

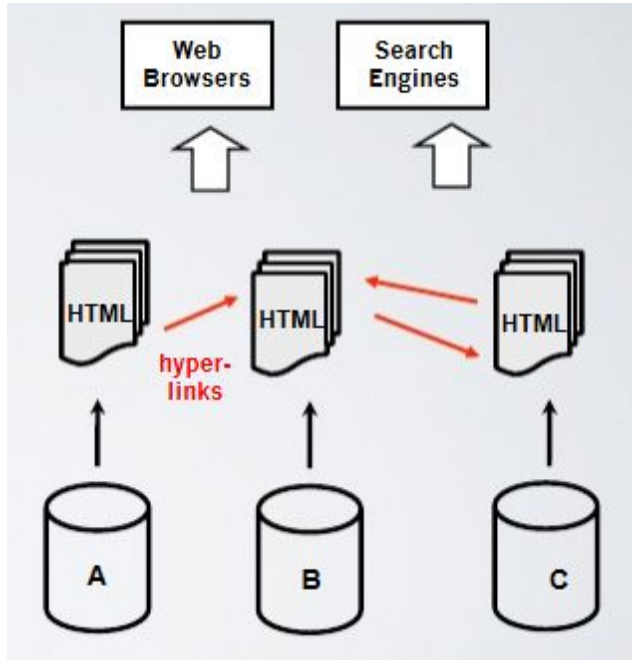
Nimisammon datapalvelu Linked Data Finland -alustalla

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Semantic Computing Research Group (SeCo), Aalto University, <http://seco.cs.aalto.fi>
jouni.tuominen@helsinki.fi*

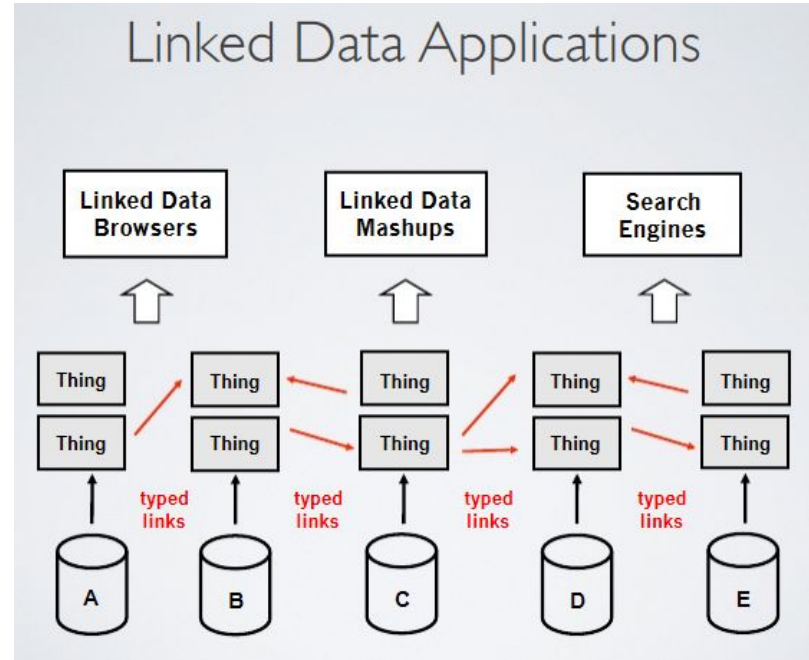
Webin dataekosysteemi

WWW



(Anja Jentzsch, 2012)

