

Linked Data

for robust and decentralized applications

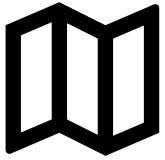
pukkamustard <pukkamustard@posteo.net>

open Engiadina

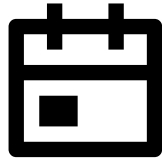


<https://openengiadina.net/>

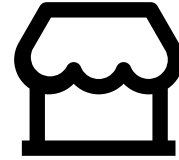
Open Local Knowledge



Geographic
information



Social and cultural
events



Organizations



Infrastructure
Status

Variety of different data

Interlink with other content

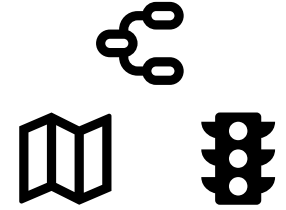
- Wikidata
- OpenStreetMap
 - Mapping between RDF and OSM data
- Almost any existing web content



ActivityPub



Natural language
communication



Structured data

Creating and maintaining data is a
social activity!

Why Linked Data?

- Variety of data
- Interlink with other content
- Social interaction (via ActivityPub)

Problems

- Robustness
 - Reliance on single servers
 - Decentralize for robustness!
- Querying



<https://dream.public.cat/>

URL → URN

- Content-addressing
 - For RDF: <http://purl.org/ca-rdf>
- Optimize for transport over P2P networks
 - ERIS (<http://purl.org/eris>)
 - IPFS / GNUNet

Authenticity

- Content-addressing
 - Sign the identifier of content-addressed content
- RDF Signify (<http://purl.org/signify>)

Mutability

- Content-addressed content is immutable
 - No persistent identifiers

- Commutative Replicated Data Types (CRDTs)
 - Distributed Mutable Containers (<http://purl.org/dmc>)

Querying

- Datalog
 - Logic Programming for Databases
- Extensible
 - Resolving of CRDT state
 - Authoritative Reasoning
 - Full-text search and geospatial indexing

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