

# Internet Roads of Caucasus

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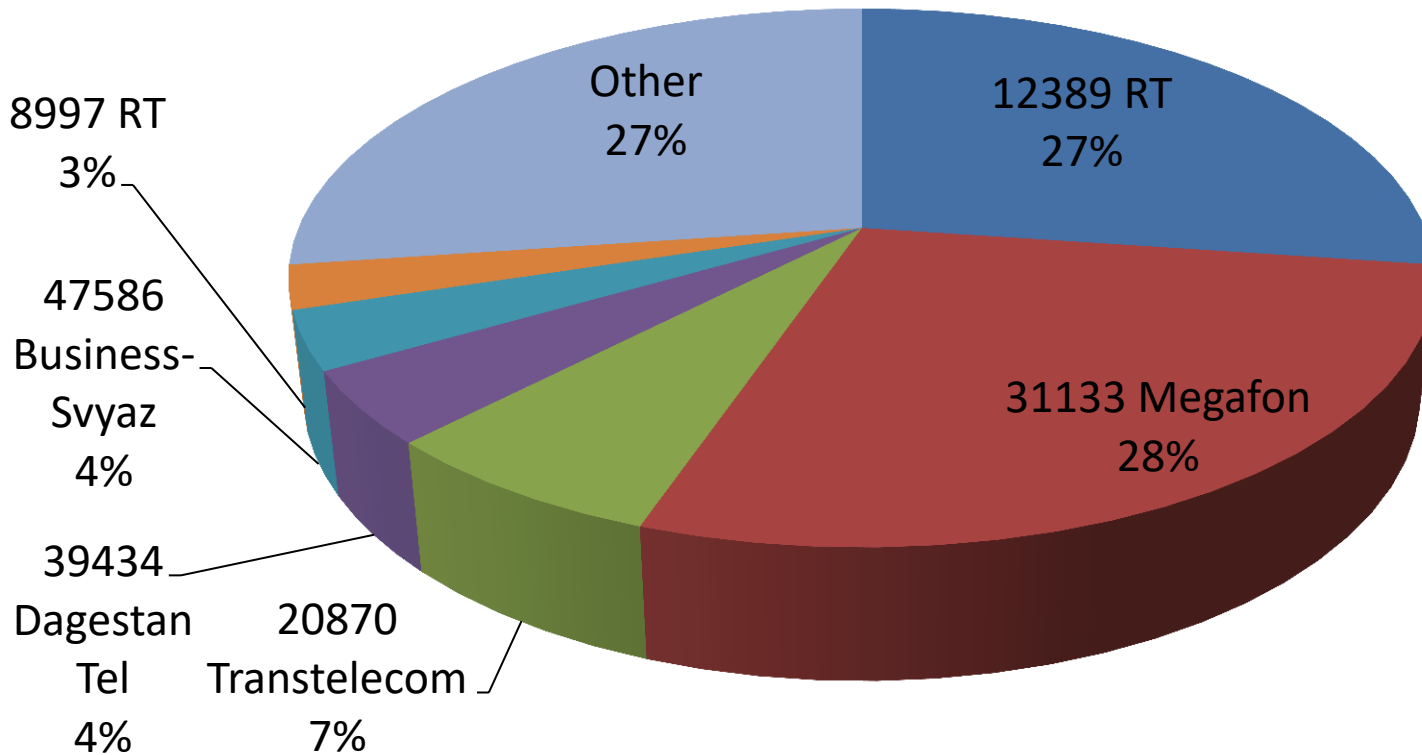
<aa@qrator.net>