GGG

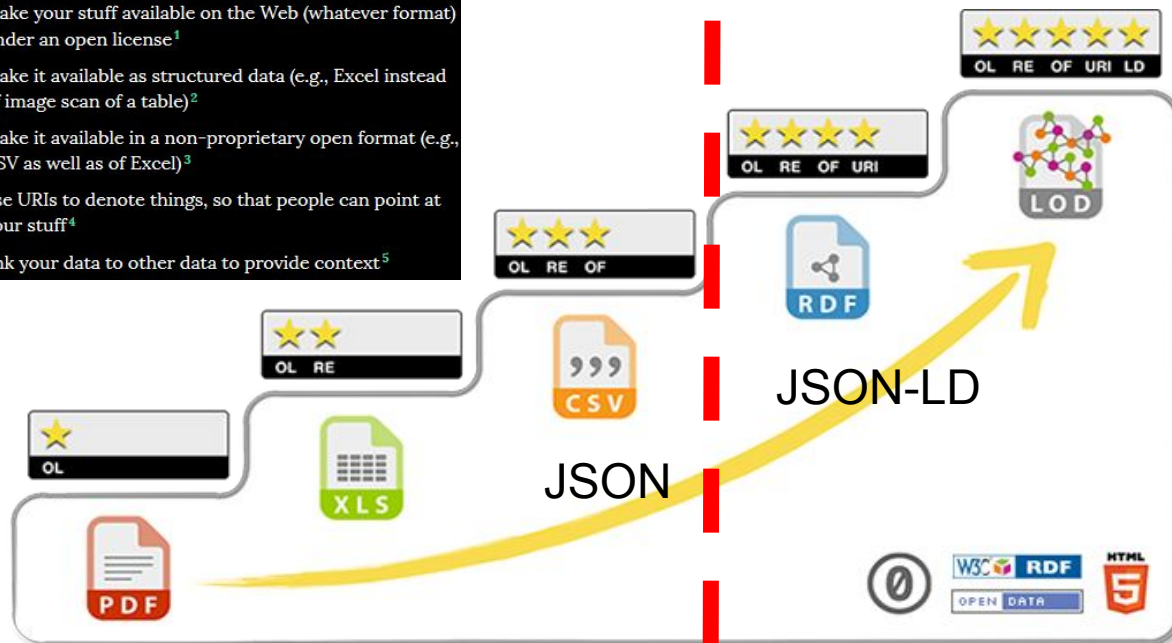


(Anja Jentzsch, 2012)

Miten julkaista dataa?

5 tähden linkitetyn datan malli

- ★ make your stuff available on the Web (whatever format) under an open license¹
- ★★ make it available as structured data (e.g., Excel instead of image scan of a table)²
- ★★★ make it available in a non-proprietary open format (e.g., CSV as well as of Excel)³
- ★★★★ use URIs to denote things, so that people can point at your stuff⁴
- ★★★★★ link your data to other data to provide context⁵



“Traditional” Open Data

Linked Open Data

(Tim Berners-Lee)
<http://5stardata.info>

Linked Data Finland Living Lab <http://ldf.fi>



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Linked Data Finland

Living Laboratory Data Service for the Semantic Web

This site is the Living Laboratory of the [Linked Data Finland](#) research initiative, conducted by the [Semantic Computing Research Group](#) at [Aalto University](#) in collaboration with University of Helsinki and a large consortium of Finnish public organizations and companies.

Our goal is to make life easier for both publishers as well as consumers of structured data on the Web. We base our work on the [Linked Data](#) paradigm and stack of standards, which combines an expressive, semantic data model ([RDF](#)) with standardized access mechanisms ([SPARQL](#) and [live HTTP URIs](#)).

5-star Linked Data

The baseline of our work is the [5-star Linked Data model](#), proposed [originally](#) by Tim Berners-Lee.

- ★ Make data available on the Web in whatever format.
- ★★ Make data available as structured data (e.g., Excel instead of an image scan of a table).
- ★★★ Use non-proprietary formats (e.g., CSV instead of Excel format).
- ★★★★ Use URIs to denote things, so that people can point at your data.
- ★★★★★ Link your data to other data to provide context.

7-star Linked Data Service

However, in our opinion, providing 5-star Linked Data is just the beginning. To actually make use of the datasets, consumers need more support in getting to know and access them, as well as a better grasp of their quality and provenance. To this end, we extend the model with two additional stars:

- ★★★★★ Provide your data with a schema and documentation so that people can *understand and re-use* your data easily.
- ★★★★★★ Validate your data and denote its provenance so that people can *trust the quality* of your data.

