



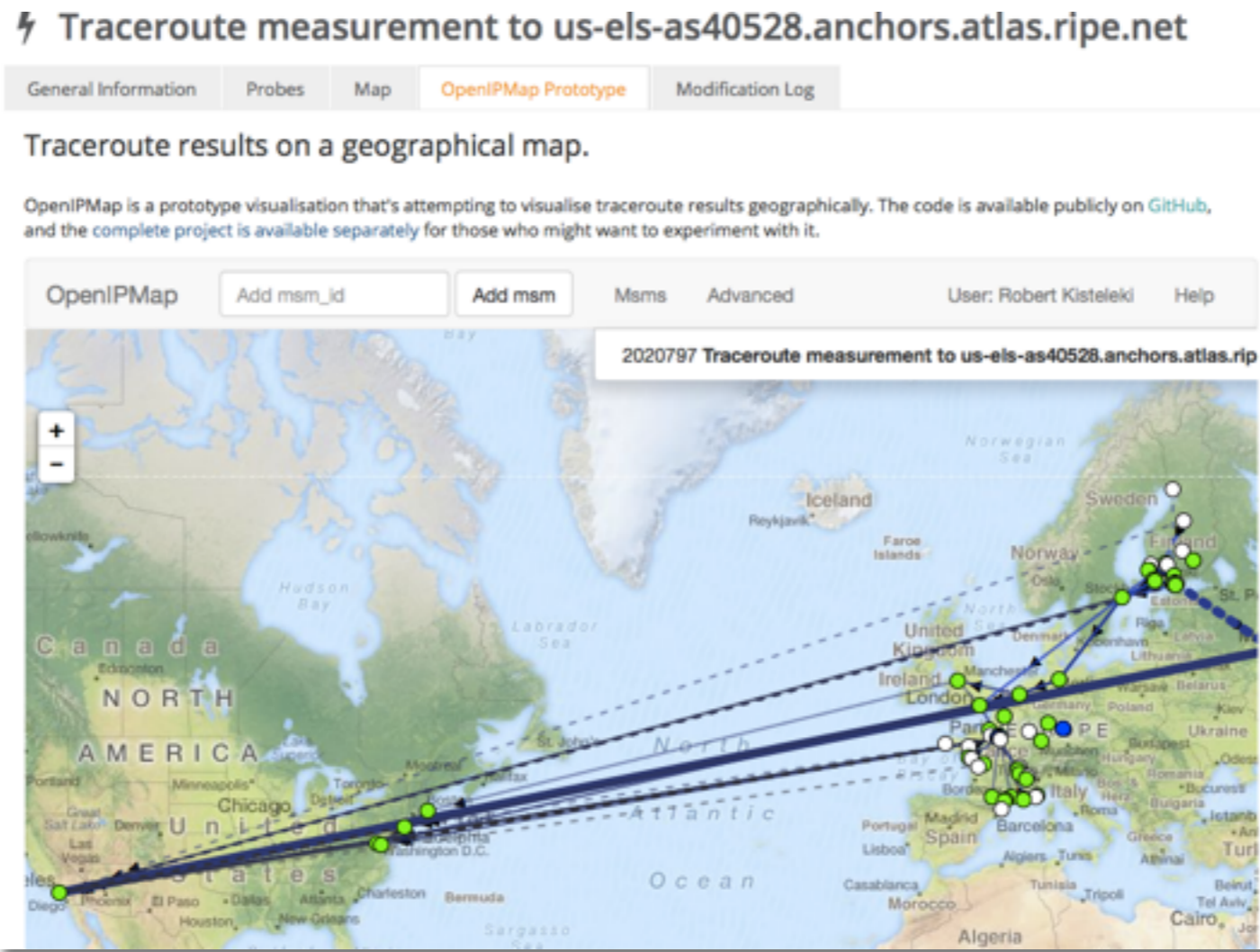
OpenIPMap Traffic locality Measuring IXPs