# The Caucasus



# Glance from Outside: Russia

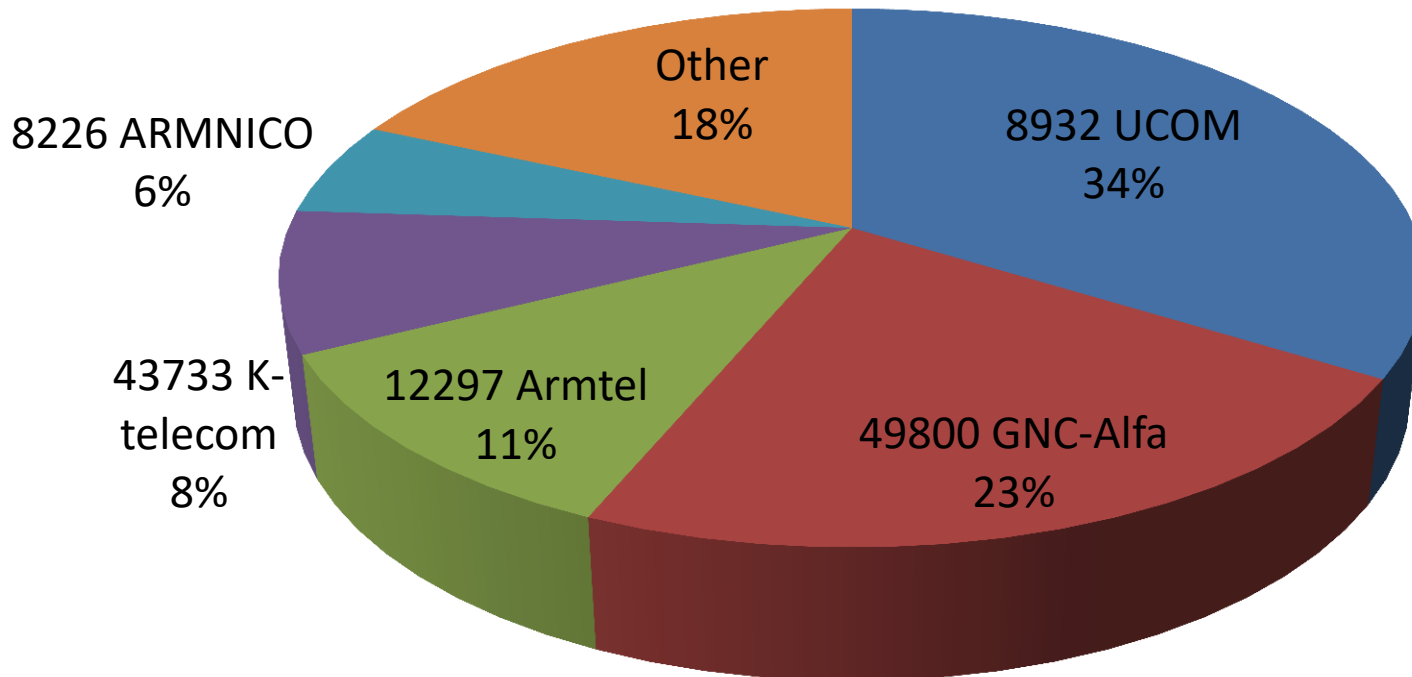
73 ASNs



TOP2: 55%

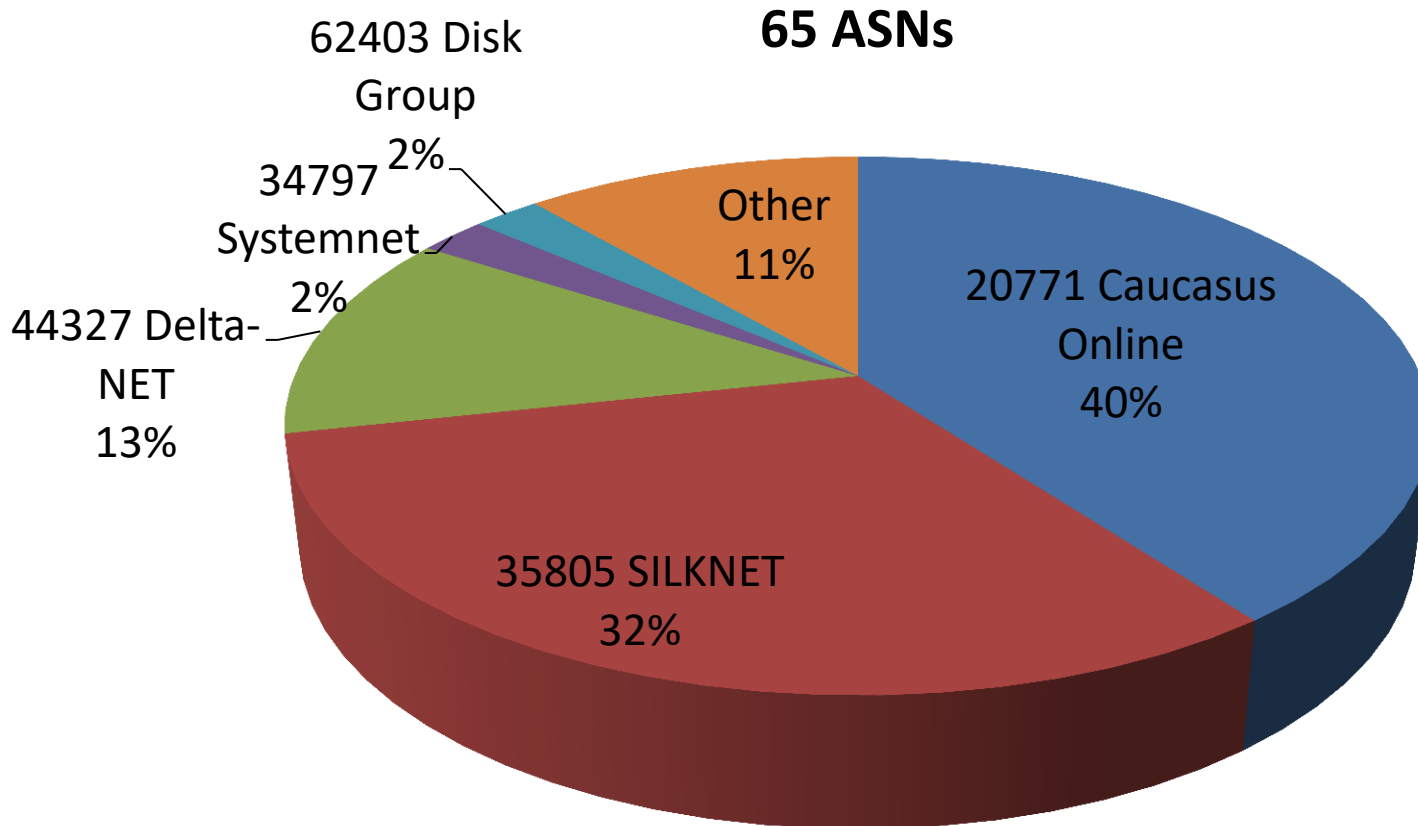
# Glance from Outside: Armenia

55 ASNs



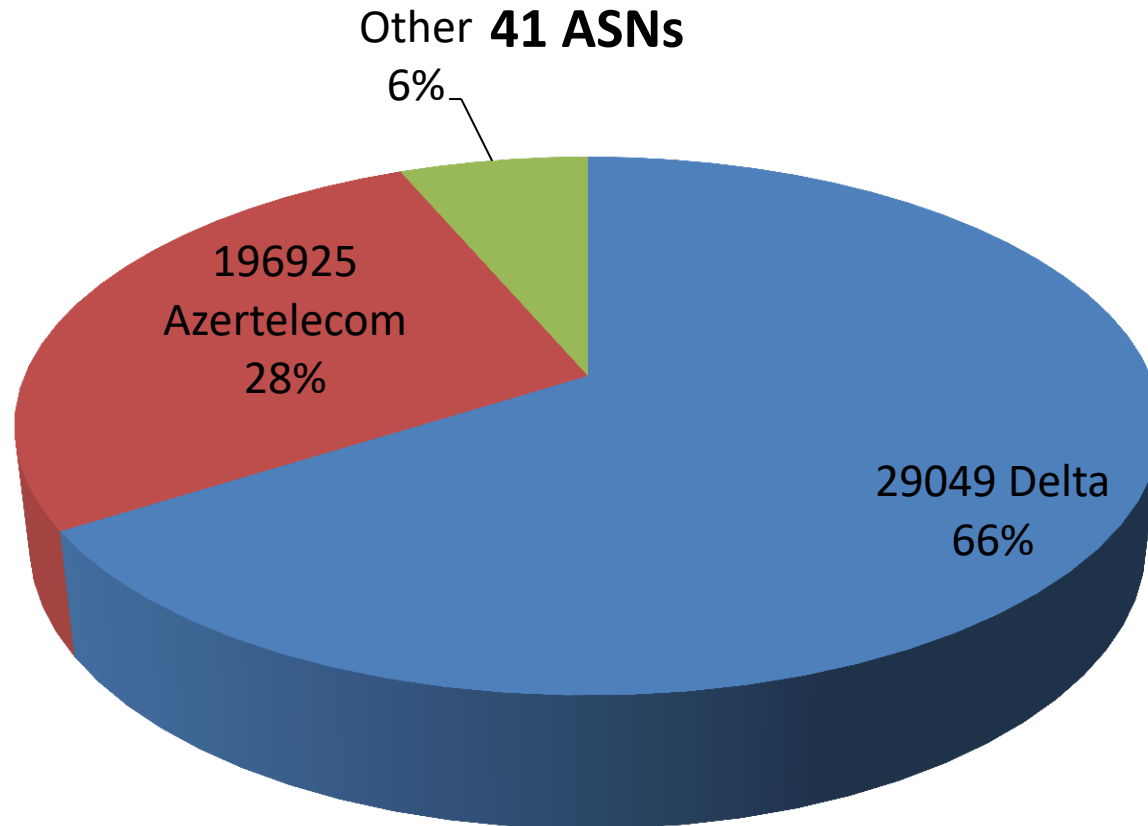
TOP2: 57%

