Zesplot in five minutes

An attempt to visualise IPv6 address space

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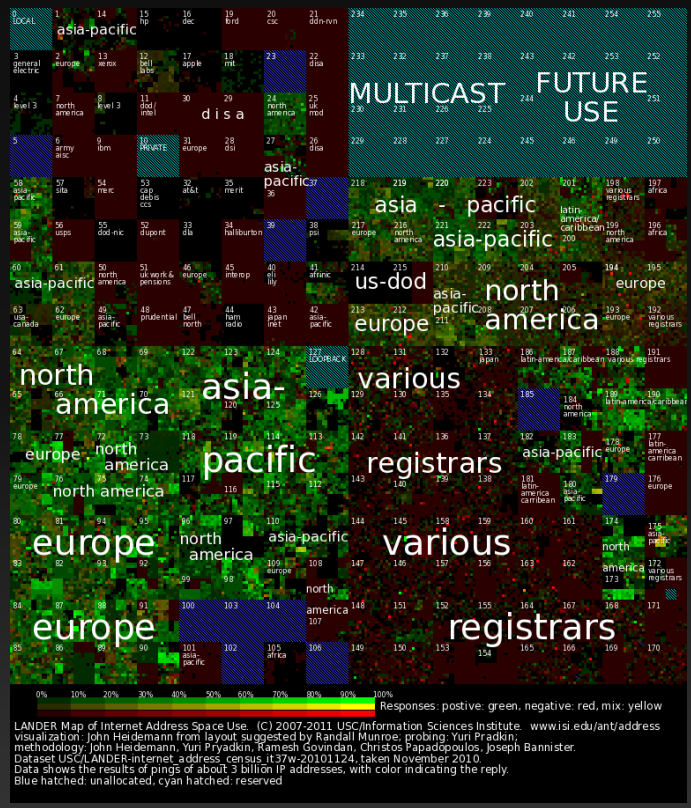
Visualising IPv6 address space ?

