Florian Thiery [1,2] | Mainz, Germany
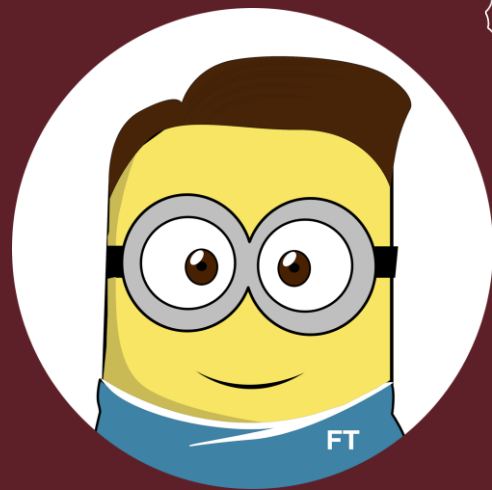
[1] mainzed

[2] Linked Geodesy

topi.link - A graph-based topology for vague geographical relations

Cheers!

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RGZM

Leibniz-Gemeinschaft

TOPI

modelling
topological relations
with a degree of connection
to make automatically
rule-based conclusions

ACADEMIC META TOOL

What?

JavaScript library for modelling and reasoning of vague graph data

Who?

Mainz Centre for Digitality in the Humanities
and Cultural Studies (mainzed)
Martin Unold, Florian Thiery

Where?

http://academic-meta-tool.xyz
https://github.com/mainzed/academicmetatool-js

ACADEMIC META TOOL

**modelling a trip
from the North of Sweden
around Scandinavia
using topological relations
and a modelled degree of
northness to enable reasoning**
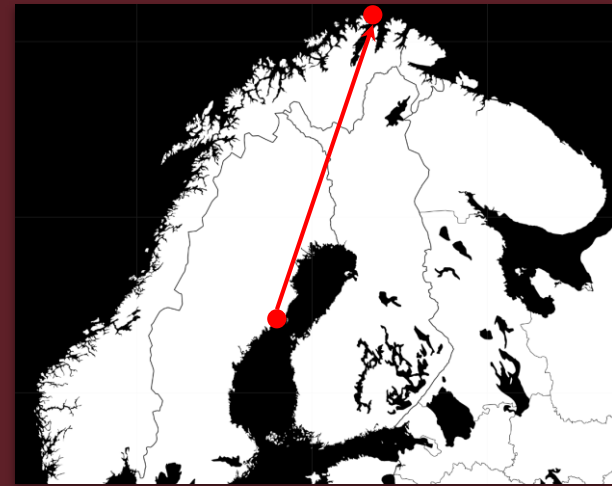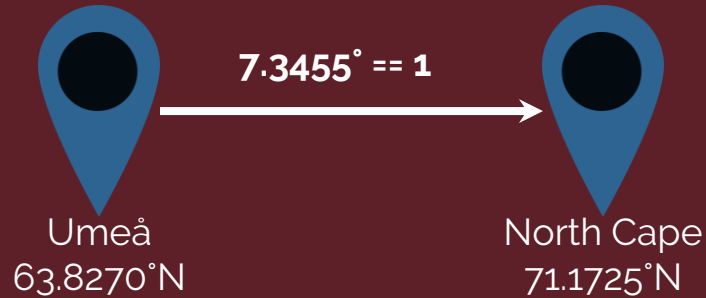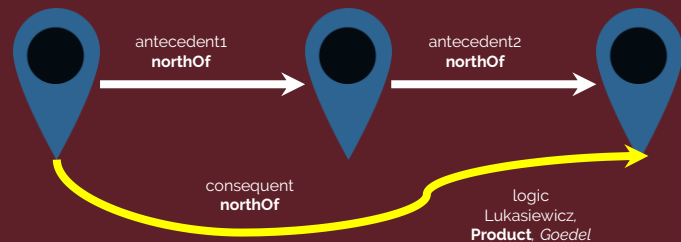
specify nodes »CONCEPTS«