# Glance from Outside: Georgia



TOP2: 72%

# Glance from Outside: Azerbaijan



TOP2: 94%

# Glance from Outside

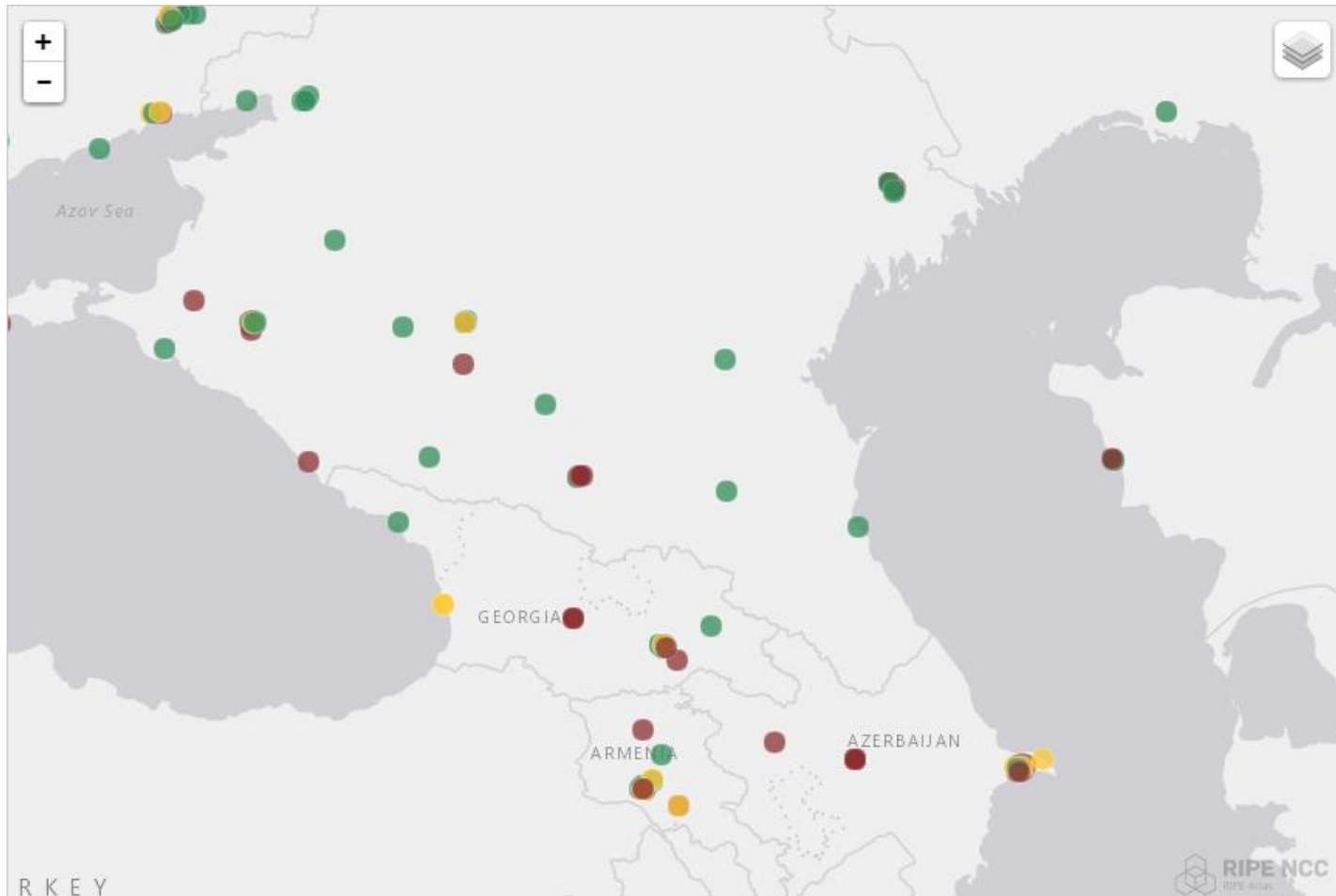
What we can do:

- Detection of major ASNs in region;
- Reliability of single ASN/region.

