

**the shine has come
off the internet**

Brian Trammell (for Christian Huitema)

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[intro]

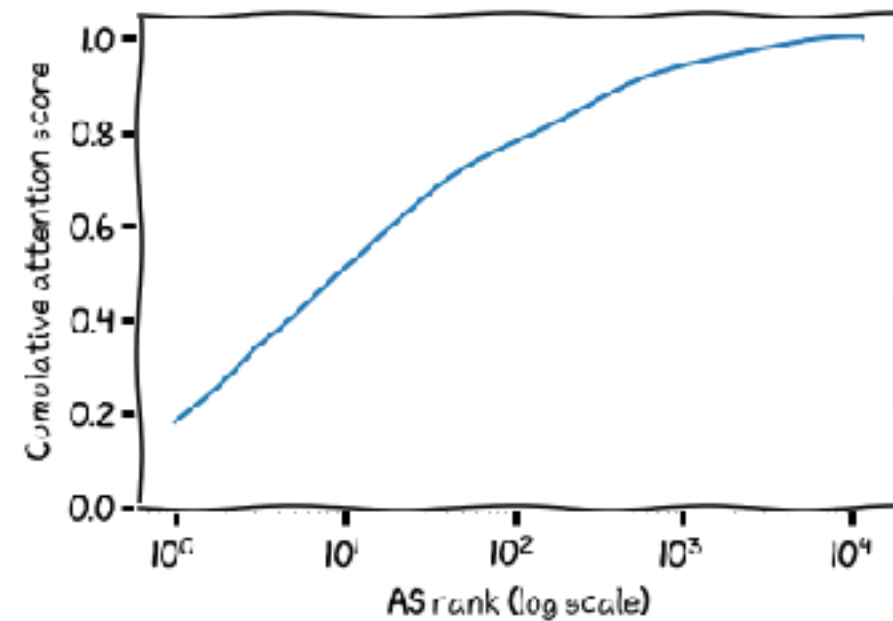
- I presume we're all optimists about the Internet.
- I presume most everyone else used to be, too.
- The past couple of years have done some damage to these presumptions.
- Is there anything for us to do about it?

[why]

- The main cause of the change in public perception is the growing asymmetry between powerful commercial and government actors and the general public.
- Certain aspects of the Internet architecture serve to exacerbate this asymmetry...
- ...though forces driving it are external to the Internet.
- → a two-pronged (architecture + political) approach

[fix the architecture]

- This asymmetry is largely a consequence of consolidation.
- Unsolved problems in the architecture exacerbate this consolidation, as these problems are easily fixed through centralization and scale; e.g.:
 - DDoS, our answer to which is "be large and ride it out"
 - Search, which we don't know how to do efficiently without centralization of the corpus being searched.
- Focusing IETF technical effort on these problems could help.
 - "Slice quenching™" anyone?



[leave politics to the politicians]

