

A photograph of a green apple and an orange fruit. The apple is on the left, slightly out of focus, and the orange is on the right, in sharp focus. Both fruits are resting on a light-colored, textured surface.

Metrics Standardization

Wikimedia Analytics Team

10 December 2013

Why standardize

Relevant

Measure quantities that describe important phenomena

Replicable

Make analyses easily reproducible and verifiable

Explicitly defined

Provide formal definitions, remove ambiguity

Consistent

Limit the proliferation of proprietary definitions; compare apples and apples

Easy to maintain

(ideally) replicable via multiple data sources at any point in time

Granular

Computable at different time scales

What to standardize

Participation metrics

Newly registered user

Active editor

Edit session

Readership metrics

Page view

Unique visitor

Visit

Use case: editor engagement vital signs

Standardize metrics used in editor engagement research

New users

New users

Live new users

New editors *

New page creators

Productive new users

Surviving new users *

Community

Active editors *

Very active editors

Page creators

Media uploaders

IP editors

Bots

Content creation

Edits

Uploads

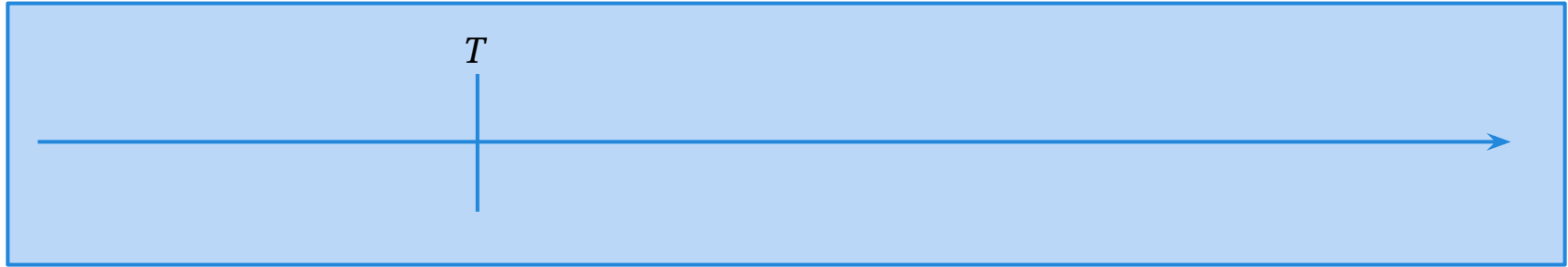
Page creations

Content curation

Deletions

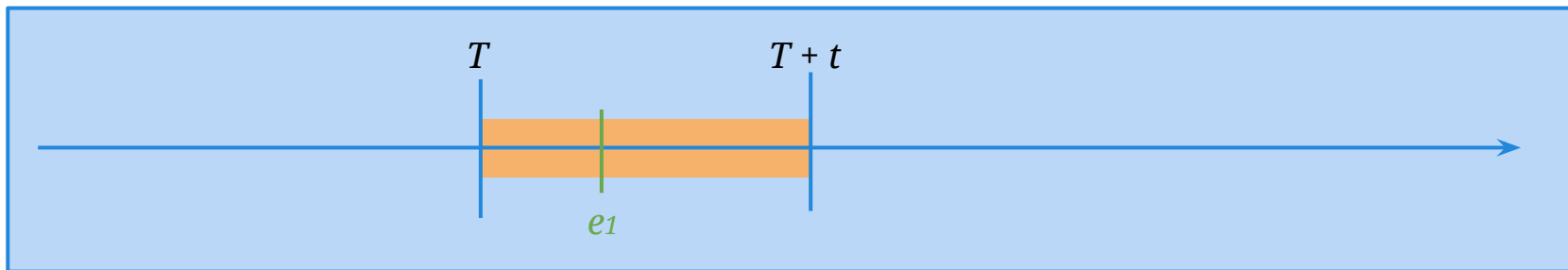
Reverts

Newly registered user (acquisition)