What we can't do:

- Study inner connectivity;
- Study delays.

# Will RIPE Atlas Save the Day?



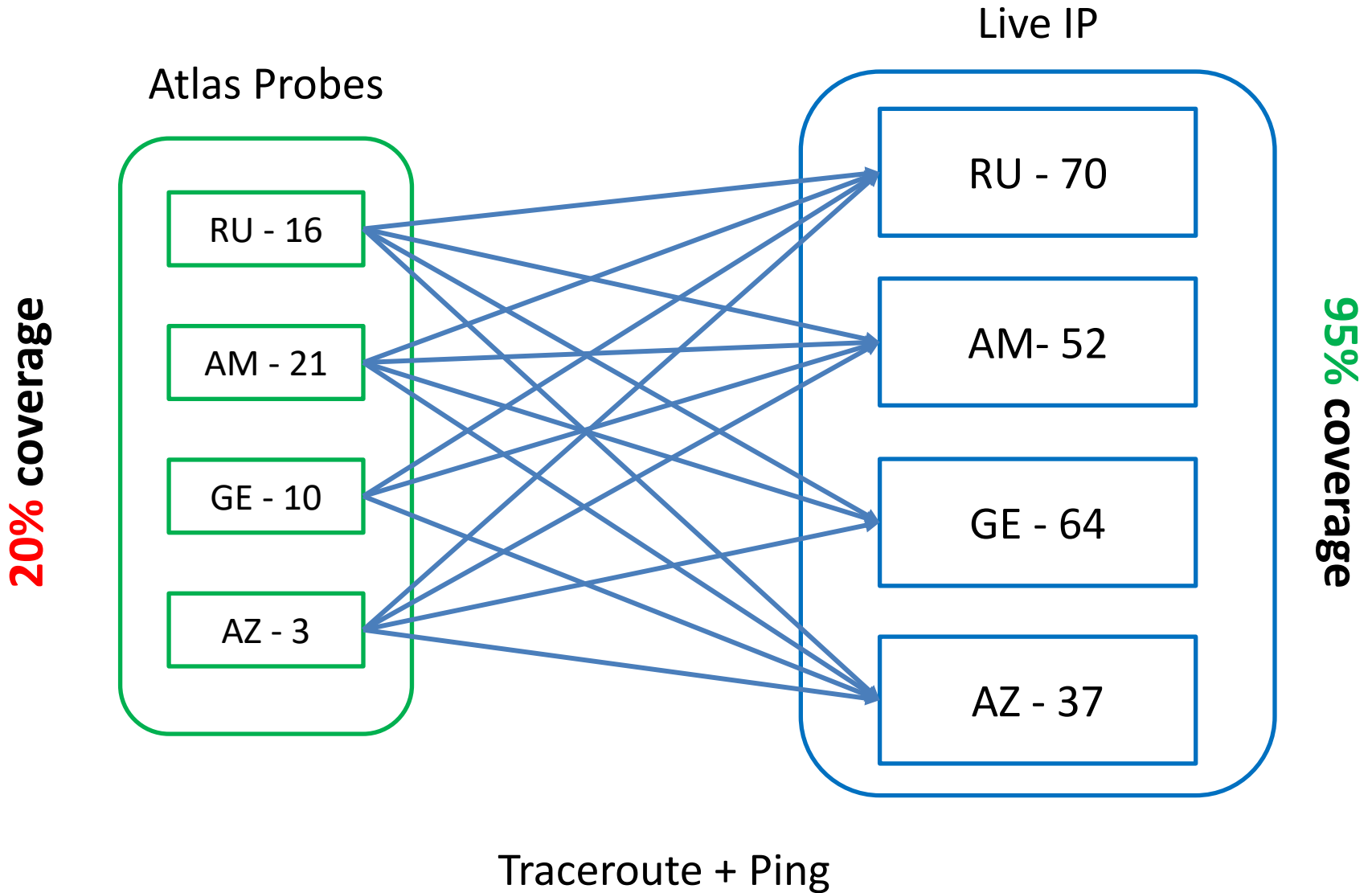


# Data Source

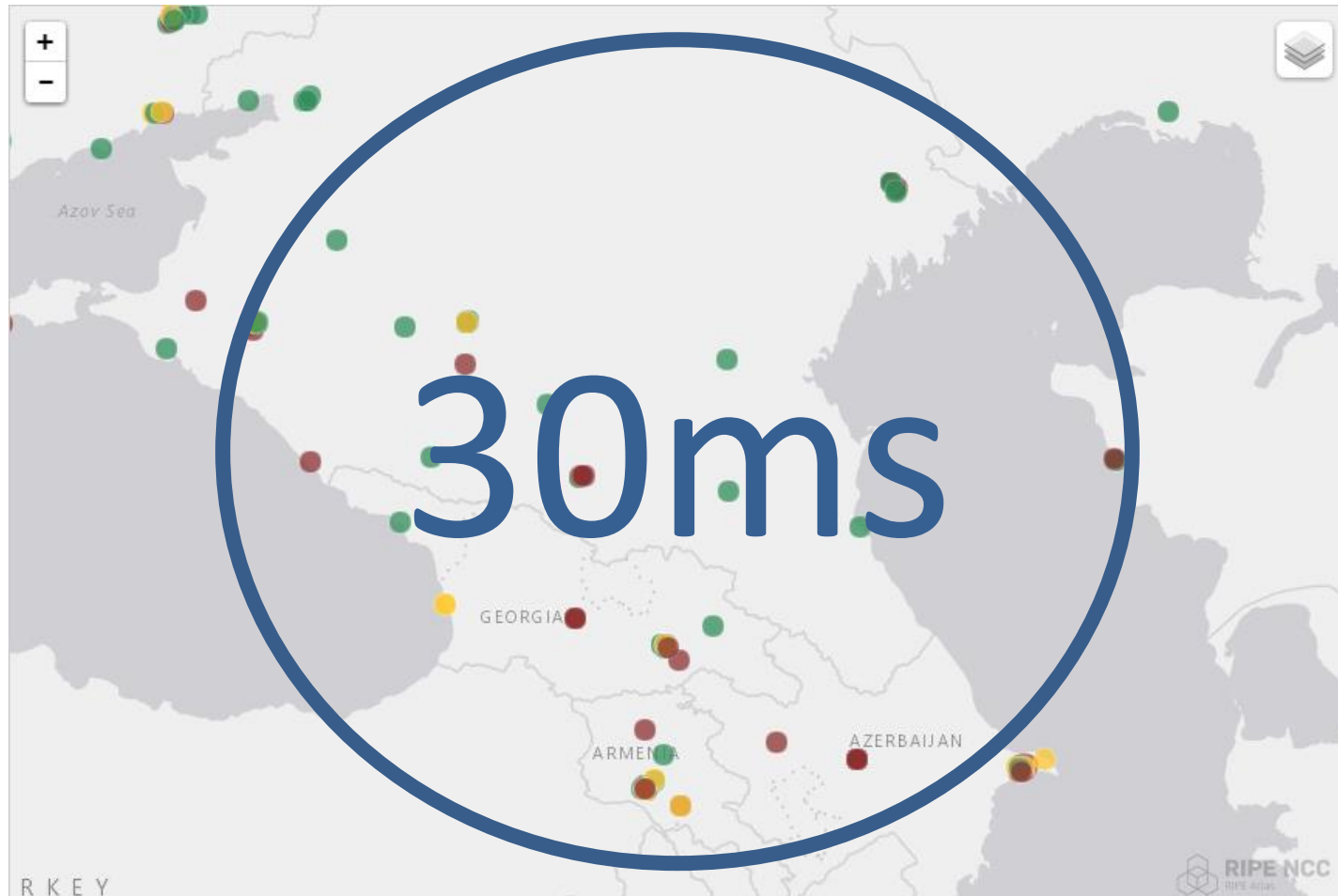
Country	No of ASNs	No of BGP Sessions	No of Atlas Probes
Russia	<b>73</b>	<b>3</b>	<b>16</b>
Armenia	<b>55</b>	<b>0</b>	<b>21</b>
Georgia	<b>65</b>	<b>0</b>	<b>10</b>