This added support should come with as little extra work as possible to the data publisher. Our hypothesis is that a lot of this can be done automatically, basing on the Linked Data core. A data publisher needs only to provide

“7 tähden” mallimme ja LDF.fi-datahotelli

Goals: enhance re-usability and data quality

7-star Linked Data Service

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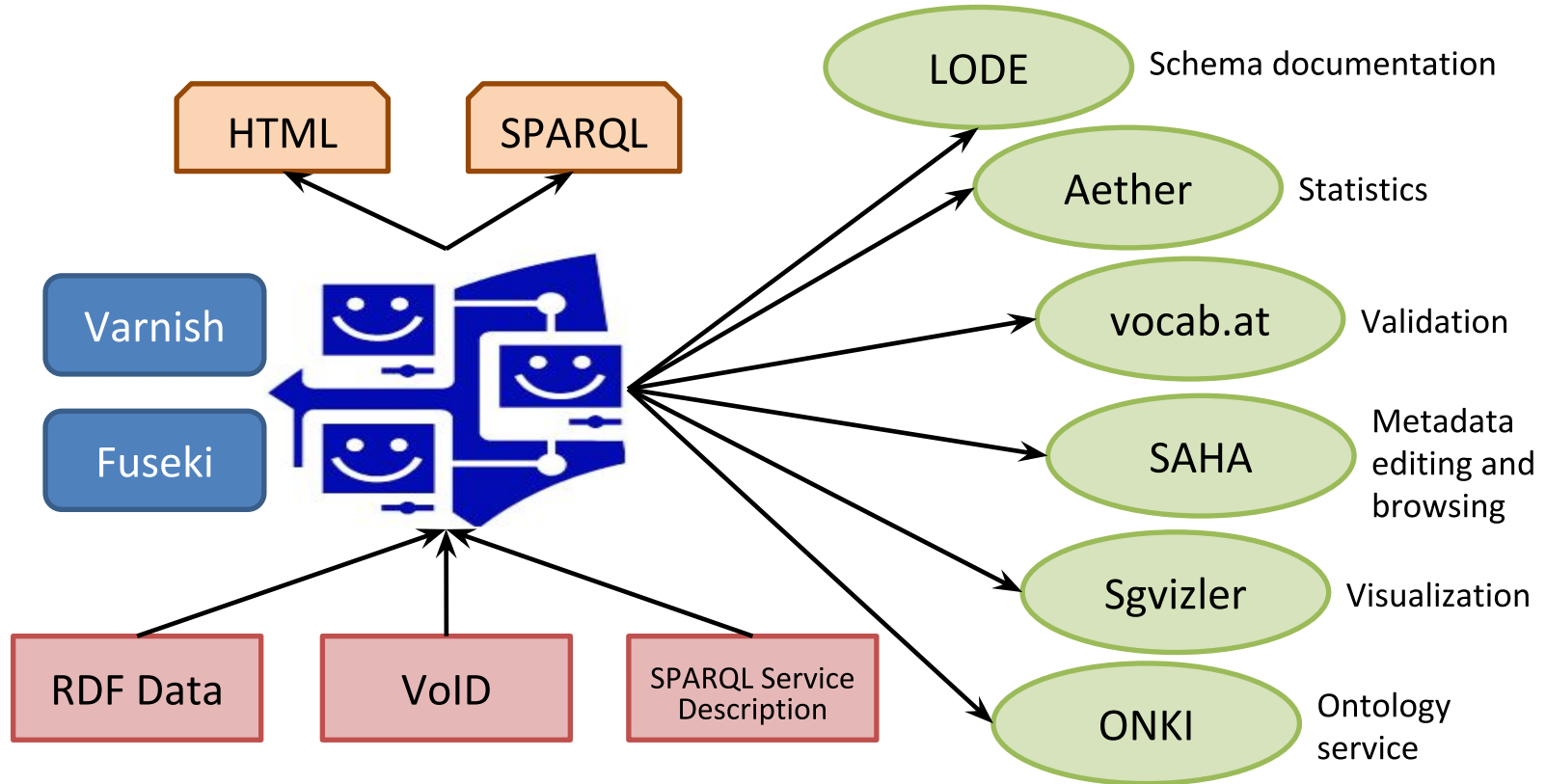
Validate your data and denote its provenance so that people can *trust the quality* of your data.