IPv4

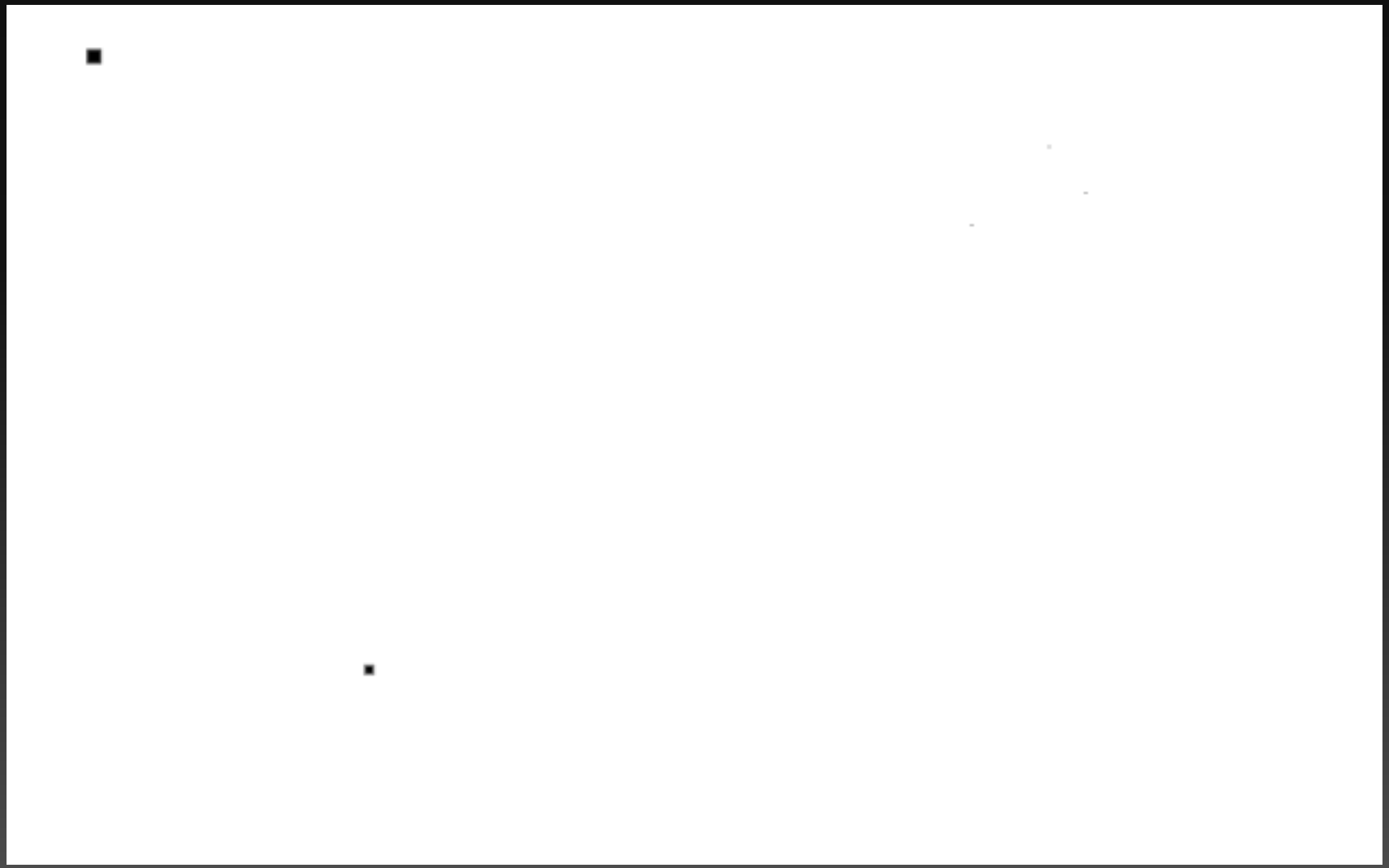
xkcd.com/195



Heidemann et al, ISI

Visualising IPv6 address space ?

IPv6



enter zesplot

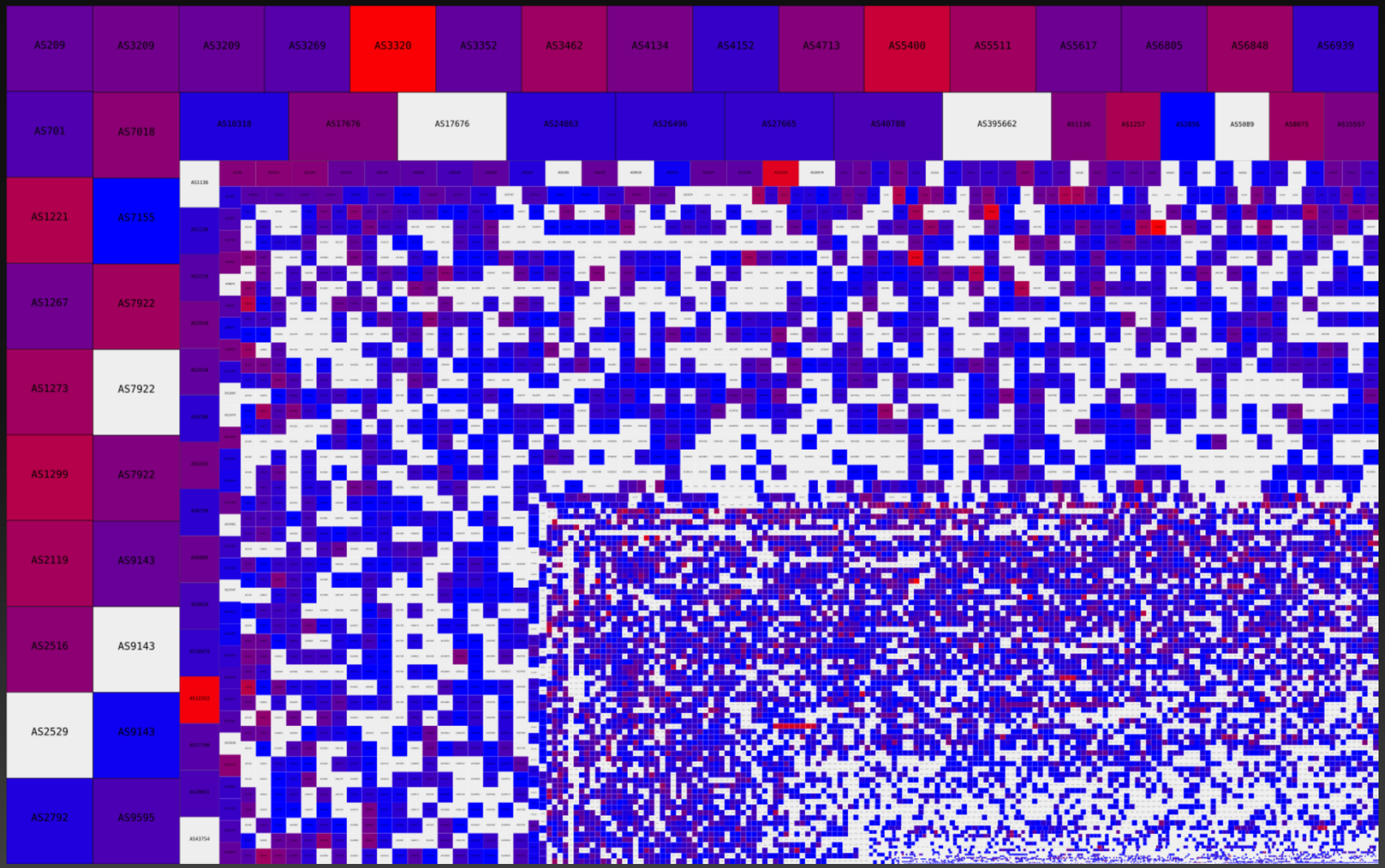
('zes' means 'six' in Dutch)