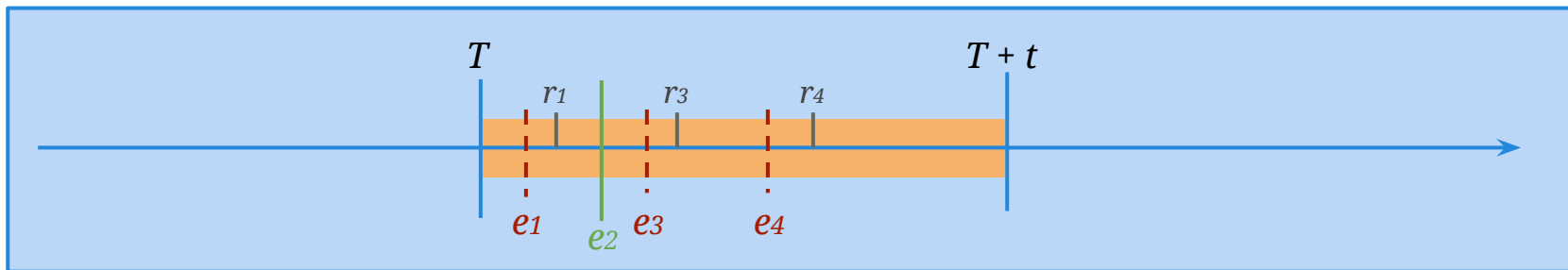
- Genuine new registrations only
- No attached users
- No proxy registrations
- New user class

New editor (activation)



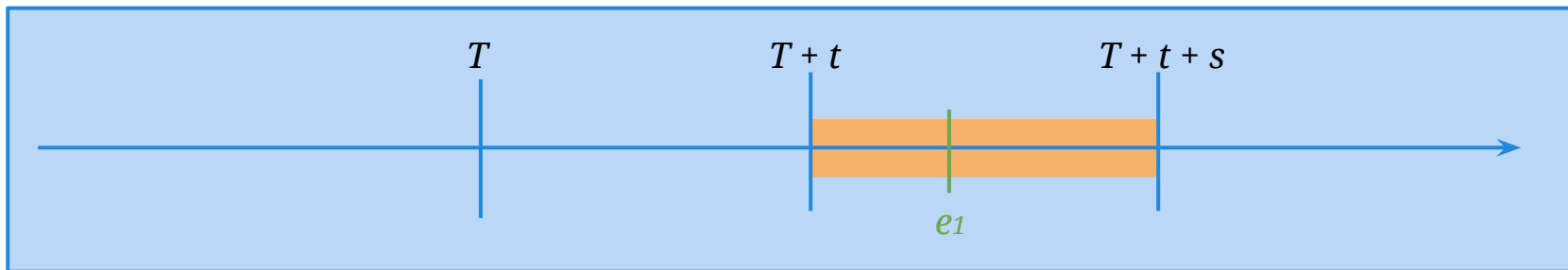
- Content edits in a timespan since registration
- Threshold-based metric: n content edits in $[T, T + t]$
- Default: 1 ns0 edit in 24 hours
- Arbitrary thresholds per period
- Replace *New Wikipedian*

Productive new user (quality)



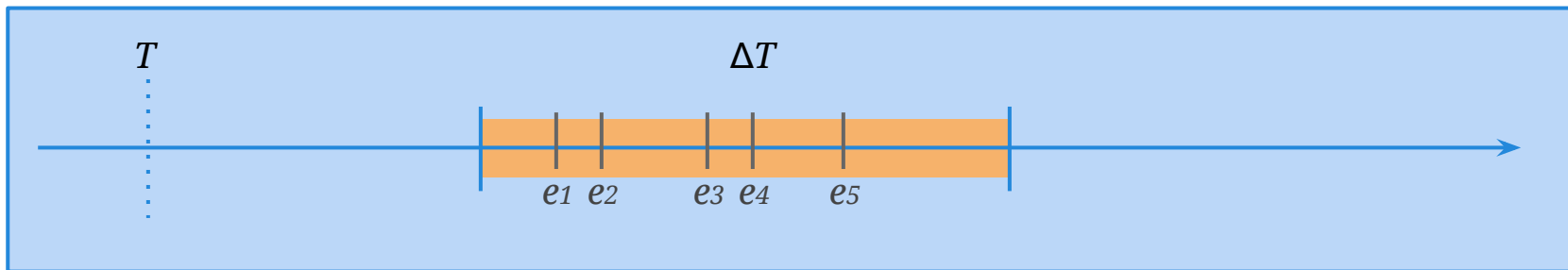
- Productive content edits in a timespan since registration
- Threshold-based metric: n content edits unreverted in time q in $[T, T + t]$
- Default: 1 ns0 edit unreverted in 48 hours in 7 days
- New user class

Surviving new user (retention)



- Content edits after a survival period since registration and within a sunset period
- Threshold-based metric: n content edits in $[T + t , T + t + s]$
- Default: 1 ns0 edit in 12th month since registration
- Arbitrary thresholds per period
- Replace *Retained new Wikipedia*