This added support should come with as little extra work as possible to the data publisher. Our hypothesis is that a lot of this can be done automatically, basing on the Linked Data core. A data publisher needs only to provide their data in the RDF format, and the LDF.fi portal will do the rest automatically. See the [overview paper](#) (in ESWC 2014 Proceedings, Springer-Verlag) for some more details about the underlying ideas.



Burj Al Arab

LDF.fi – yleinen linkitetyn datan julkaisualusta



Nimisampo: aineistot

Nimi	Data/rajapintajulkaisu	Lisenssi
Nimiarkisto (Kotimaisten kielten keskus Kotus)	http://www.ldf.fi/dataset/kotus-names-archive	
Paikannimirekisteri (Maanmittauslaitos MML)	http://www.ldf.fi/dataset/pnr	
Karjalan karttojen paikat (MML / Tiittanen)	http://www.ldf.fi/dataset/warsa	
Thesaurus of Geographical Names (Getty)	http://vocab.getty.edu	ODC-By
Senaatin kartasto (Kansallisarkisto)	http://mapwarper.onki.fi/layers/5	
Karjalan kartat, 1:100 000 topografinen (MML)	http://mapwarper.onki.fi/layers/4	copyright MML / Puolustusvoimat

Nimiarkisto

Nimi	Aadaminala
Paikan laji	na-schema:place_type_3780
Leveyskoordinaatti (wgs84:lat)	61.733505875359
Pituuskoordinaatti (wgs84:long)	21.664435760413
Pitäjä (n. 1938 pitäjäjako)	Ahlainen
Perusosa	ala
Määriteosa	Aadamin
Kokoelma	KotusNA1
Kartan numero	114211
KarttaID	1483
Keruulipun pistesijaintimerkintä	2
Keruulipun X-merkintä	18
Keruulipun Y-merkintä	58

Paikannimirekisteri

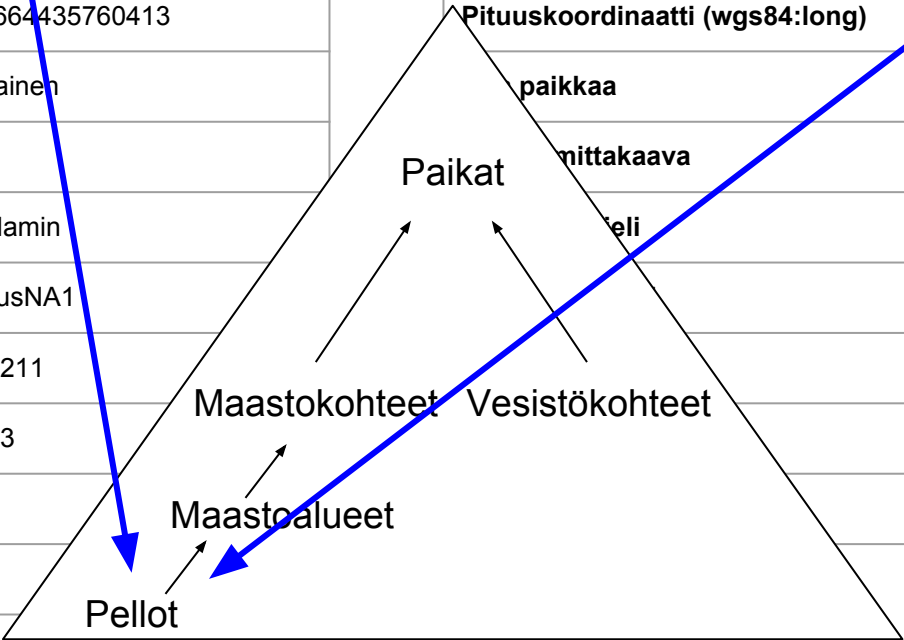
Nimi	Rantopelto
Paikan laji	pnr-schema:place_type_320
Leveyskoordinaatti (wgs84:lat)	61.798498991000905
Pituuskoordinaatti (wgs84:long)	25.931729434385076
Osa paikkaa	pnr:P_10645405 (Joutsa)
Kartan mittakaava	pnr-schema:map_scale_25000
Virallinen kieli	pnr-schema:language_fin
Enemmistökieli	pnr-schema:language_fin
tm35Fin7-koodi	M4424F3
pp6-koodi	21P1D1
ylj7-koodi	312209B

