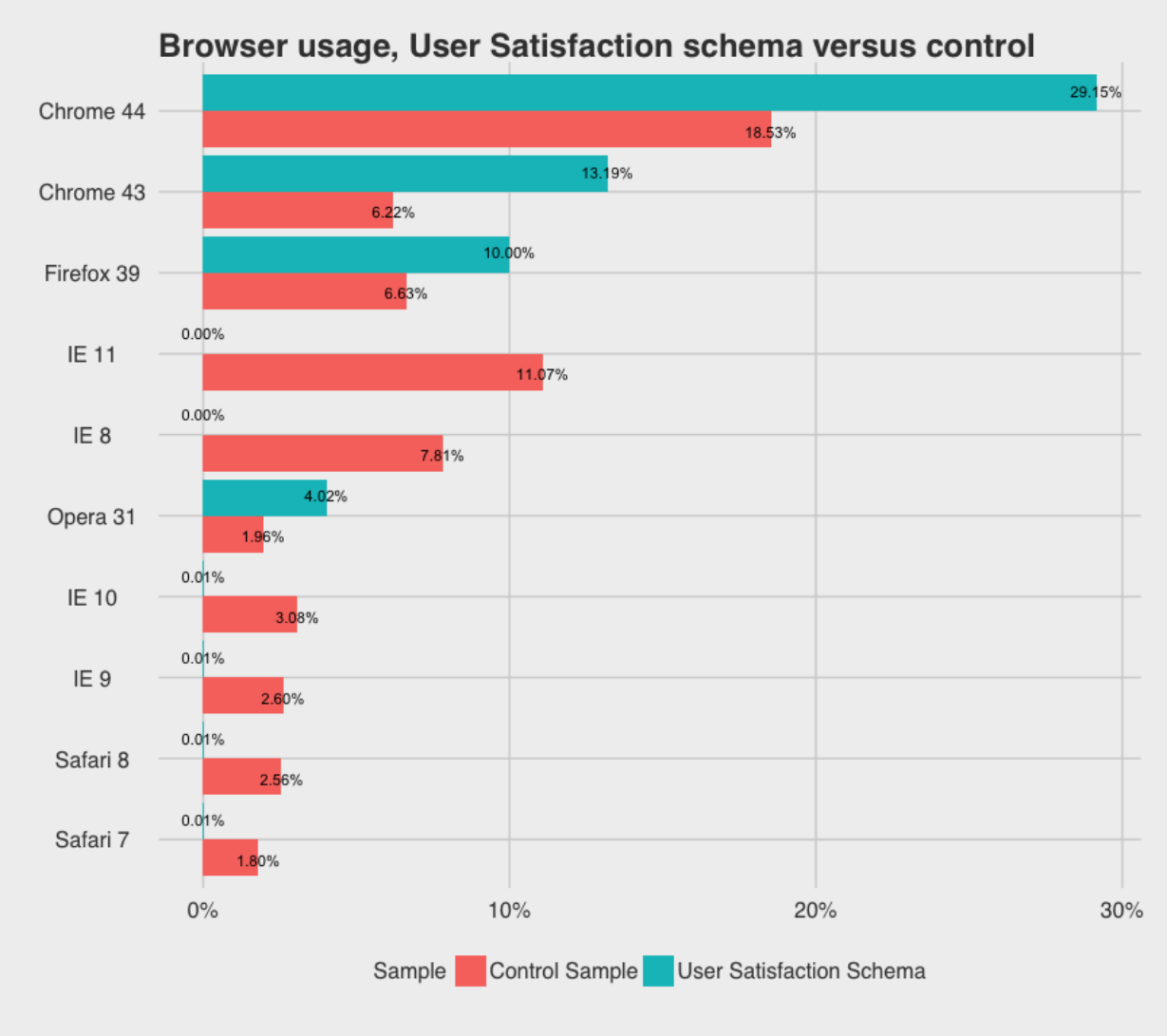
USER SATISFACTION: PAGE VISIT TIMES

Analysis Team

September 18, 2015