Azerbaijan	<b>41</b>	<b>0</b>	<b>3</b>

No money – no honey?

# A Measurement



# Expectation Latency



# Expectation vs Reality

Latency	Russia	Armenia	Georgia	Azerbaijan
Russia	50ms	110ms	107ms	76ms
Armenia	113ms	23ms	110ms	121ms
Georgia	146ms	119ms	16ms	118ms
Azerbaijan	90ms	133ms	112ms	2ms

Slightly differs from expectations...

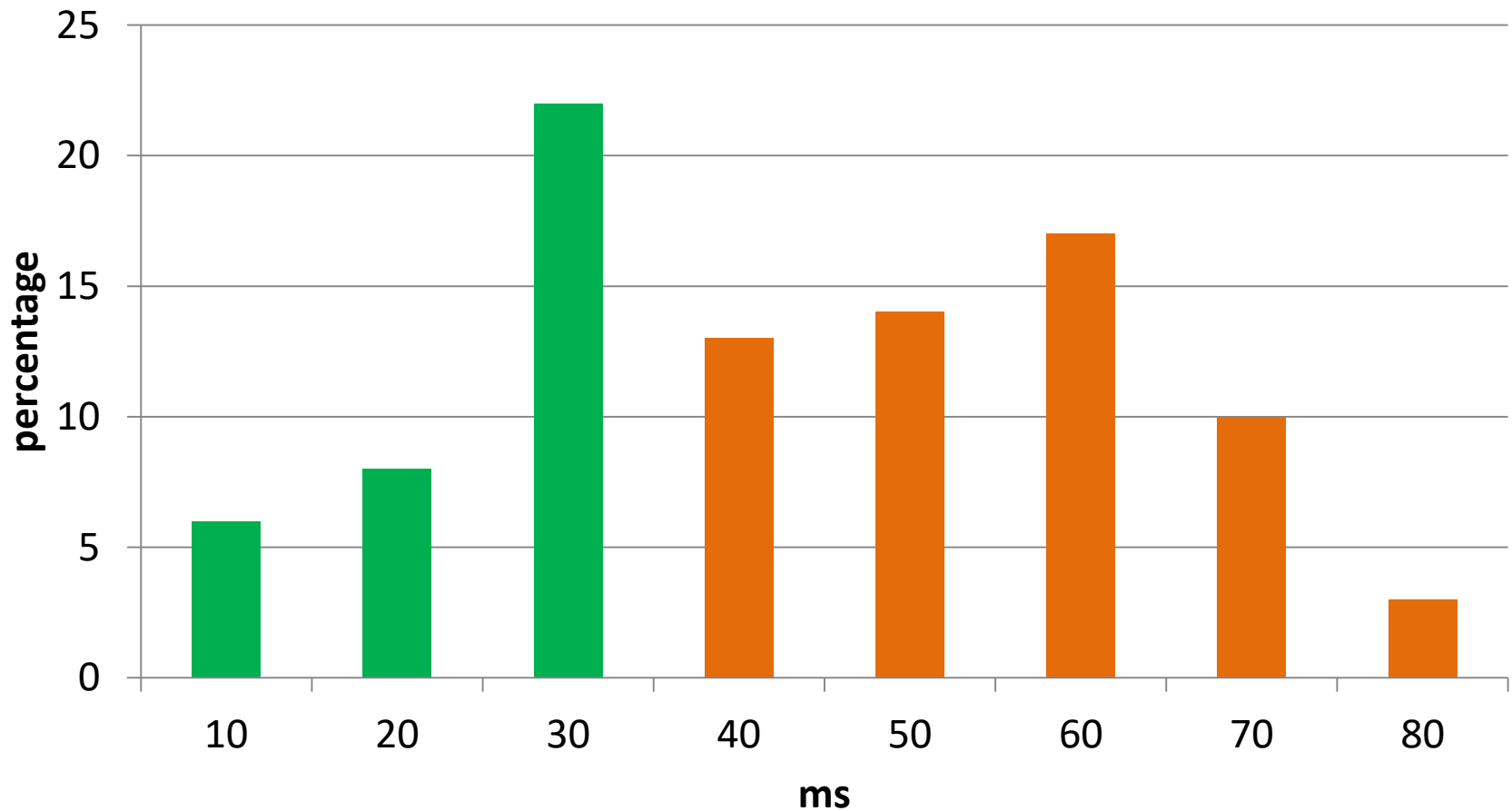
How it happened?

