

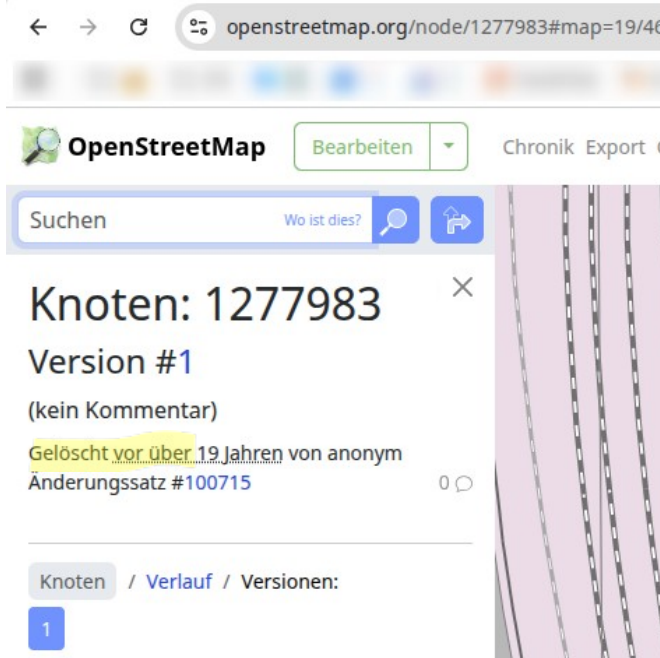
GovTech Hackathon 2026

OGD-OSM Bridge

OST – Ostschweizer Fachhochschule
IFS / Geometalab

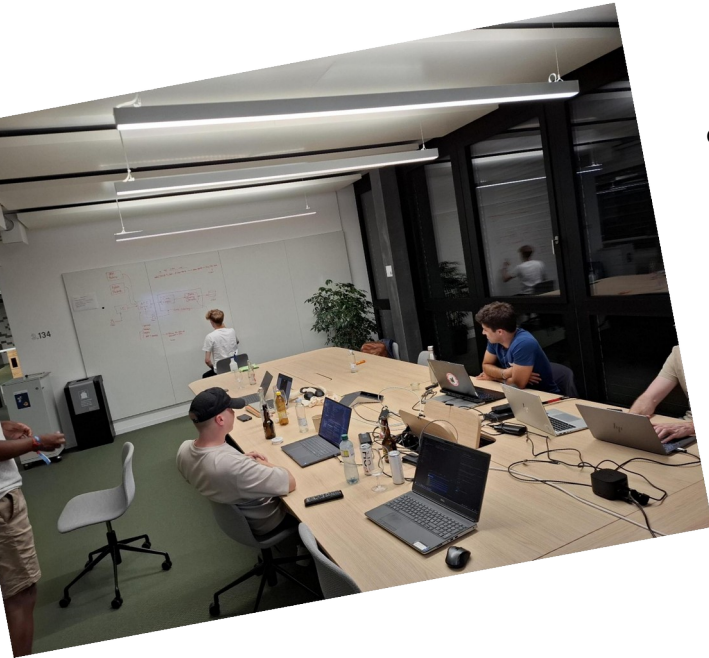
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The Problem



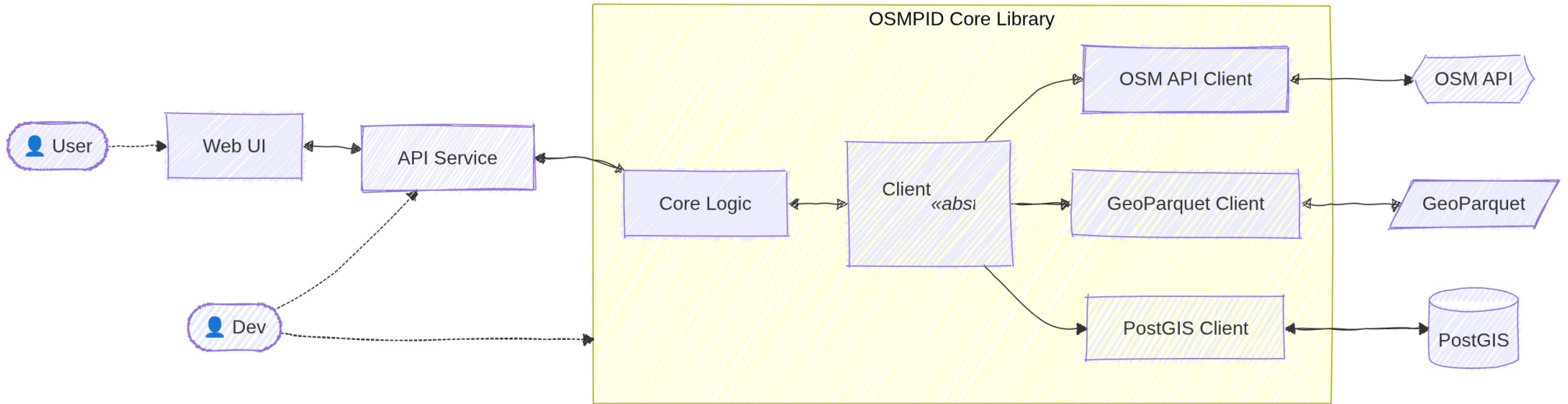
- Viele Datensätze verlinken zu OSM
 - Die OSM-ID ist jedoch **nicht permanent**

The Specification



- Folgende Komponenten sind nötig
 - type, id, version, child_version, [tags]
- Beispiele
 - `node/2641352539@7`
 - `node/2641352539@7?amenity=bar`
 - `way/99887766@12;2026-03-10T08:00:00Z`
 - `relation/445566@3;2026-03-01T14:30:00Z`

The Architecture



Web UI Demo

OSMPID / OSM Persistent IDs

ConceptValidateGenerateAPIValidate an ID

/ ENDPOINT · GET /VALIDATE

Validate an OSMPID

Check a stored reference against current OSM state. The validator parses the string, resolves the object, and reports whether the version, child elements, or tags have changed — returning a refreshed ID when they have.