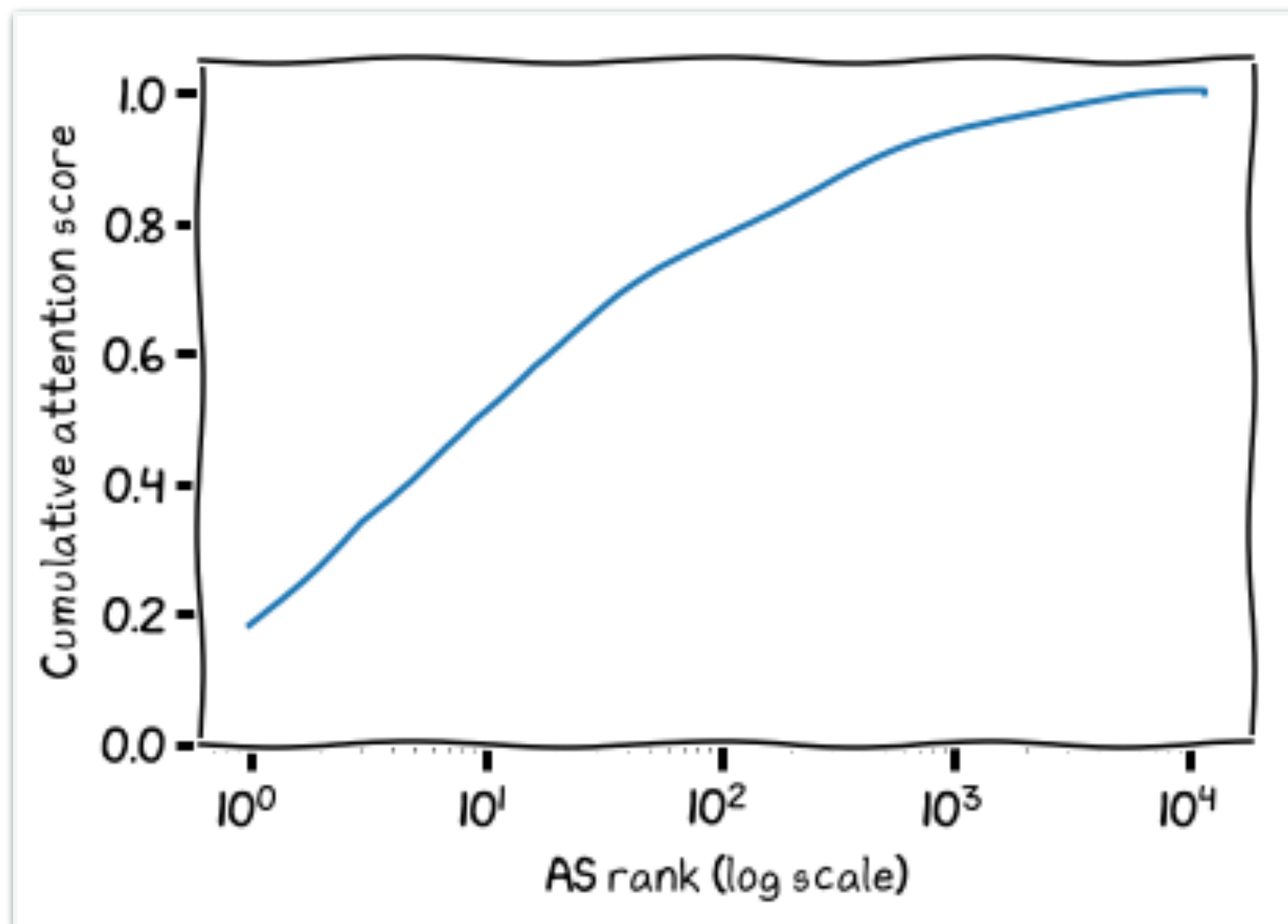
- Asymmetry affects the Internet users in many ways. Large platforms learn a lot about users, and use that knowledge to drive personalized content and advertisement. Instead of flowing directly, communication between users is now often mediated through these platforms, with consequences such as filter bubbles.
- We-the-IAB can't fix this: the drivers are non-technical.
- In our capacity as a technical advisory body to the Internet Society, we can engage with them (including ongoing efforts, e.g. Building Trust in the Internet initiative).

[discuss]

[consolidation index]

[consolidation index]

- Assume a Zipf distribution of attention to website of rank n , assign "attention" to AS serving each site, rank ASs.



[consolidation index]

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- 52.5% of Web attention flows to ten entities:

[consolidation index]

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- 52.5% of Web attention flows to ten entities:
 - 15169 (Google)
 - 13335 (Cloudflare)
 - 16509, 14618 (Amazon)
 - 37963 (Alibaba)
 - 54113 (Fastly)
 - 32934 (Facebook)
 - 23724 (China Telecom)
 - 4808 (China Unicom)
 - 14907 (Wikimedia)
 - 16276 (OVH)