Active editor



- n content edits in ΔT
- Default: 5 ns0 edits in 1 month
- Arbitrary thresholds per period (daily, weekly, montly)
- Replace *Monthly active editor*

Guiding principles and open issues

robust vs responsive to configuration changes

Project changes definition of a “countable” page

Project creates new content namespace

stateless vs stateful

Historical values change due to deletion, redaction, content redistribution

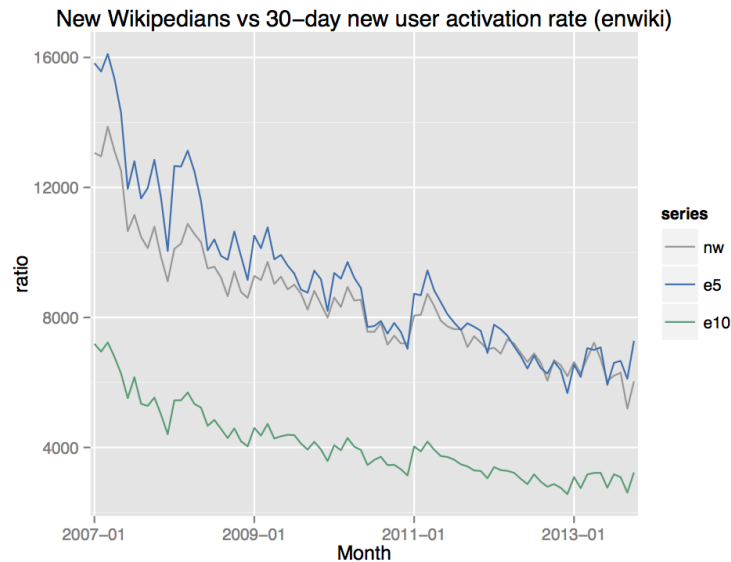
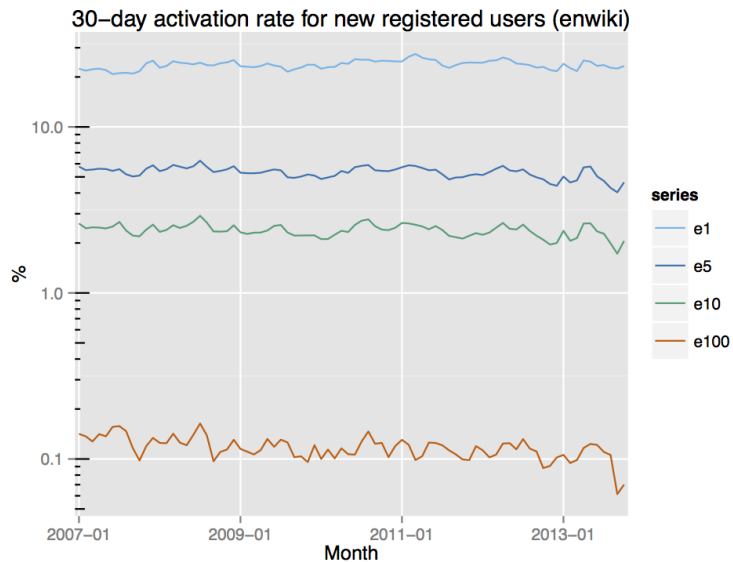
Censored observations are flagged / excluded