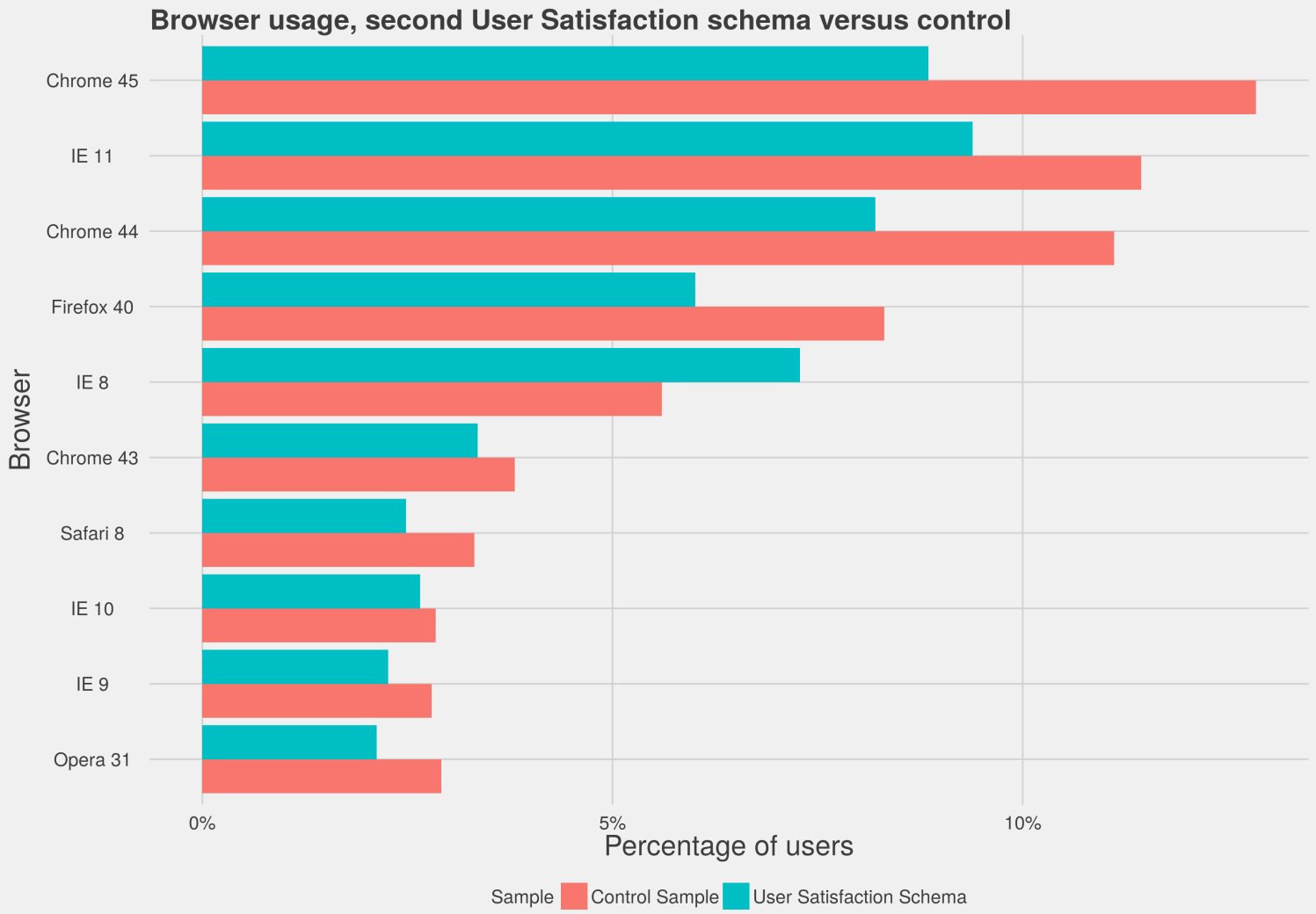
Wikimedia Foundation / Engineering and Product / Discovery