POI

specify edges »ROLES«

northOf

POI · POI

southOf

POI · POI

specify degree of northness

⇒ *normalisation*

7·3455° == 1

Umeå
63.8270°N

North Cape
71.1725°N

specify Role-Chain axioms

antecedent1
northOf

antecedent2
northOf

consequent
northOf

logic
Lukasiewicz,
Product, *Goedel*

specify Inverse axioms

antecedent
northOf

inverse
southOf

Let us model the Scandinavian trip of Flo and Emil!

Umeå
63.8270°N

0.7674°N

0.10

Umeå

Lycksele

Lyckssele 🇳🇴

64.5944˚N

1.7456°N

Lycksele → *0.24* → Arctic Circle

POLCIRK
Napapiiri
Arctic Circle
Cercle Polaire
Polarkreıs

Arctic Circle

66.34°N

Florian Thiery (CC BY 4.0)

18

Arctic Circle

66.34°N 🇳🇴

0.7572°N

0.10

Arctic Circle

Rognan

Rognan 🇳🇴

67.0972˚N

Florian Thiery (CC BY 4.0)

Rognan

67.0972°N

1.2359˚N

0.17

Rognan

Lofoten

Lofoten

68,3331°N

Lofoten

68,3331°N

Lofoten 🇳🇴

68,3331°N

Florian Thiery (CC BY 4.0)

1.3187°N

0.18

Lofoten Tromsø

Tromsø

69,6518°N

Tromsø

69,6518°N

1.5207°N

0.21

Tromsø

North Cape

North Cape

71,1725˚N

North Cape

71,1725°N

-2.2669°N

-0.31

North Cape

Inari

Inari 🇫🇮

68,9056°N

Florian Thiery (CC BY 4.0)

Inari

68,9056°N

35

Inari
68,9056°N

Inari 🇫🇮

68,9056°N

-2.3625°N

-0.32

Inari   Santa Claus

Santa Claus
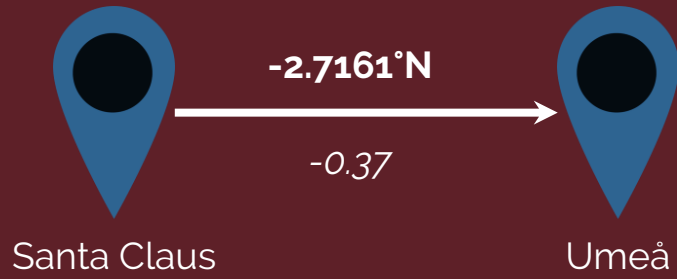
66,5431°N

24C°

-2.7161°N

-0.37

Santa Claus → Umeå

Umeå

63.8270°N 🇸🇪

Thx <u>Anne</u> for the great experience!