easy to maintain vs accurate

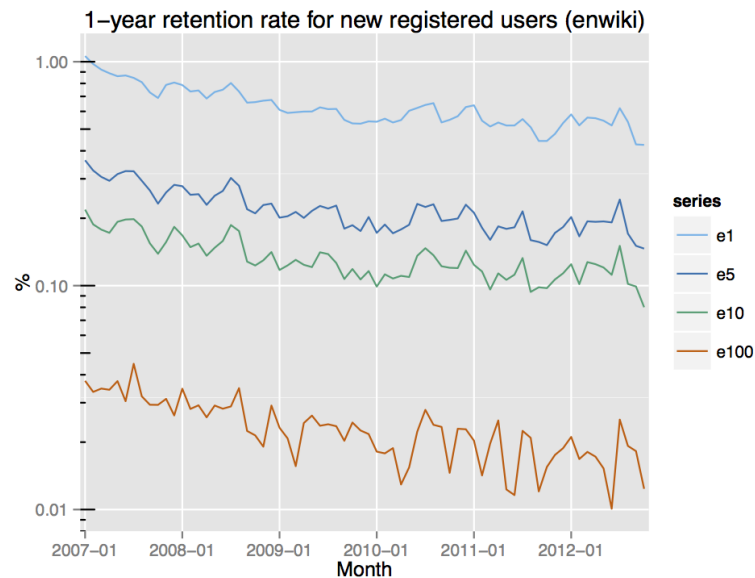
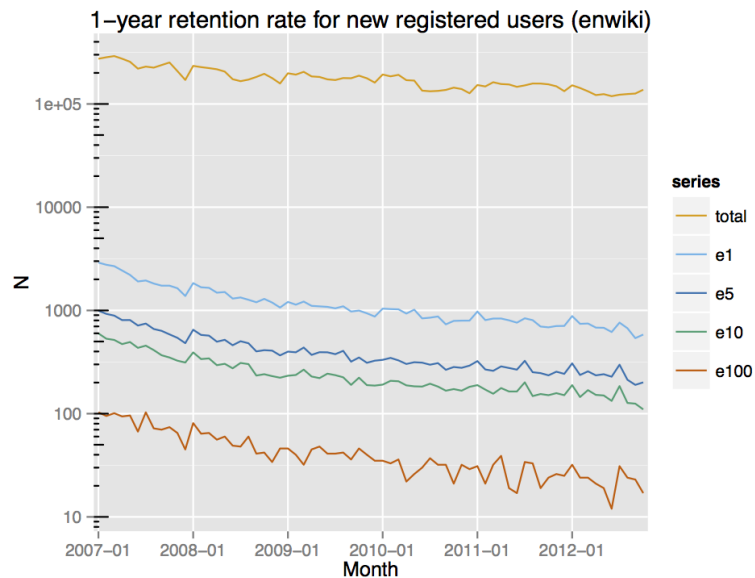
How do we identify a bot?

focus on conventional vs diagnostic parameters

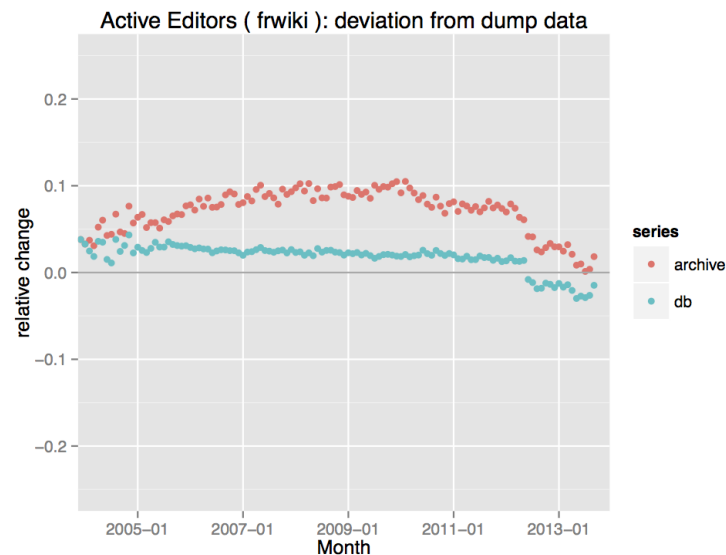
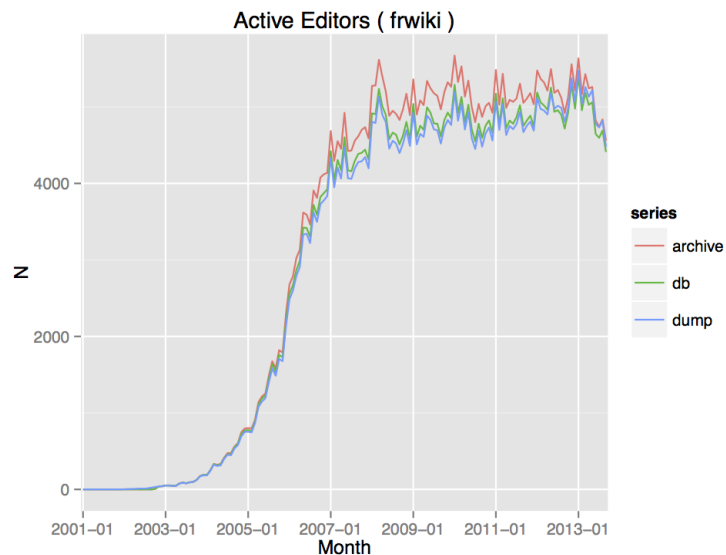
Supportive analysis: new user activation



Supportive analysis: new user retention



Supportive analysis: editor activity



Next steps

fine-tune definitions + sample queries



community feedback



prototype dashboards



productization

Credits

Apples and Oranges • CC BY photo by Michael Johnson
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