Initial schema



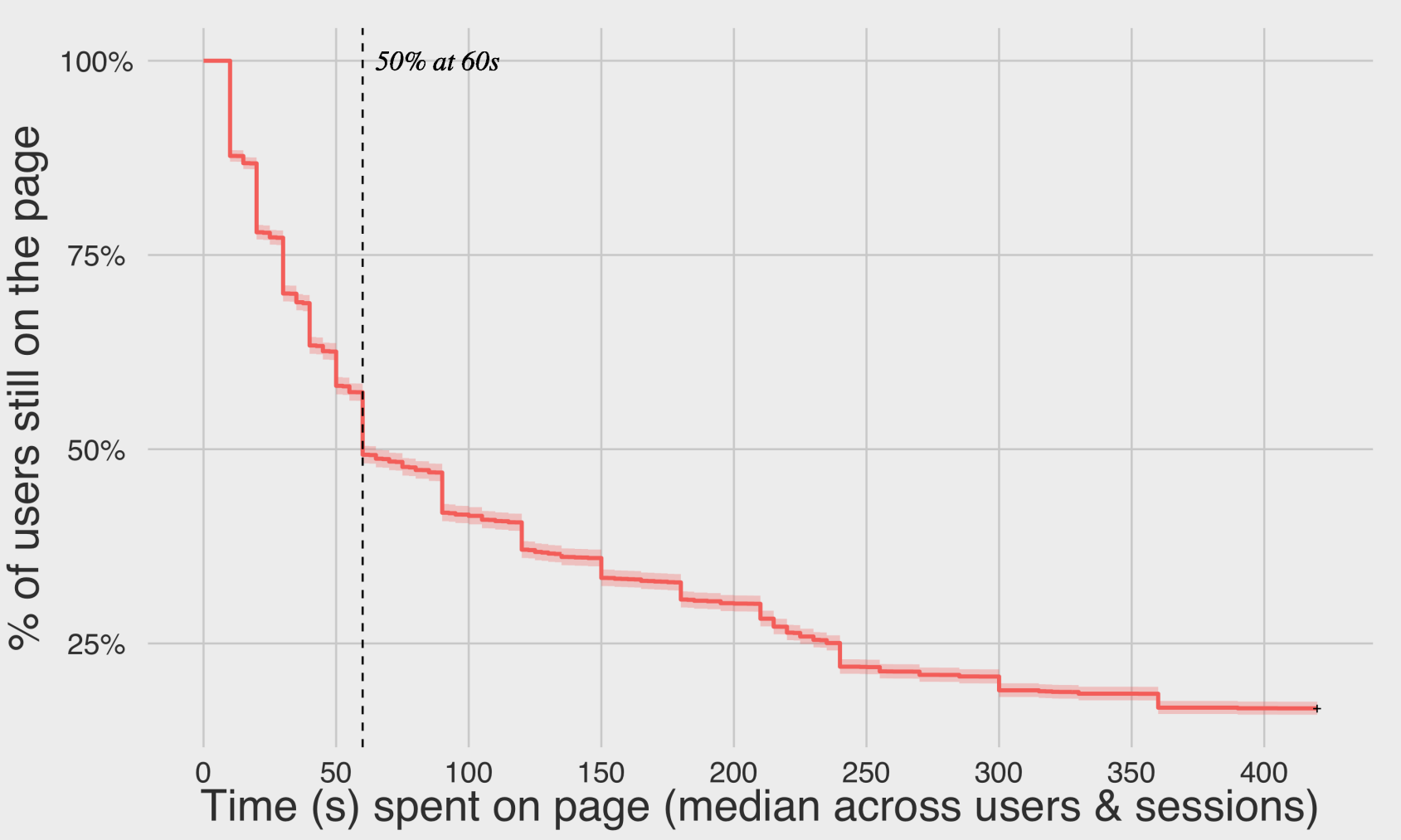
Strict JavaScript requirements in **v1** biased sampling.

