matrix) | Geocoding | Isochrones
- fully based on open data → OSM!
- **FOSS!**



new requirements



Humanitarian
OpenStreetMap
Team

**openroute
service** for
disaster
management

**openroute
service**



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new requirements

need:

up-to-date database + routing graphs



OpenRouteService: slow update of the database/routing graphs





Solution

one ORS instance per region



speeds up graph generation

real-time OSM



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The screenshot shows the OpenRouteService interface for disaster management. The left sidebar contains a search bar with 'Start' and 'End' fields, and a toolbar with navigation icons. The main map area displays a map of Papua New Guinea and the Solomon Islands, with a blue highlighted region covering parts of New Guinea, Papua Niugini, and the Solomon Islands. A 'HOT' (Hotspot) icon is visible on the map. A 'Choose your region:' dropdown menu is open, showing the following options:

Region	Time
Papua New Guinea	2018-03-16 01:34:03 UTC
Africa	2018-03-19 14:11:48 UTC
South Asia	2018-03-16 11:28:27 UTC
South America	2018-03-19 13:59:14 UTC

Other visible elements include a scale bar (300 km / 300 mi), a 'Leaflet | Map data © OpenStreetMap contributors' footer, and a 'HeiGIT' logo in the top left of the map area.



up-to-date data?

real-time OSM

- provides custom OSM extracts
- keeps them up-to-date in near real-time



Real-time OSM task manager

Show entries

Search:

Name	URL	expires	added	update interval [s]	updated	mean runtime [s]
haiti	./data/9_haiti.osm.pbf		2018-01-11T09:50	10	2018-01-11T09:55:17	30.8
nepal	./data/10_nepal.osm.pbf		2018-01-11T09:50	10	2018-01-11T09:54:58	57.1
milano	./data/11_milano.osm.pbf	2018-01-13T00:00:00	2018-01-11T09:52	60	2018-01-11T09:55:32	27

Showing 1 to 3 of 3 entries

Previous Next



[Get data](#) [Get all tasks as JSON](#)



Technical details

- Node.js server
- manages update-tasks in sqlite3 data base
- keeps data up-to-date
- provides an API
- provides a web frontend for simple administration



Update strategy

- find and download smallest Geofabrik extract for area of interest. crop accordingly.
- if this fails, rely on planet file
- continuous updates with osmupdate



Access to our service?

<http://realtimeosm.openrouteservice.org>

info@heigit.org



Grazie!

<https://github.com/GIScience/OSM-realtime-update>

<http://realtimeosm.openrouteservice.org>

<http://giscienceblog.uni-hd.de>

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