Nimiarkisto

Paikannimirekisteri

Nimi	Aadaminala	Nimi	Rantopelto
Paikan laji	na-schema		pnr-schema:place_type_320
Leveyskoordinaatti (wgs84:lat)	61.733505		61.798498991000905
Pituuskoordinaatti (wgs84:long)	21.664435760413		25.931729434385076
Pitäjä (n. 1938 pitäjäjako)	Ahlainen		pnr:P_10645405 (Joutsa)
Perusosa	ala		pnr-schema:map_scale_25000
Määriteosa	Aadamin		pnr-schema:language_fin
Kokoelma	KotusNA1		pnr-schema:language_fin
Kartan numero	114211		M4424F3
KarttaID	1483		21P1D1
Keruulipun pistesijaintimerkintä	2		312209B
Keruulipun X-merkintä	18		
Keruulipun Y-merkintä	58		

Paikkatyypiontologia



Names Archive of the Institute for the Languages of Finland

Kotimaisten kielten keskuksen Nimiarkisto

<http://www.ldf.fi/dataset/kotus-names-archive>

Linked Data Finland



The dataset contains approximately 2.3 million place name records from the place name collections gathered during a period of over 100 years in the Names Archive of the Institute for the Languages of Finland. The data can be searched and analyzed in the [NameSampo](#) service.

License

[CC BY 4.0](#)



Licensors: [Kotimaisten kielten keskus](#), [Semanttisen laskennan tutkimusryhmä \(SeCo\)](#)

See possible graph-specific licenses below.

Detailed Dataset Contents

Names Archive of the Institute for the Languages of Finland (URI: <http://ldf.fi/kotus-names-archive/>)

([Browse data](#) / [Download](#))

This graph contains 2.3 million place name records from the Names Archive of the Institute for the Languages of Finland. More information about the source data: <https://nimiarkisto.fi>.

RDF version by SeCo @ Aalto University.

Information included: place name, place type, municipality, coordinates, collection year.

Example resource URI: <http://ldf.fi/kotus-names-archive/1>



Aineiston lataus

SPARQL-kyselyeditori



```
1 PREFIX spatial: <http://jena.apache.org/spatial#>
2 PREFIX wgs84: <http://www.w3.org/2003/01/geo/wgs84_pos#>
3 PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
4 PREFIX na-schema: <http://ldf.fi/schema/kotus-names-archive/>
5
6 SELECT * WHERE {
7   ?place spatial:nearby ("69.0" "28.0" 40 'km') ; # Lake Inari
8   skos:prefLabel ?label .
9   FILTER (regex(str(?label), "^(ukko|ukon)", "i"))
10  ?place na-schema:municipality ?municipality ;
11         wgs84:lat ?lat ;
12         wgs84:long ?long .
13 }
```