ReferenceGET / VALIDATE

Validate

Examples:

way/2641352539@7;2026-03-12T10:15:00Z?amen...

node/2641352539@7

relation/445566@3;2026-03-01T14:30:00Z

way/99887766@12;2026-03-10T08:00:00Z?amen...

way/55512345@5;2026-02-11T08:40:00Z

node/2641352539@7?amenity=bar&building&nam...

ResultHTTP 200 OK

node/2641352539@7

UNCHANGED

HTTP 200 OK

Version, child elements and tags all match. The reference still resolves to the same object state.

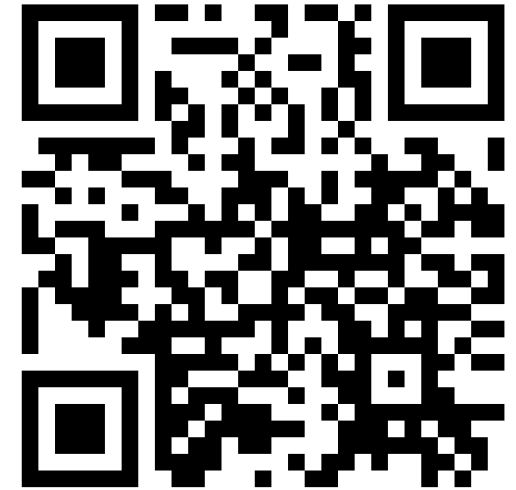
Last-Modified: Thu, 12 Mar 2026 21:32:03 GMT

ID components

- element_type required
- element_id required
- version required
- latest_child_timestamp conditional
- tags optional

Outcomes

- UNCHANGED Version, children, tags all match.
- CHANGED A refreshed OSMPID is returned.
- DELETED Object no longer visible.
- UNKNOWN type + id never existed.
- HALFORMED 422 — string failed to parse.



osmpid.infs.ai

OGD Showcase

- Eidg. Gebäude- und Wohnungsregister (**GWR**)

```
$ uv run showcase/GWR/matcher.py
MATCH | 0 | 16 Alte Unterrainstrasse, 9050 Appenzell -> way/240565266 (12.8 m)
MATCH | 1 | 27 Alte Unterrainstrasse, 9050 Appenzell -> way/240565269 (3.5 m)
MATCH | 2 | 25 Alte Unterrainstrasse, 9050 Appenzell -> way/240565270 (3.0 m)
MATCH | 3 | 14 Alte Unterrainstrasse, 9050 Appenzell -> way/240565271 (3.0 m)
MATCH | 4 | 12 Alte Unterrainstrasse, 9050 Appenzell -> way/240565275 (3.0 m)
MATCH | 5 | 23 Alte Unterrainstrasse, 9050 Appenzell -> way/240565276 (3.0 m)
```

```
$ uv run showcase/GWR/validator.py
Validating 0 - OSMPID: way/240565266@3;2022-07-27T09:16:30Z -> Result: unchanged
Validating 1 - OSMPID: way/240565269@3;2022-07-31T09:39:20Z -> Result: unchanged
Validating 2 - OSMPID: way/240565270@3;2022-07-31T09:39:20Z -> Result: unchanged
Validating 3 - OSMPID: way/240565271@3;2022-07-27T10:05:55Z -> Result: unchanged
Validating 4 - OSMPID: way/240565275@3;2022-07-27T10:05:55Z -> Result: unchanged
Validating 5 - OSMPID: way/240565276@3;2025-04-01T15:31:06Z -> Result: unchanged
```

Validating 4 - OSMPID: way/240565270@3;2022-07-27T10:05:55Z -> Result: unchanged
Validating 5 - OSMPID: way/240565276@3;2025-04-01T15:31:06Z -> Result: unchanged

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R21 f_x Σ =

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	EGID	E#	DEINR	STRNAME	OSMPID	OSMPID_VALIDATION_RESULT	OSMPID_VALIDATION_DATETIME													
2	1712079	0#	16#	Alte Unterrainstrasse	way/240565266@3;2022-07-27T09:16:30Z	unchanged	2026-05-29T14:03:44.662													
3	1712080	0#	27#	Alte Unterrainstrasse	way/240565269@3;2022-07-31T09:39:20Z	unchanged	2026-05-29T14:03:44.970													
4	1712081	0#	25#	Alte Unterrainstrasse	way/240565270@3;2022-07-31T09:39:20Z	unchanged	2026-05-29T14:03:45.126													
5	1712082	0#	14#	Alte Unterrainstrasse	way/240565271@3;2022-07-27T10:05:55Z	changed [way/240565271@4;2026-05-29T11:10:24Z]	2026-05-29T14:03:45.283													

Learnings

- Vibe Coding Experiment
 - SOTA Agents: Claude Code Opus 4.7
 - Self-hosted Agents: Qwen3.6-27B
 - Human-in-the-loop: Claude Code Opus 4.7
- Beobachtungen
 - Agents: Ähnliche Resultate, teil. aufgebläht, aber funktionieren
 - HITL: Viel weniger code, sauberer, einfach zu warten/zu erweitern

