The Long Taile of Typosquatting Domain Names

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Extent of Typosquatting

GOOGXE.COM

56 million potential **typos** targeting
ALL
.com domains

4.7 million typos
targeting the **488 113**
Alexa's top .com domains

230 000 typos targeting the
3264 Alexa's top.com
domains

Alexa provides a list of domains ranked by popularity

Outline

- Why Typosquatting?

- How do we find Typosquatting domains?

- Trends in Typosquatting

- Possible defenses

The Target Domain: pncbank.com

Potential Typo Domain: pncbxnk.com

Potential Typo Domain: pncban**X**.com

Potential Typo Domain: pncbanX.com

Potential Typo Domain: pncbanX.com

Potential **Typo** Domain: **pncbanX.com**

Potential Typo Domain: pmcbank.com

Ecosystem

Target Domain
(**pncbank.com**)

2 %

Brand Protection

TypoSquatting Domain

98 %

Competitor Brand

Other Domain

Phishing/ Malicious

Ads

pmcbank.com

Potential Typo Domains

The Target Domain

Generated Typo domains

Potential Typo Domains

Deletion → pncbXnk

Addition → pncbaAnk

Substitution → pnZbank

Transposition → pnBCank

wwwpncbank

.

.

.

pncbanX

pMcbank

pncbank.com → Typo Generation → Selecting Registered Domains → pncbnk

pncban

.

.

.

pmcbank

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True **Typo** Domains

DNS

Whois

Content

Potential **Typo** Domains

True **Typo** Domains

pncbnk

pncban

.

.

.

pncbnk

pncban

.

.

.

pmcbank

Heuristic Rule Set

.

.

.