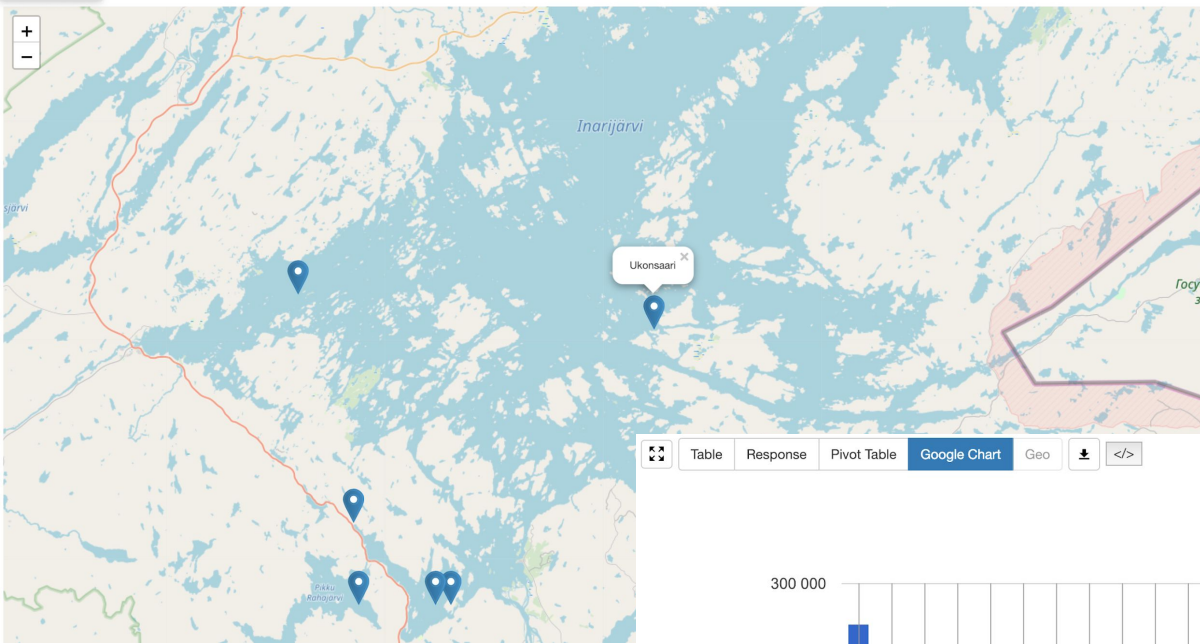
 **Table** Response Pivot Table Google Chart Geo  

Showing 1 to 6 of 6 entries (in 0.148 seconds)