# Expectation vs Reality

<b>Latency</b>	Russia	Armenia	Georgia	Azerbaijan
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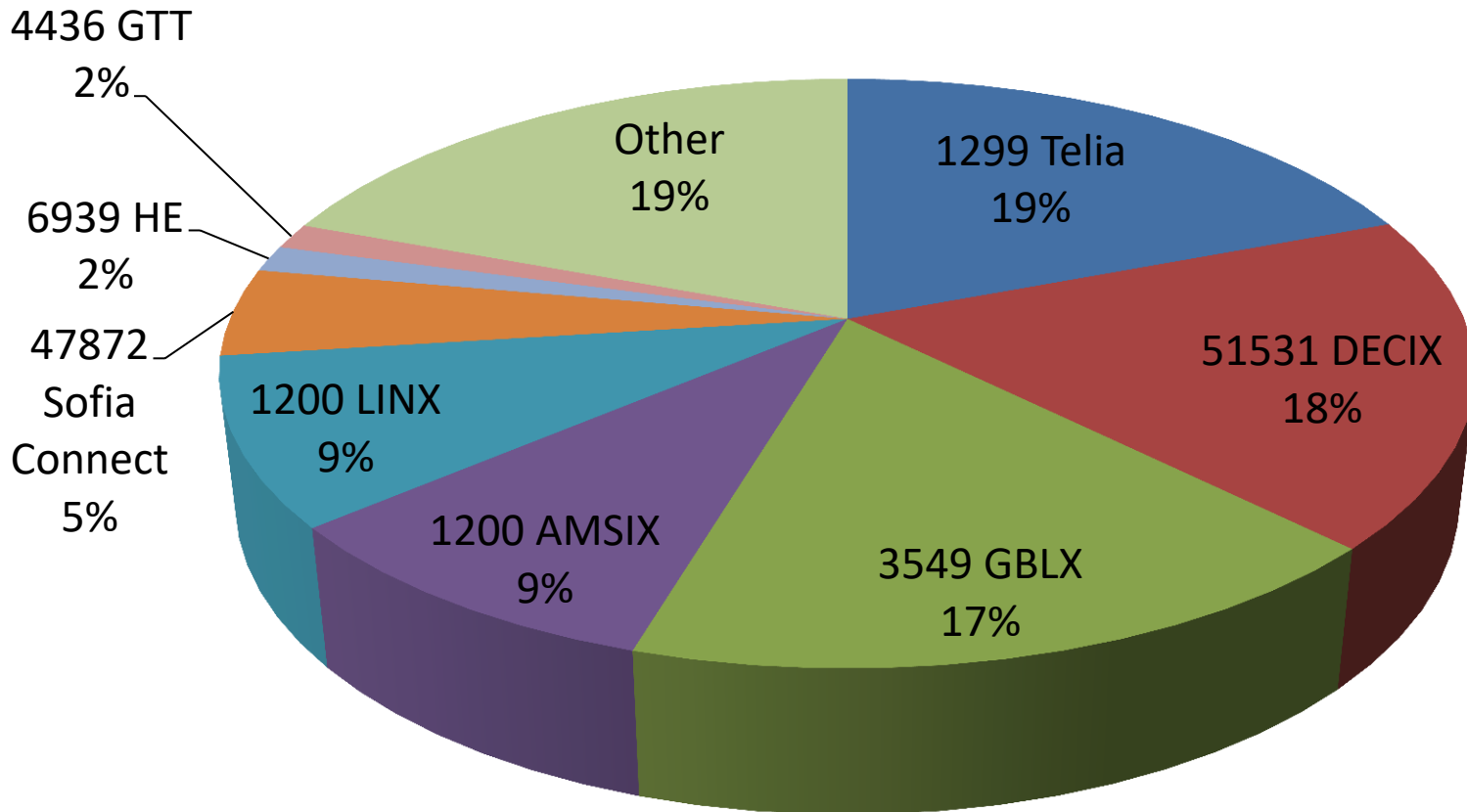
<b>Localization</b>	Russia	Armenia	Georgia	Azerbaijan
Russia	97%	58%	32%	89%
Armenia	45%	85%	16%	10%
Georgia	16%	15%	76%	2%
Azerbaijan	51%	0%	8%	90%