Revised schema

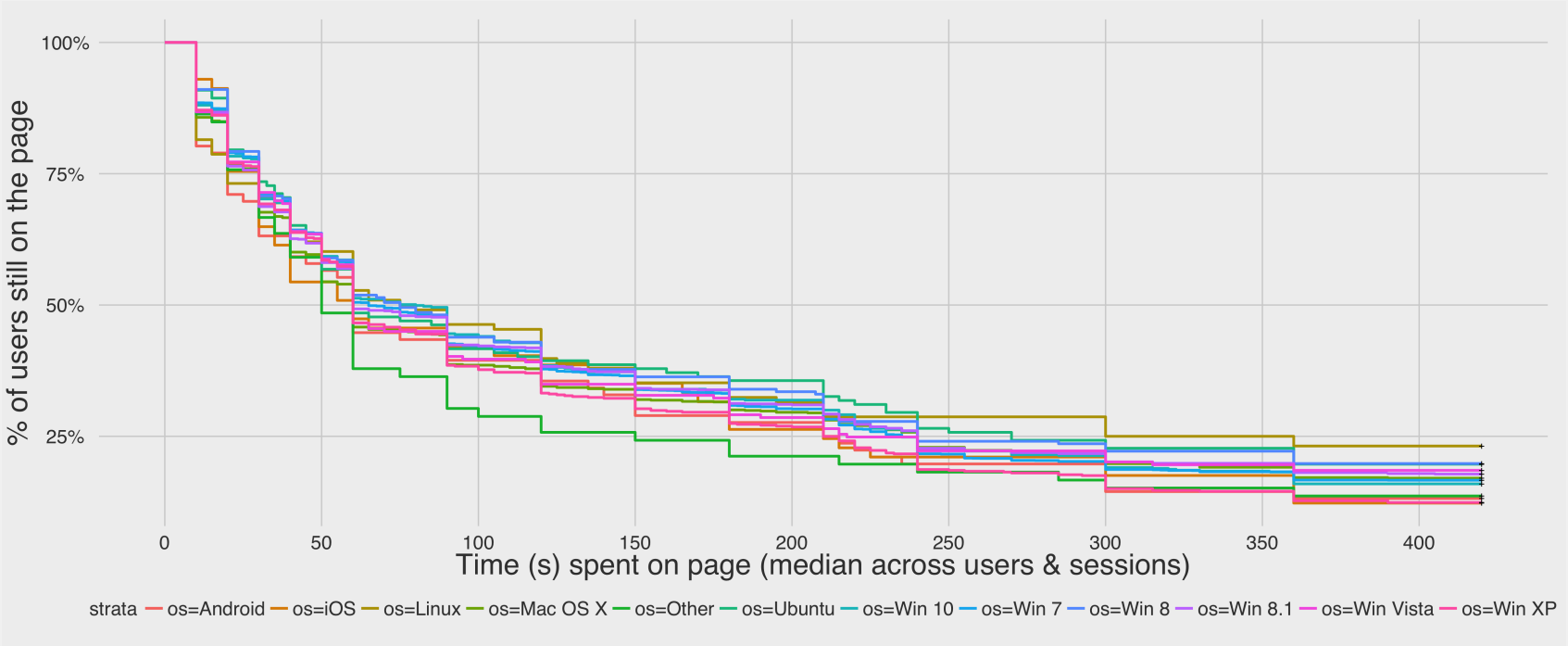


Logged nearly 300,000 events from 10,211 sessions with **v2**.