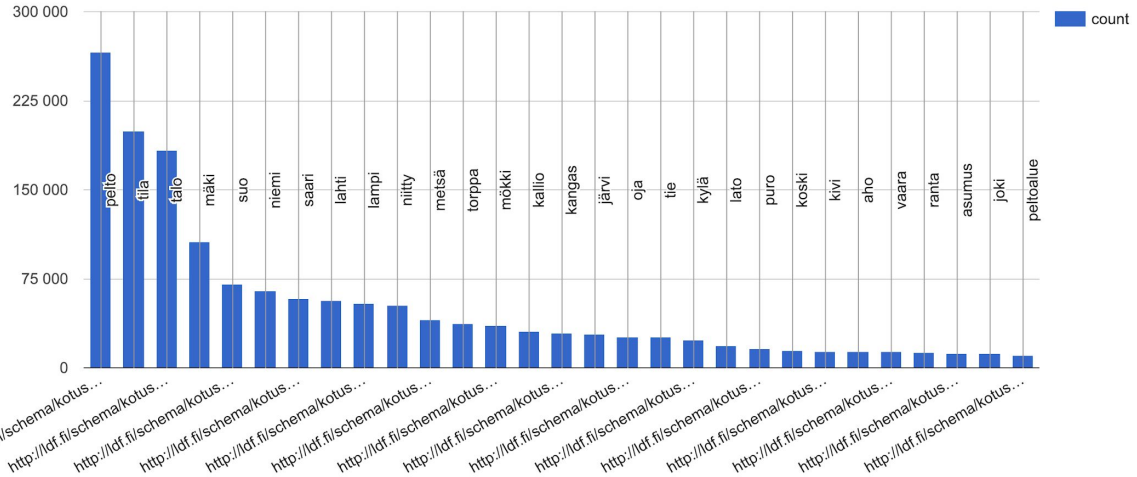
Search: Show **50** entries

	place	label	municipality	lat	long
1	http://ldf.fi/kotus-names-archive/323278	Ukko	Inari	"68.93648681979"^^xsd:decimal	"27.282297028032"^^xsd:decimal
2	http://ldf.fi/kotus-names-archive/323280	Ukko	Inari	"68.75660442724"^^xsd:decimal	"27.527227650774"^^xsd:decimal
3	http://ldf.fi/kotus-names-archive/323290	Ukonjärvi	Inari	"68.757000778337"^^xsd:decimal	"27.378908261332"^^xsd:decimal
4	http://ldf.fi/kotus-names-archive/323293	Ukon Korkiasaari	Inari	"68.756679497908"^^xsd:decimal	"27.502508161033"^^xsd:decimal
5	http://ldf.fi/kotus-names-archive/323296	Ukonsaari	Inari	"68.916649323522"^^xsd:decimal	"27.854750300317"^^xsd:decimal
6	http://ldf.fi/kotus-names-archive/323298	Ukontupa	Inari	"68.804456135641"^^xsd:decimal	"27.370791773483"^^xsd:decimal

Showing 1 to 6 of 6 entries (in 0.148 seconds)



[Table](#)
[Response](#)
[Pivot Table](#)
[Google Chart](#)
[Geo](#)
[+](#)
[</>](#)



Linkitetyn datan selaus

SAHA3 | [kotus-names-archive](#) - search

<http://ldf.fi/kotus-names-archive/323278>

saari: Ukko

[\[edit\]](#)



68.93648681979, 27.282297028032

Collection	KotusNA1
Collection map file id	171
Collection slip map tile x	12
Collection slip map tile y	51
Collection year	1990
Collector	Portti, Reija
http://www.w3.org/1999/02/22-rdf-syntax-ns#type	saari
http://www.w3.org/2003/01/geo/wgs84_pos#lat	68.93648681979
http://www.w3.org/2003/01/geo/wgs84_pos#long	27.282297028032
http://www.w3.org/2004/02/skos/core#prefLabel	Ukko
Initial letter	U
Map code	384105
Municipality (in ca 1938)	Inari
X = other names in the collection slip	X

Tietomallin dokumentaatio



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2. [Data Properties](#)
3. [Namespace Declarations](#)

Classes

[Place](#)

[Place](#)^c

[back to ToC](#) or [Class ToC](#)

IRI: <http://ldf.fi/schema/hipla/Place>

is in domain of

[Collection](#)^{dp}, [Collection map file id](#)^{dp}, [Collection slip map point](#)^{dp}, [Collection slip map tile x](#)^{dp}, [Collection slip map tile y](#)^{dp}, [Collection year](#)^{dp}, [Collector](#)^{dp}, [Extended collection slips parent slip](#)^{dp}, [Extended collectoin slip](#)^{dp}, [Initial letter](#)^{dp}, [Map code](#)^{dp}, [Map code](#)^{dp}, [Municipality \(in ca 1938\)](#)^{dp}, [PEX \(codes\)](#)^{dp}, [X = other names in the collection slip](#)^{dp}

Data Properties

[Actual municipality](#) [Collection](#) [Collection map file id](#) [Collection slip map point](#) [Collection slip map tile x](#) [Collection slip map tile y](#) [Collection year](#) [Collector](#)
[Extended collection slips parent slip](#) [Extended collectoin slip](#) [Initial letter](#) [Map code](#) [Map code](#) [Municipality \(in ca 1938\)](#) [PEX \(codes\)](#) [X = other names in the collection slip](#)

[Actual municipality](#)^{dp}

[back to ToC](#) or [Data Property ToC](#)

IRI: http://ldf.fi/schema/kotus-names-archive/actual_municipality

Kokeile itse! <http://ldf.fi>

Kiitokset:



ICT Solutions for Brilliant Minds

C S C

– LDF.fi- ja Nimisampo-palveluiden palvelinresurssit



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