- Based on *squarified treemaps*[1]
- Space-filling, using relative sizing and colouring
- Only plots prefixes and addresses you feed it

zesplot aims to be a powerful tool
aiding in **spotting outliers and patterns**
in IPv6 measurement data.

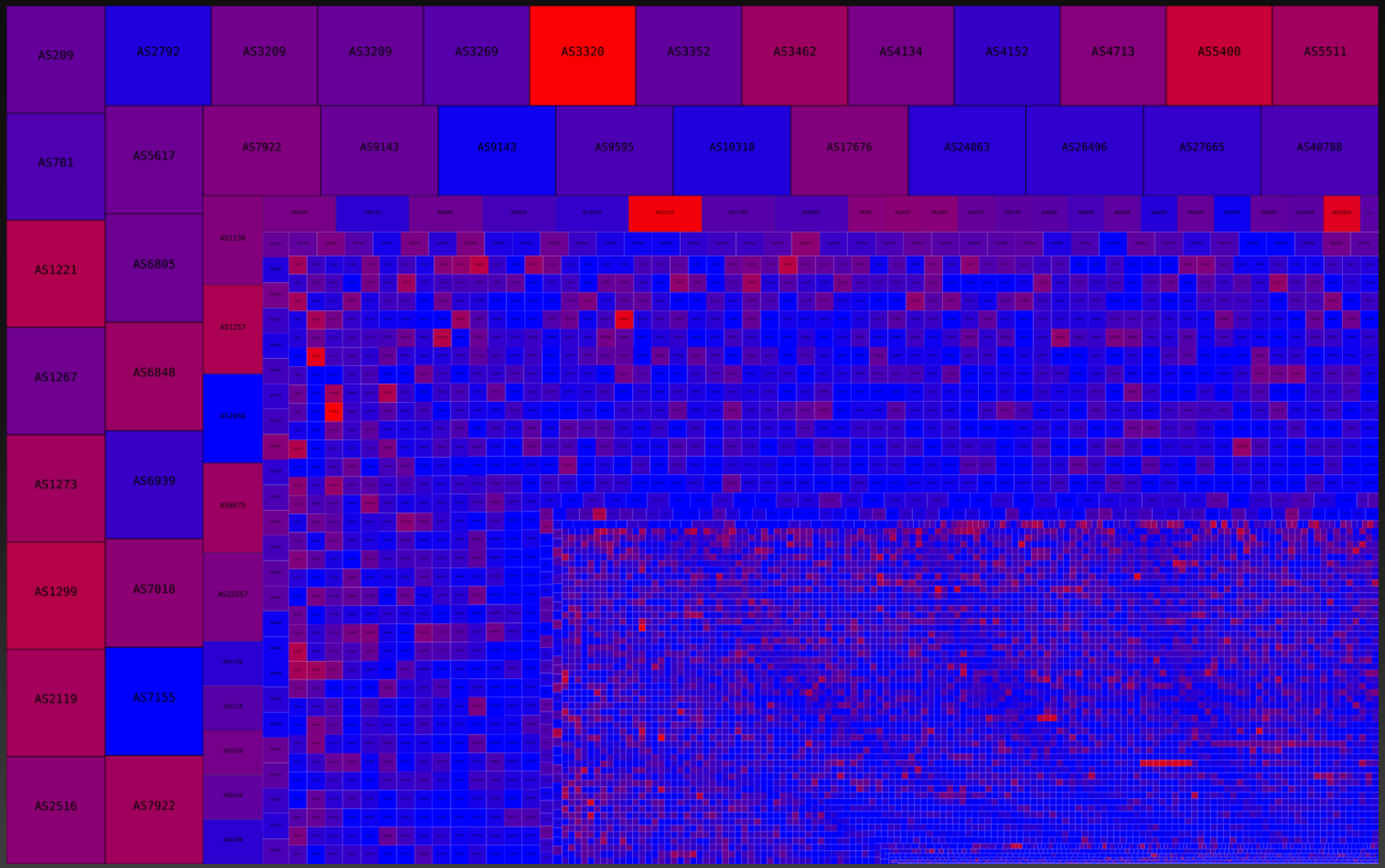
[1] https://www.win.tue.nl/~vanwijk/stm.pdf