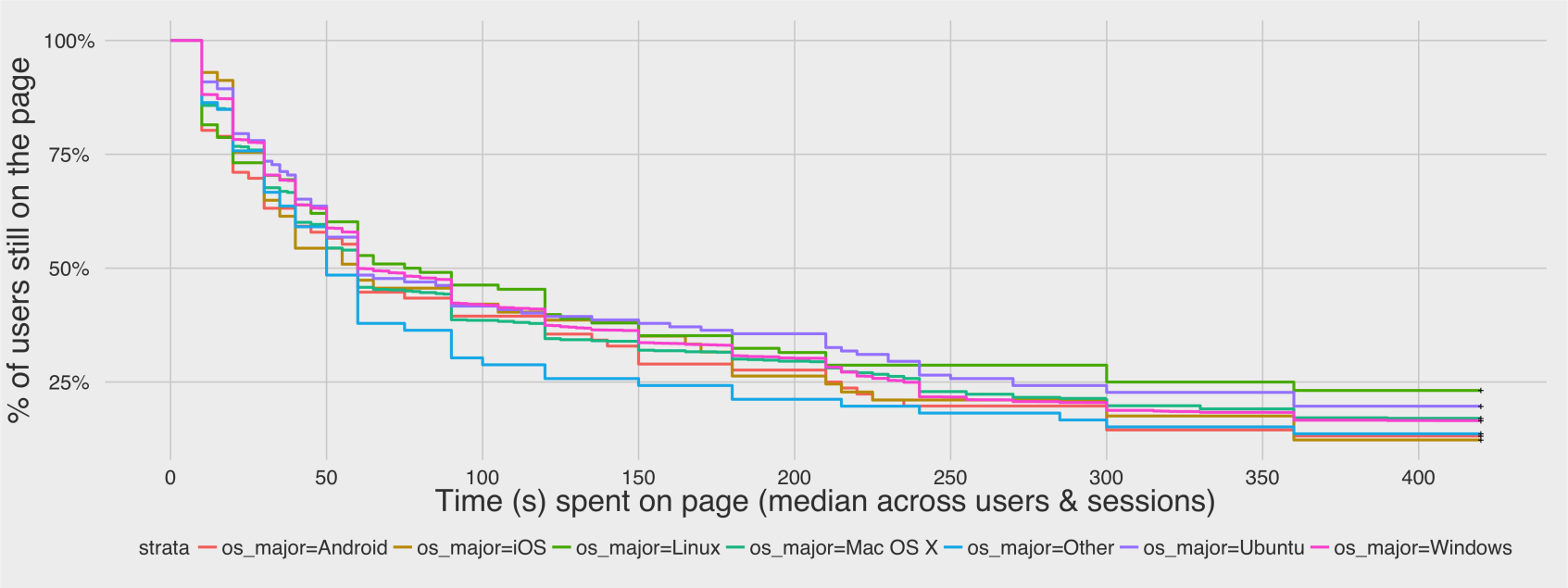
Results



The first quarter of users closed the page within the first 25s, and after a minute, we have lost 1/2 of our users.

