

# Adding some **privacy** to RIPE DB geolocation

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# RIPE NCC Geolocation Prototype

`inetnum: 10.0.0.0 - 10.0.255.255`

`language: NL`

`geoloc: 59.84067541708714 17.86651611328125`

- ▶ Idea: Provide information to content providers about end users
- ▶ `language` attribute specifies what language(s) users prefer
- ▶ `geoloc` attribute specifies where users are

# RIPE NCC Geolocation Prototype – Problems

inetnum: 10.0.0.0 - 10.0.255.255

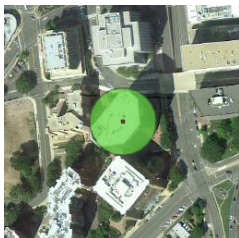
language: NL

geoloc: 59.84067541708714 17.86651611328125

- ▶ language should use RFC 5646 “Tags for Identifying Languages”
- ▶ geoloc attribute does not have a clear semantic – users are not located at a point
- ▶ geoloc attribute has no privacy protections

# RIPE NCC Geolocation Prototype – Suggestion

- ▶ **Make the geoloc field a URI**
- ▶ If it makes sense to be a point / circle, use a geo URI
- ▶ Otherwise, use an http URI pointing to a location service external to the RIPE DB [RFC5985]

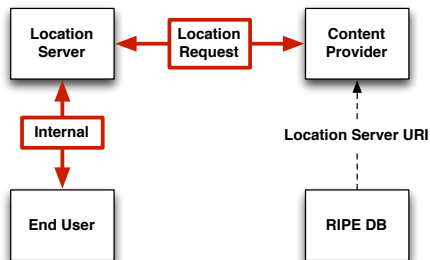


`geo:38.894,-77.073;u=33.5`



`http://isp.net/location.php`

# Location Indirection – Privacy



- ▶ Remove private and variable data from the RIPE DB
- ▶ ISPs can make privacy decisions on their own
  - ▶ Negotiate with users and local regulators
  - ▶ Advanced privacy policies, e.g., based on requestor
- ▶ Makes deployment more difficult for ISPs, however

# Location Indirection – Flexibility

- ▶ XML schema for expressing rich geolocation objects
- ▶ Geodetic constructs like polygons and ellipsoids
- ▶ Civic addresses (see below)

```
<civicAddress>  
  <country>AT</country>  
  <RD>Am Stadtpark</RD>  
  <HNO>;1;;;;;;;;;;;;;</HNO>  
  <PC>1030</PC>  
  <ROOM>Park Congress 1</ROOM>  
</civicAddress>
```

# Summary

- ▶ RIPE NCC user surveys indicate demand for a way for ISPs to advertise geolocation information
- ▶ Current prototype has problems of definition and privacy
- ▶ Allowing for indirection could help address these issues
  - ▶ Enable ISPs to control privacy/disclosure
  - ▶ Remove private information from the RIPE DB
  - ▶ Allow for richer descriptions of geolocation