ex. #1: TU München hitlists



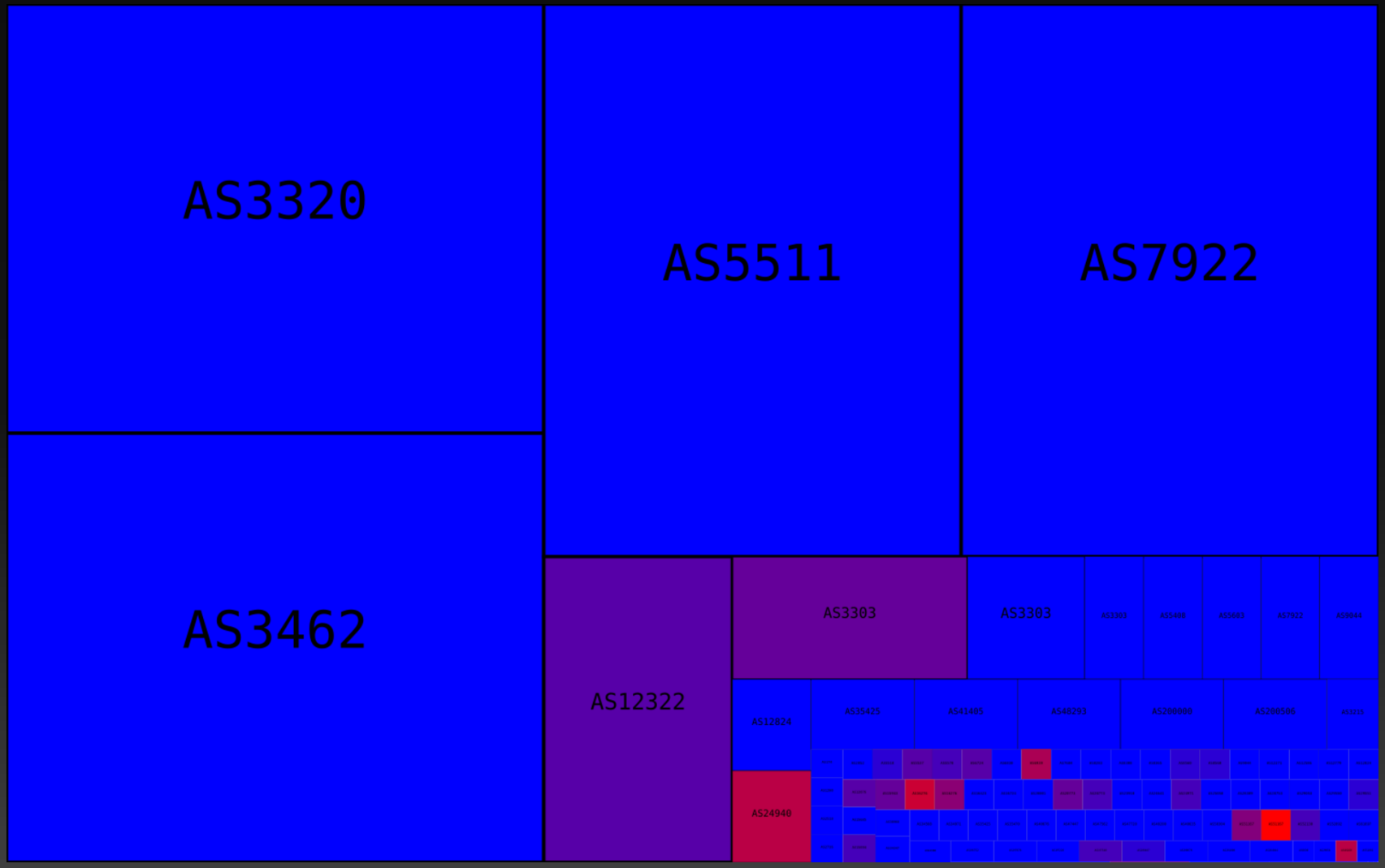
all announced prefixes (routeviews.org)