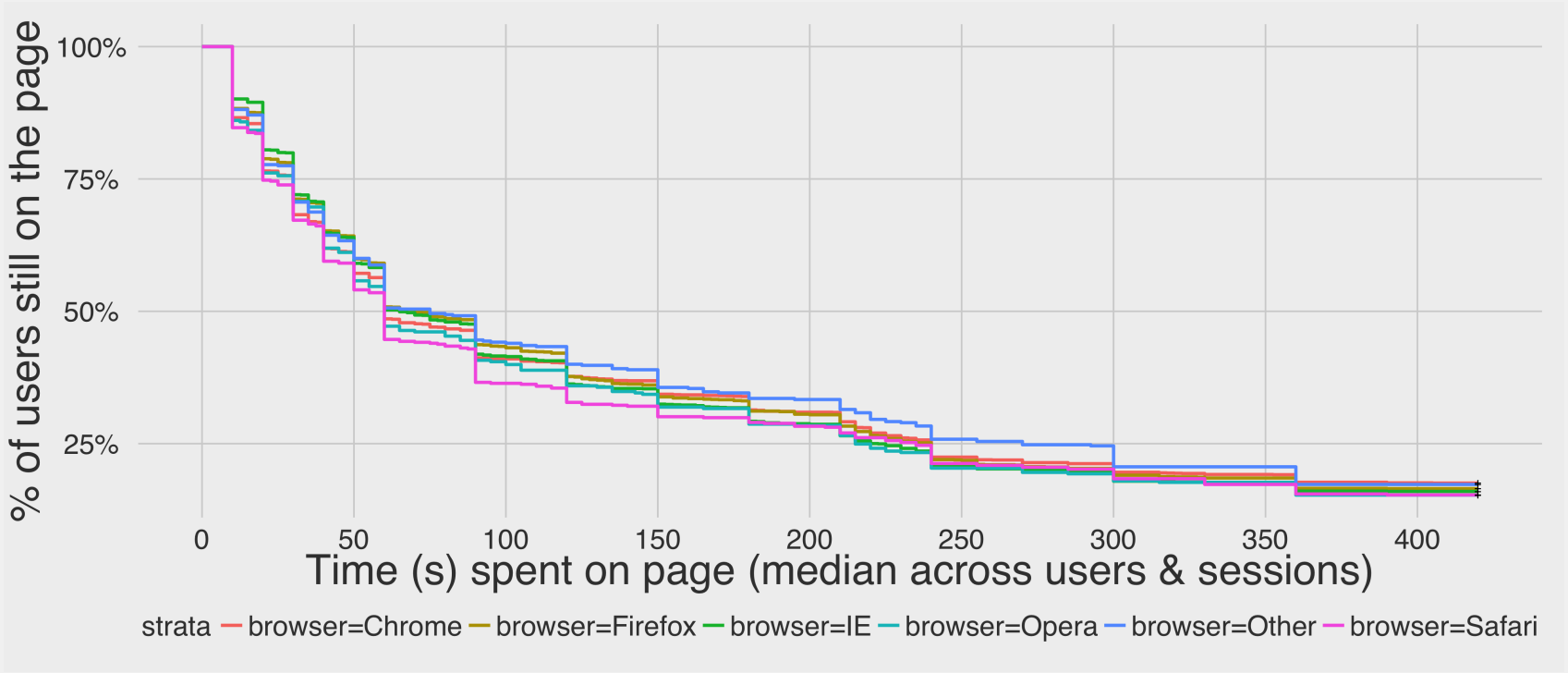


A greater fraction of Linux users kept the pages open for at least 420s than users on any other OS.