# Russia: 50ms with 97% localization



Lot of traffic goes through central Russia

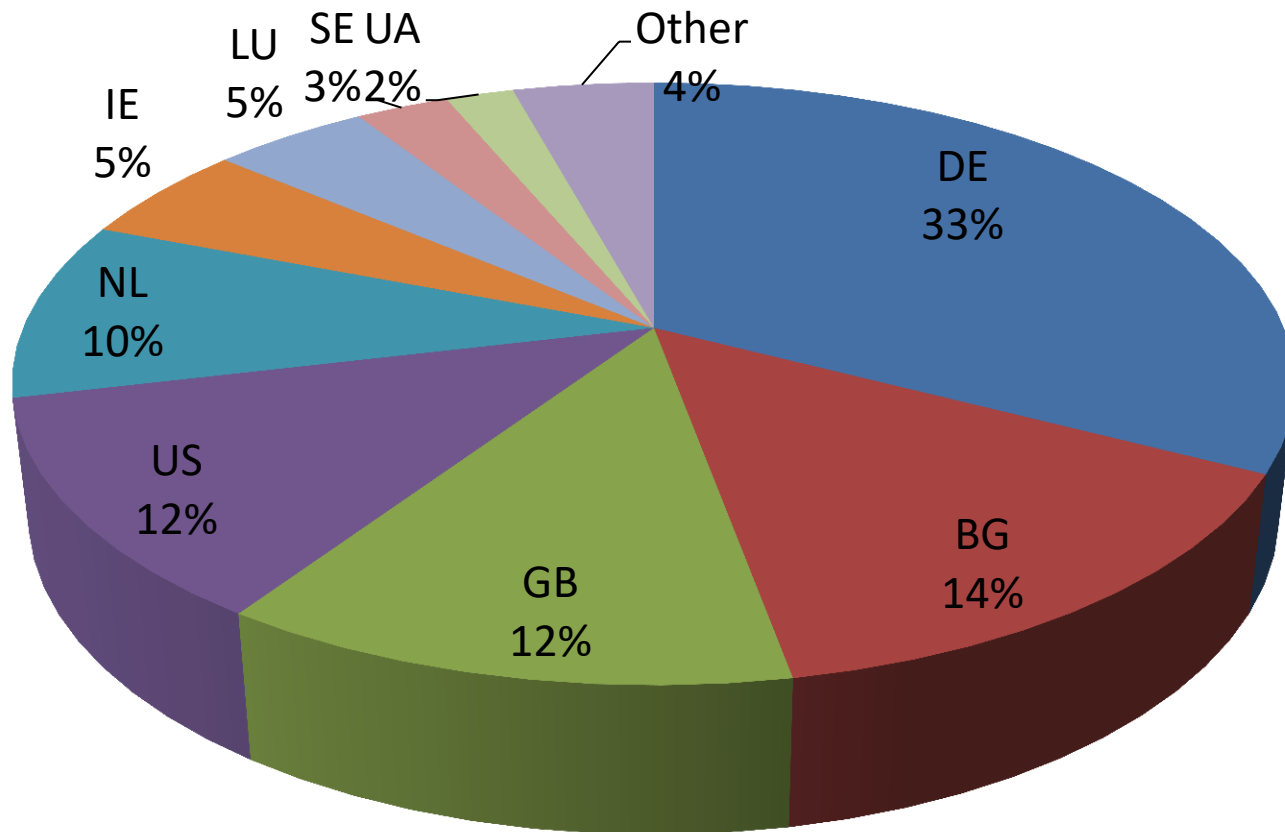
# 'Foreign' Networks: ASNs



36% – EU IXes

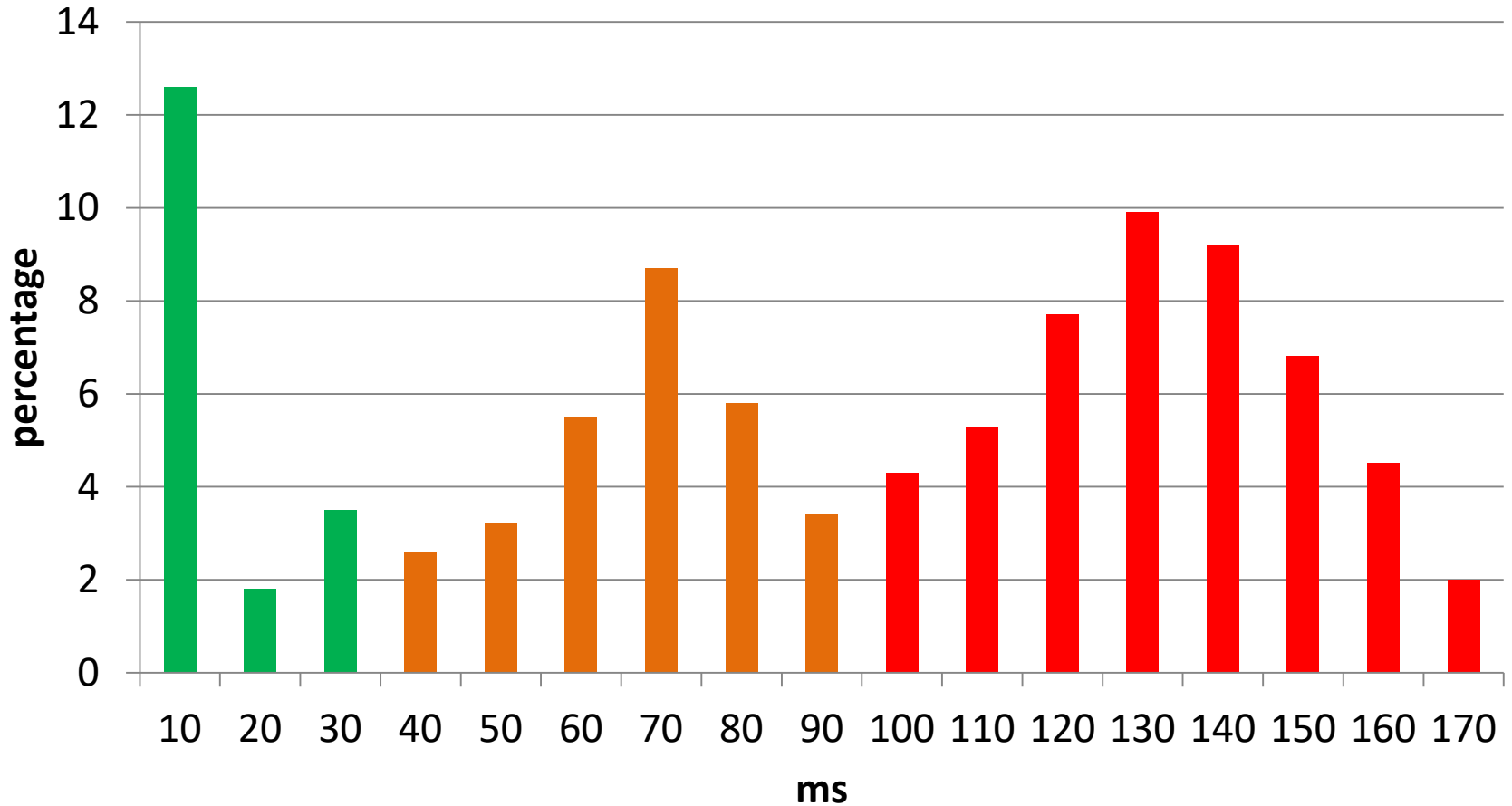
>50% – EU Upstreams