ex. #1b: TU München hitlists



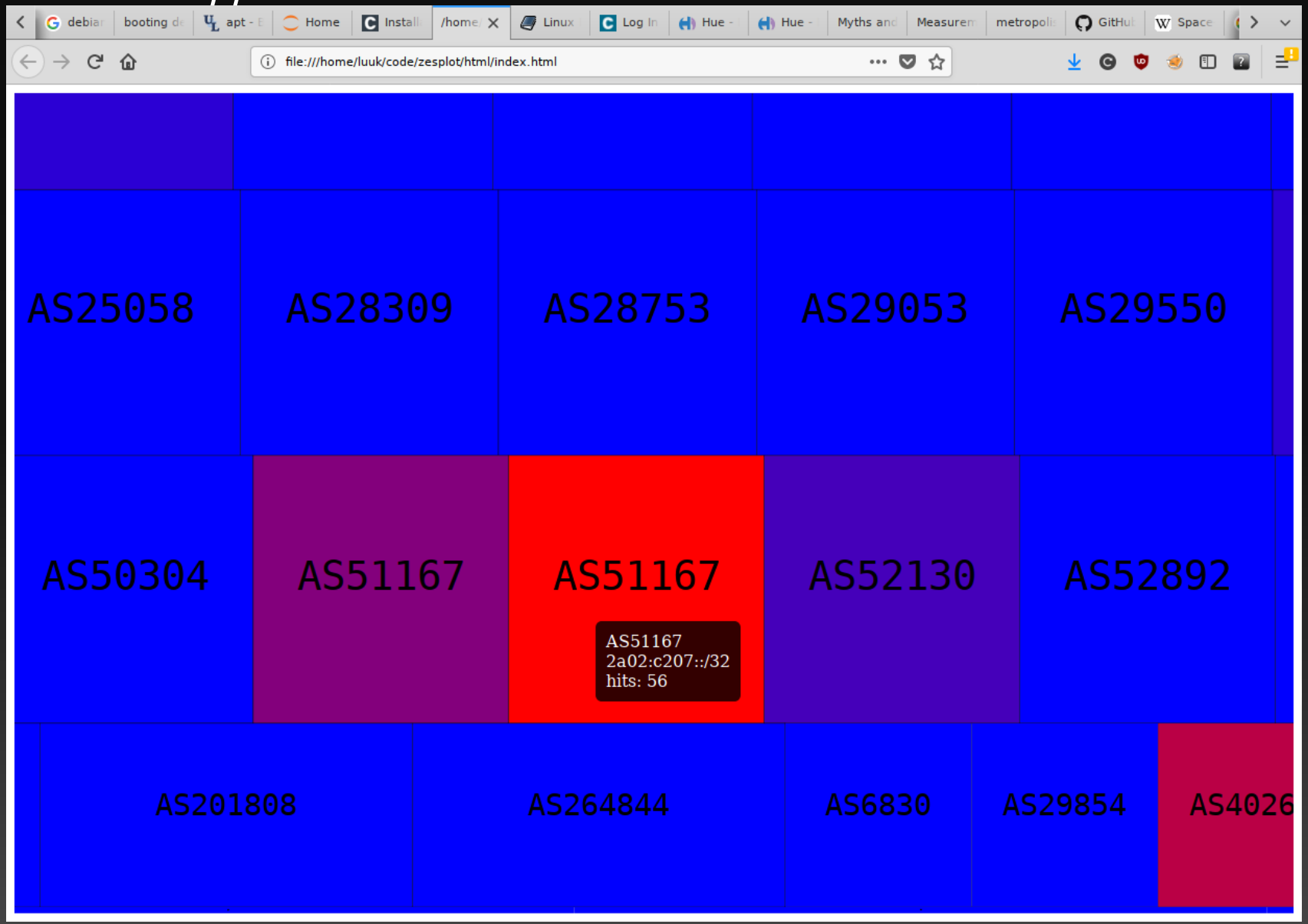
Filtered: only showing prefixes with ‘hits’

ex. #2: memcached on IPv6



(filtered; 361 memcached instances)

ex. #2b: memcached on IPv6



(in browser) tooltip showing ASN and specific prefix

overview

features:

- vectorized output (SVG)
- filter ‘empty’ prefixes
- plot individual addresses within prefix
- zoom in/out, tooltips

implementation:

- MIT license
- written in Rust
- fast:
  45k prefixes, 4M addresses
  in $\sim$5s on my desktop PC

feedback please!

- try it out yourself:
  `https://github.com/DRiKE/zesplot`
- is this useful? why (not)?
- like to see certain features?
- ideas for use cases?

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