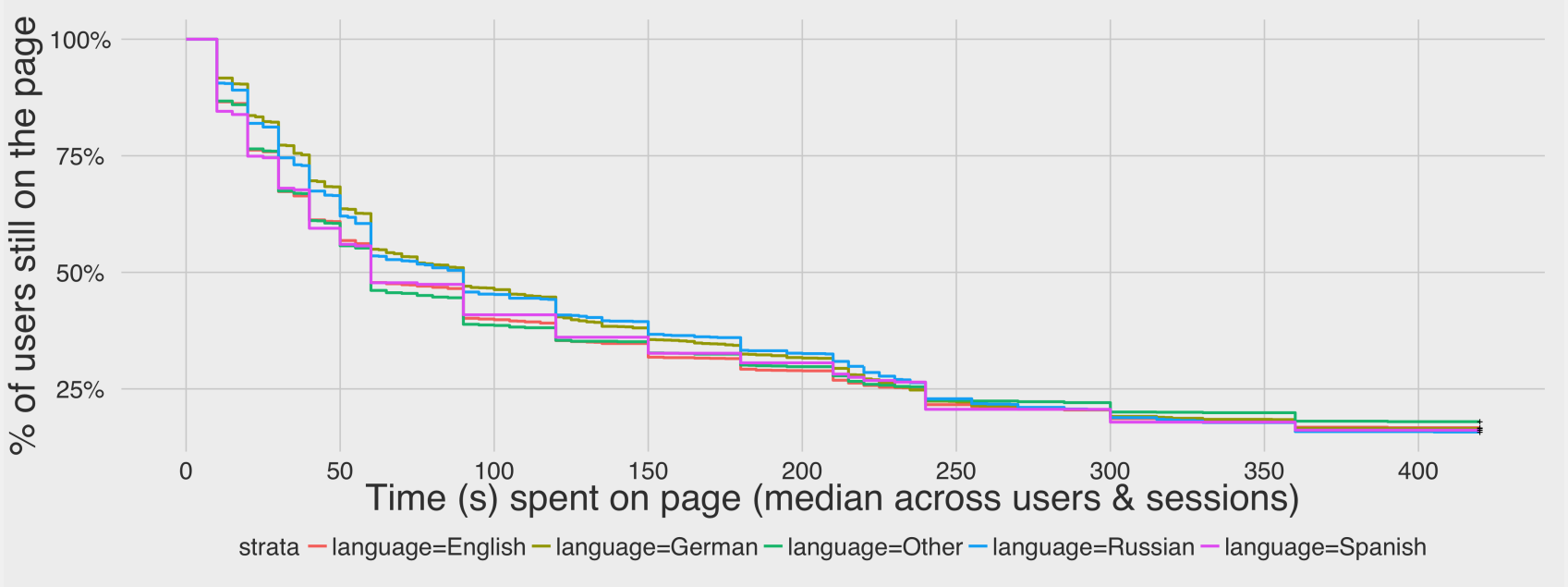


Combined the fragmented Windows sub-populations into a single Windows group.

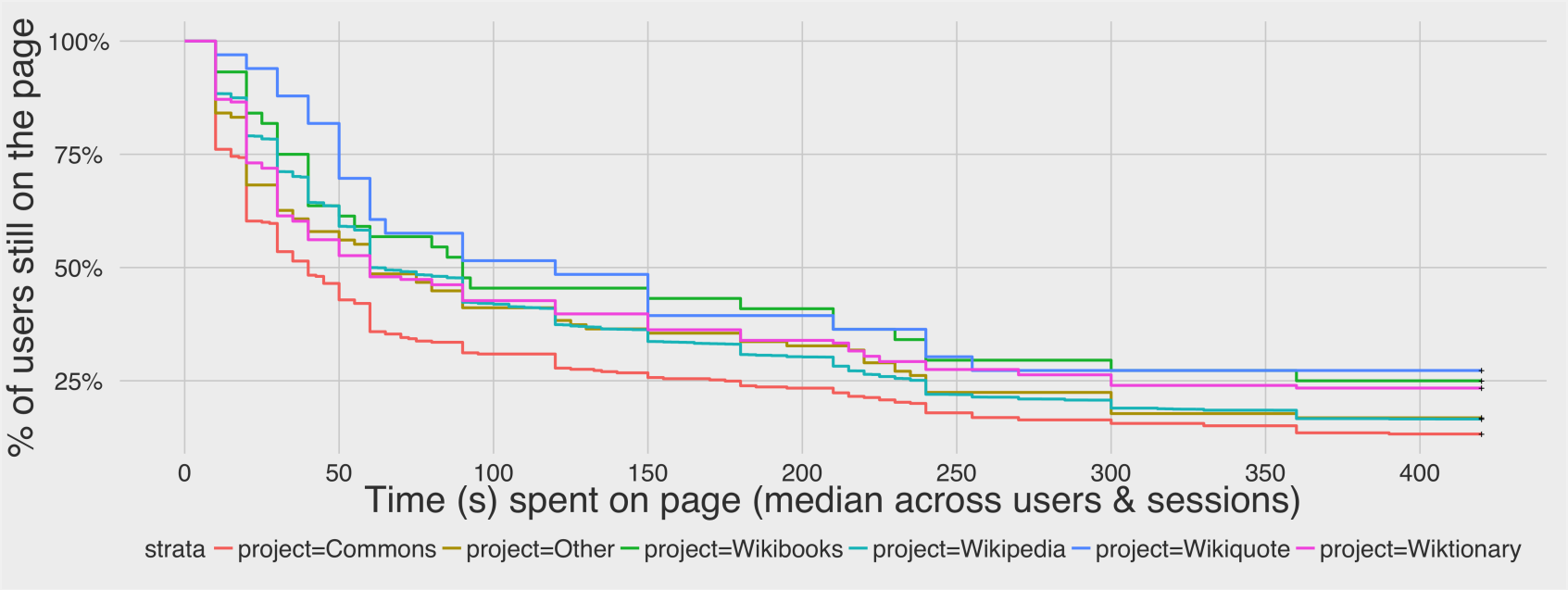
- Retained a greater fraction of Linux and Ubuntu users past 400s.
- Lost Android and iOS users faster than on other platforms.