topi - A graph-based vague topology for toponyms

T O P I

topi.link v1.0 / *Git*

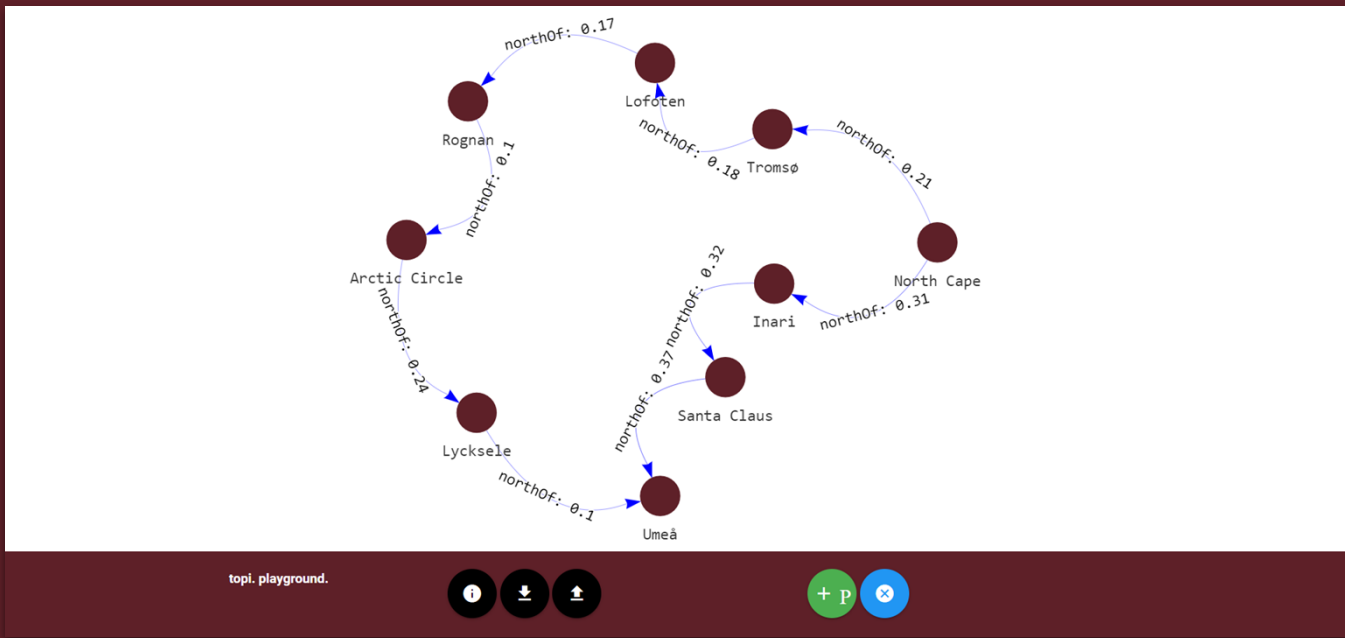build by *Linked Geodesy + mainzed*

model the trip via topi.link ...

... using the *North-South Network* ...

... create the trip network ...

... and let us do magic :-)

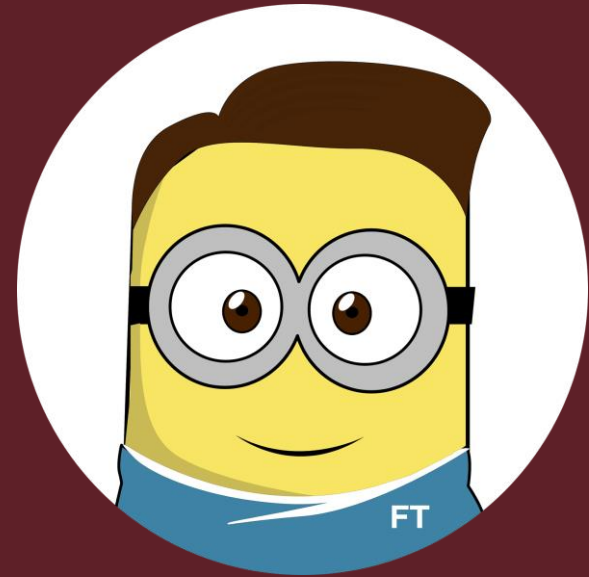# http://topi.link

Thx!

Any questions?

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contact via mail **rse@fthiery.de**

ORCID **0000-0002-3246-3531**

TOPI

ACADEMIC **META TOOL**

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- Unold, M., Cruz, C. (2017). *How to enrich description logics with fuzziness*. 2017 Computing Conference, London, 2017, pp. 51-57. https://doi.org/10.1109/SAI.2017.8252080 *(English)*

Credits

- presentation template by SlidesCarnival
- photos not referenced by Pixabay or [Florian Thiery](Florian%20Thiery)
- Thanks to [Anne Götz](Anne%20G%C3%B6tz) (Zonista) for the great trip

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