# 'Foreign' Networks: countries





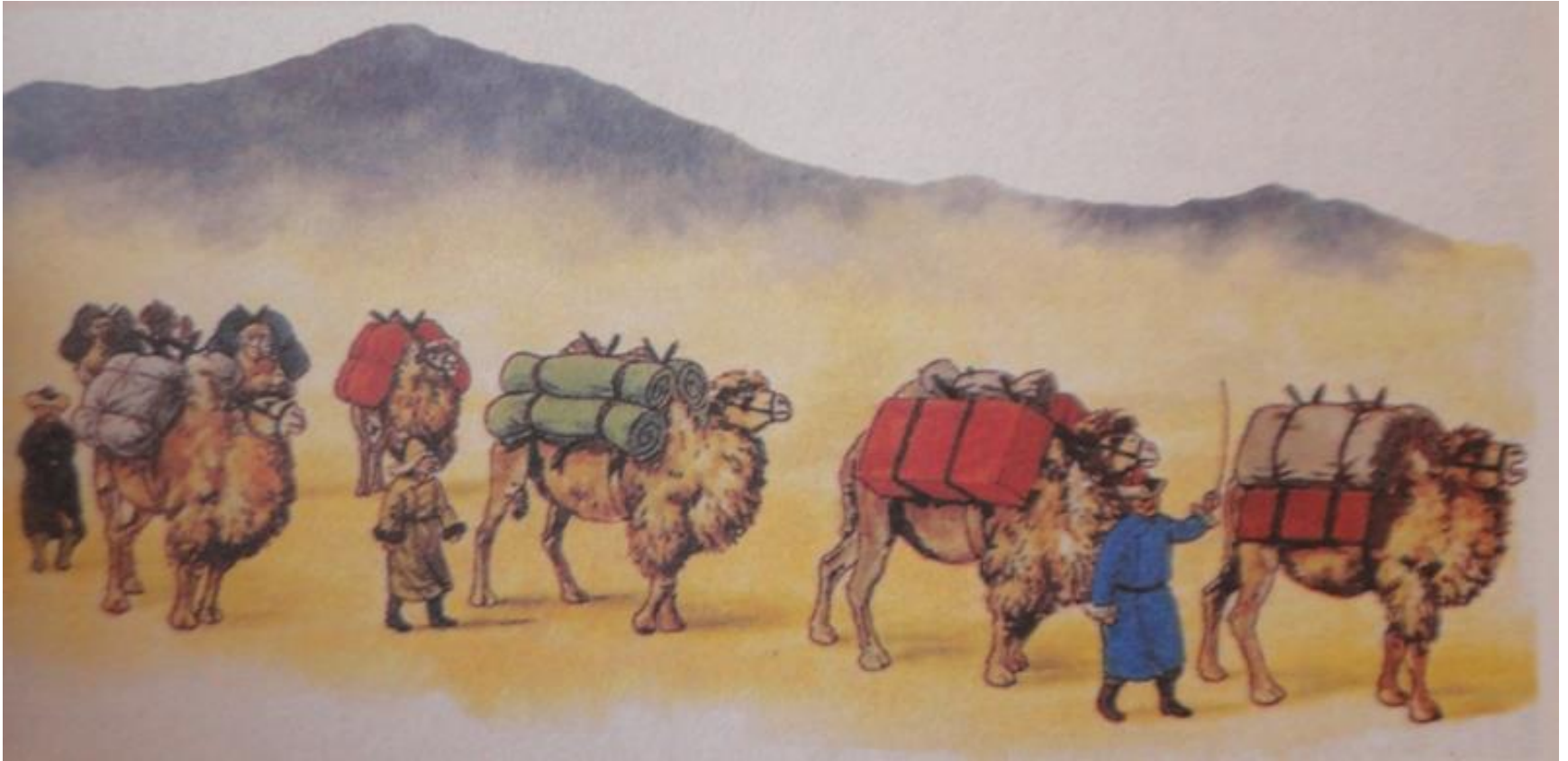
# ENOG region



AVG Latency: **91ms**

Traffic Localization: **56%**

Tomorrows roads depend on your  
today decisions!



... and

- Use RIPE Atlas!
- [Establish](#) BGP Multihop sessions!