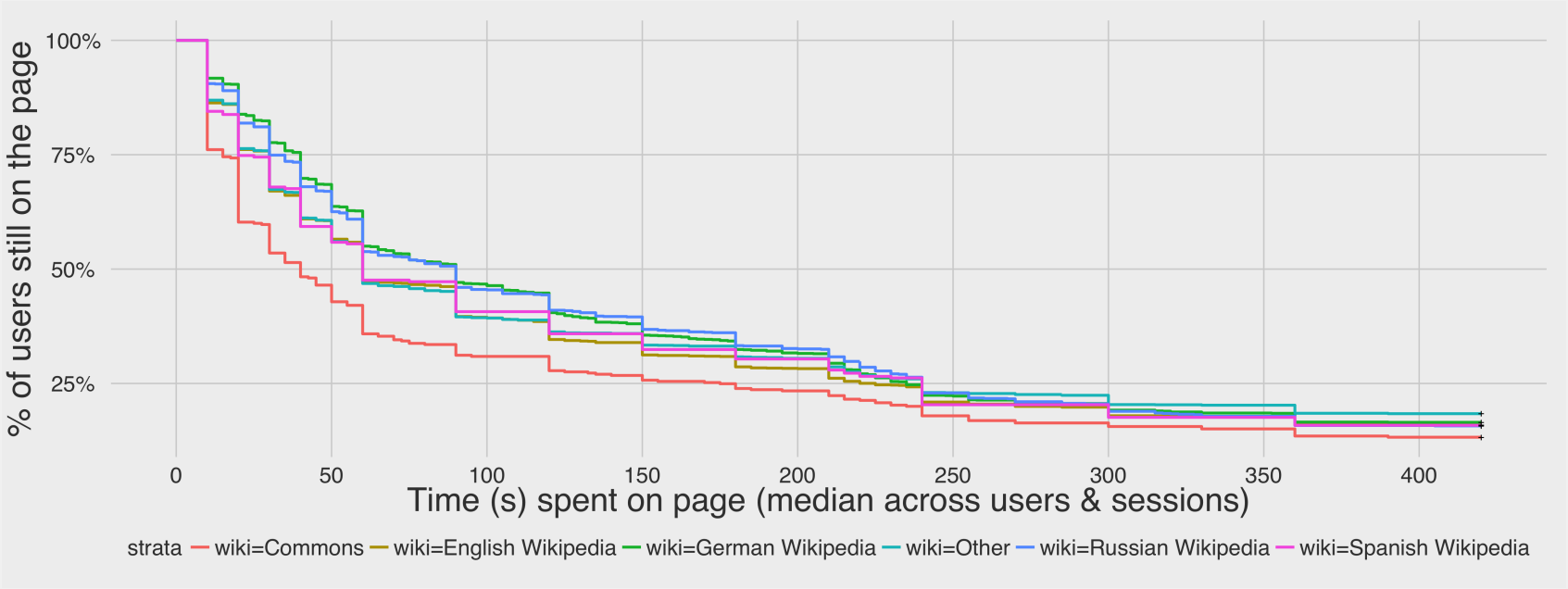
- Users across the various browsers behaved similarly.
- The big exception is Safari users (pink), who we lose the fastest.



Users remained on German and Russian wiki pages longer than on wikis in other languages.



- Lost users the fastest on Commons (red). By 40s, we have already lost half those users.
- Users viewing Wikiquote (blue) pages stayed on those pages longer than users on others. Didn't lose half users until 120s!



- Users of Russian and German Wikipedias stayed on those pages longer.
- Spanish and English Wikipedias (along with other wikis) very similar.

Discussion

Already a valid schema that yields useful data.

Proposed improvements:

- Log scroll events
  - Ping server if user has scrolled in the last 30-60s.
  - Can be used later to make check-ins more robust.
- Record additional data for events already in schema:
  1. Number of results returned to user.
  2. Ranking of visited page as it was on SERP.

Thank you!

Further reading

- **Research:Measuring User Search Satisfaction** on Meta
- **Survival analysis** on Wikipedia
- **Kaplan-Meier estimator** on Wikipedia

Open source

- **This analysis** on GitHub
- **Satisfaction research codebase** on GitHub