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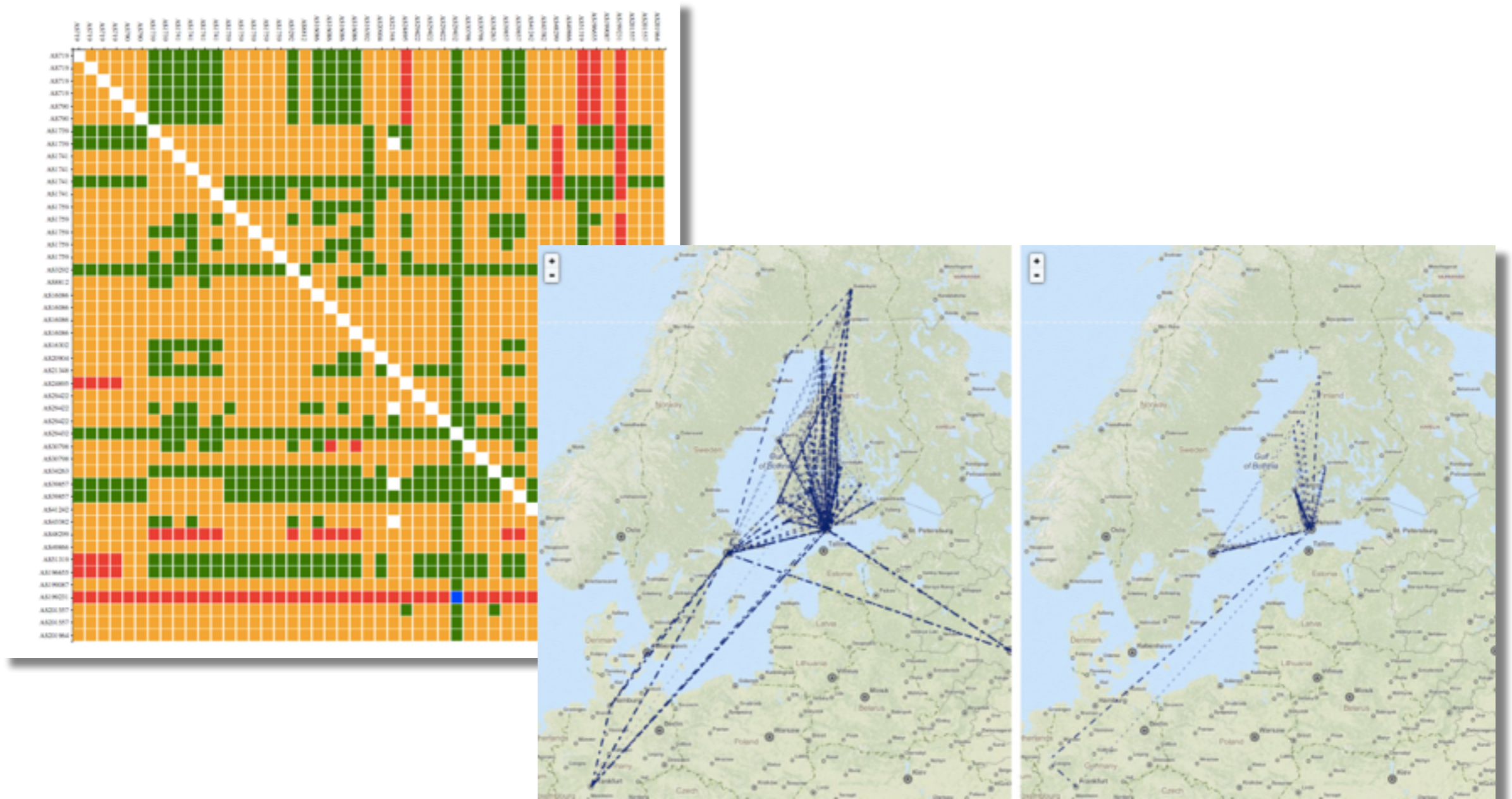
- The aim is to build a geolocation database of **infrastructure IPs**
- It's a **prototype service** that deals with probabilities, assembled from multiple sources:
 - Known locations of networks, e.g. IXP peering lans
 - Harvesting reverse DNS names of traceroute hops
 - Individual user inputs — crowdsourcing
 - Triangulation from already known locations (planned)
 - Iterative approaches (planned)
- Data and code are meant to be open

- Why? This is useful for a number of cases:
 - Knowing what infrastructure is in a particular place
 - In case of outages, disasters, ...
 - Knowing what route your packets take physically
 - Understanding if traffic stays “local”
 - Optimising your peerings
 - Help avoiding “hairpinning”
 - Other research questions

- It's a prototype service we run, also integrated into RIPE Atlas: it shows up as a new tab for traceroute measurements



- Combining RIPE Atlas with OpenIPMap:
 - Select a set of probes in the observed country / region
 - Execute traceroutes in a mesh (probe-to-probe) to measure how packets flow
 - Map **all** the observed IPs to their locations (if known)
 - Check which paths stay within the country / region
- Visualise this:
 - On a map
 - Highlighting in-country and out-of country traffic
 - Highlighting IXP use



- If your ASN is not on the graph, apply for RIPE Atlas probe

- See <http://sg-pub.ripe.net/emile/ixp-country-jedi/FI-2015-05/ixpcountry/>
- By using this interactive tool you can...
 - ... select the path that is going out of country
 - talk to your upstream(s)
 - ... select the path that is not going via a local IXP
 - make a new peering agreement
- And if you see geolocation errors, then please contribute and fix them in OpenIPMap! :-)
 - <https://marmot.ripe.net/openipmap/>

Questions?