pmcbank
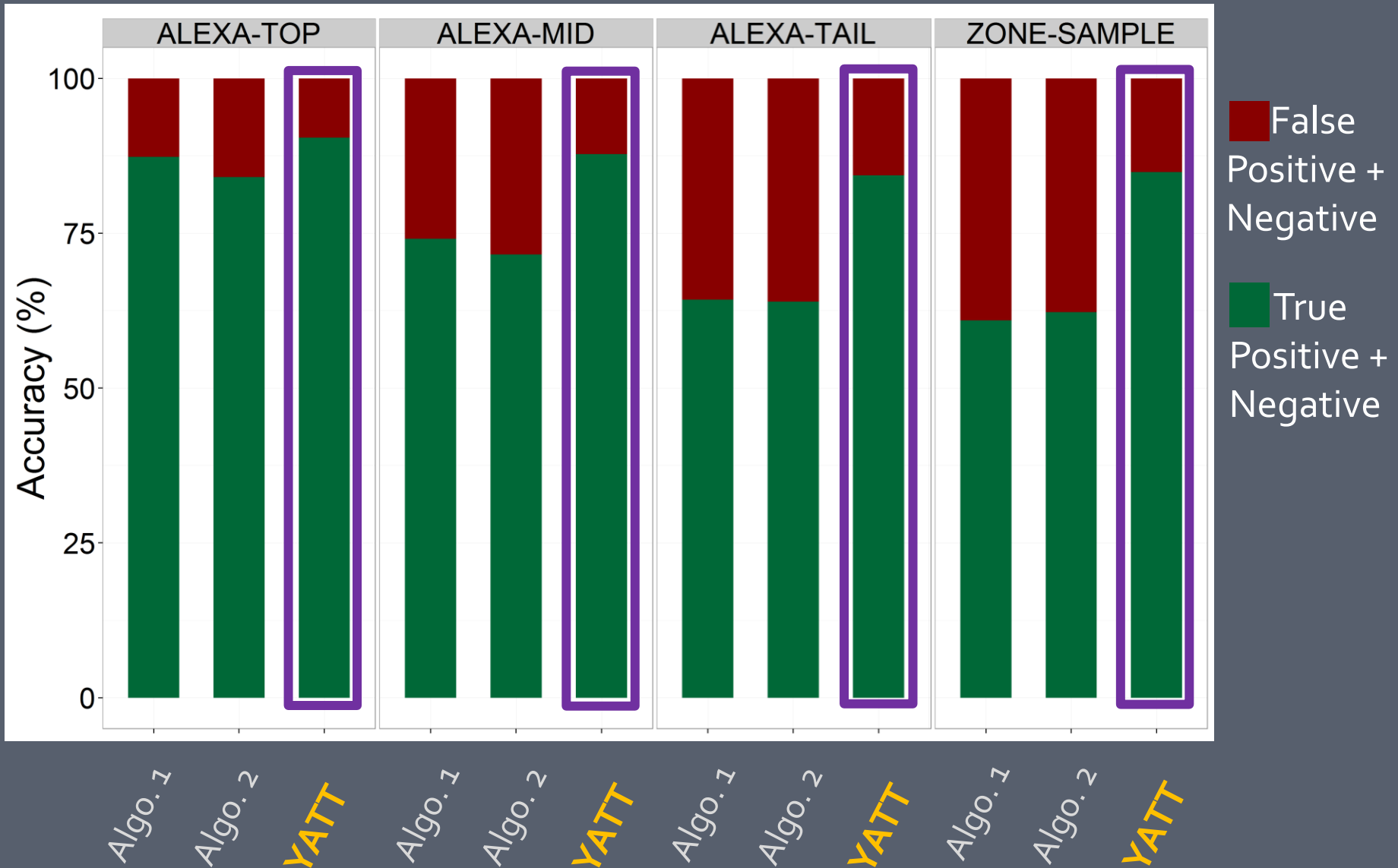
Not **Typo** Registrations
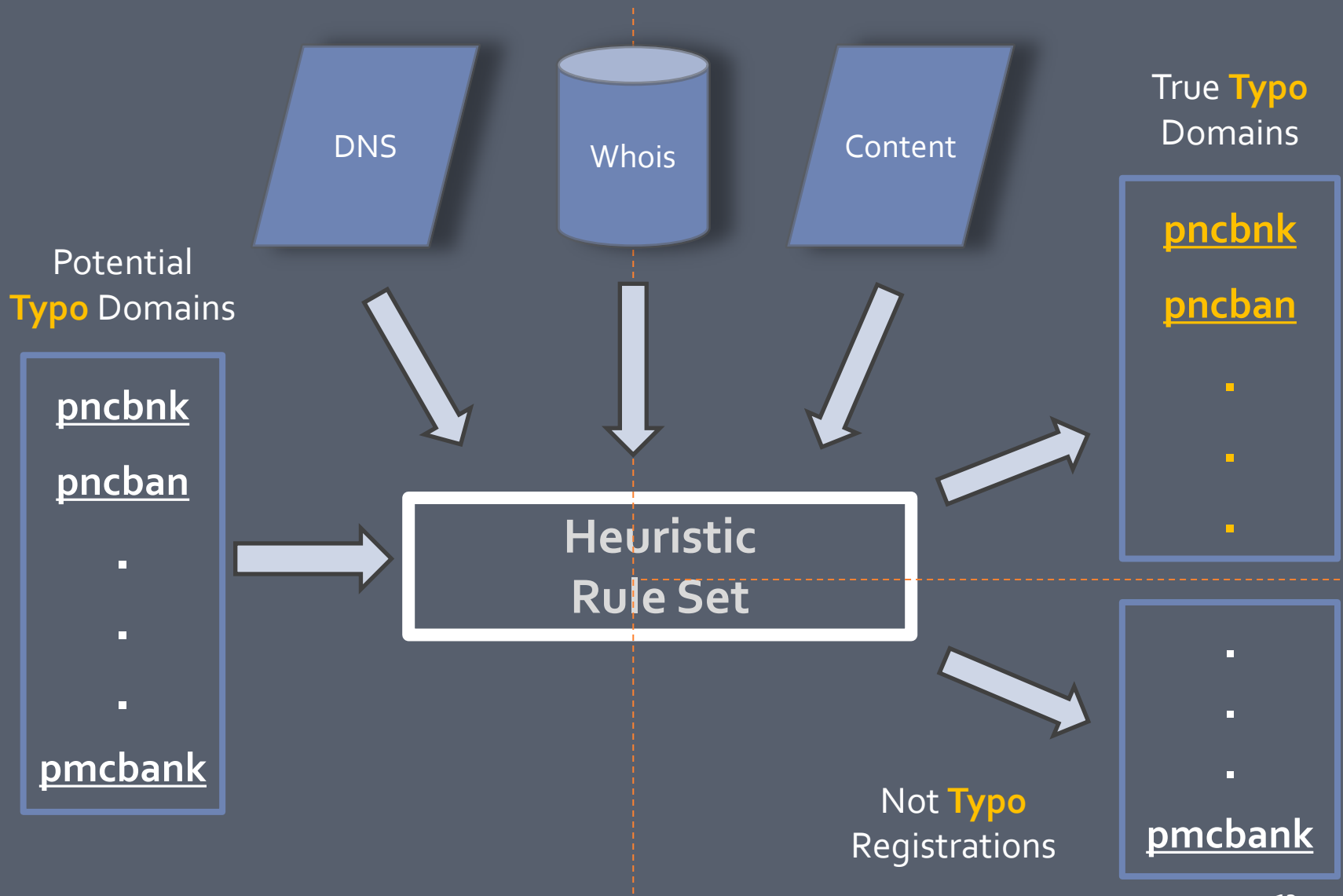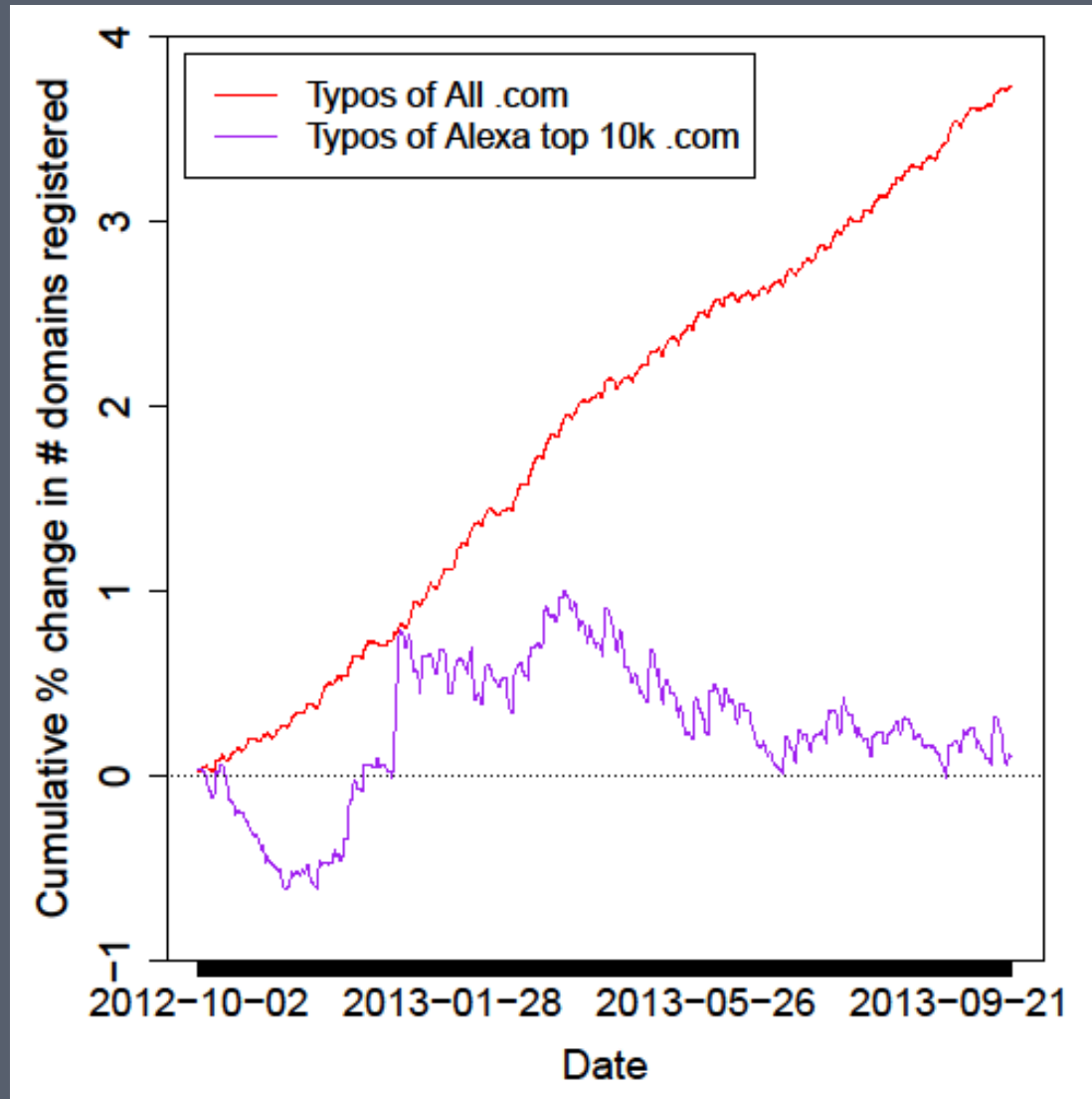
Manual Categorization

Accuracy

Based on previous work: **Algo. 1** and **Algo. 2** Ours: **YATT**

Trends in registration across time
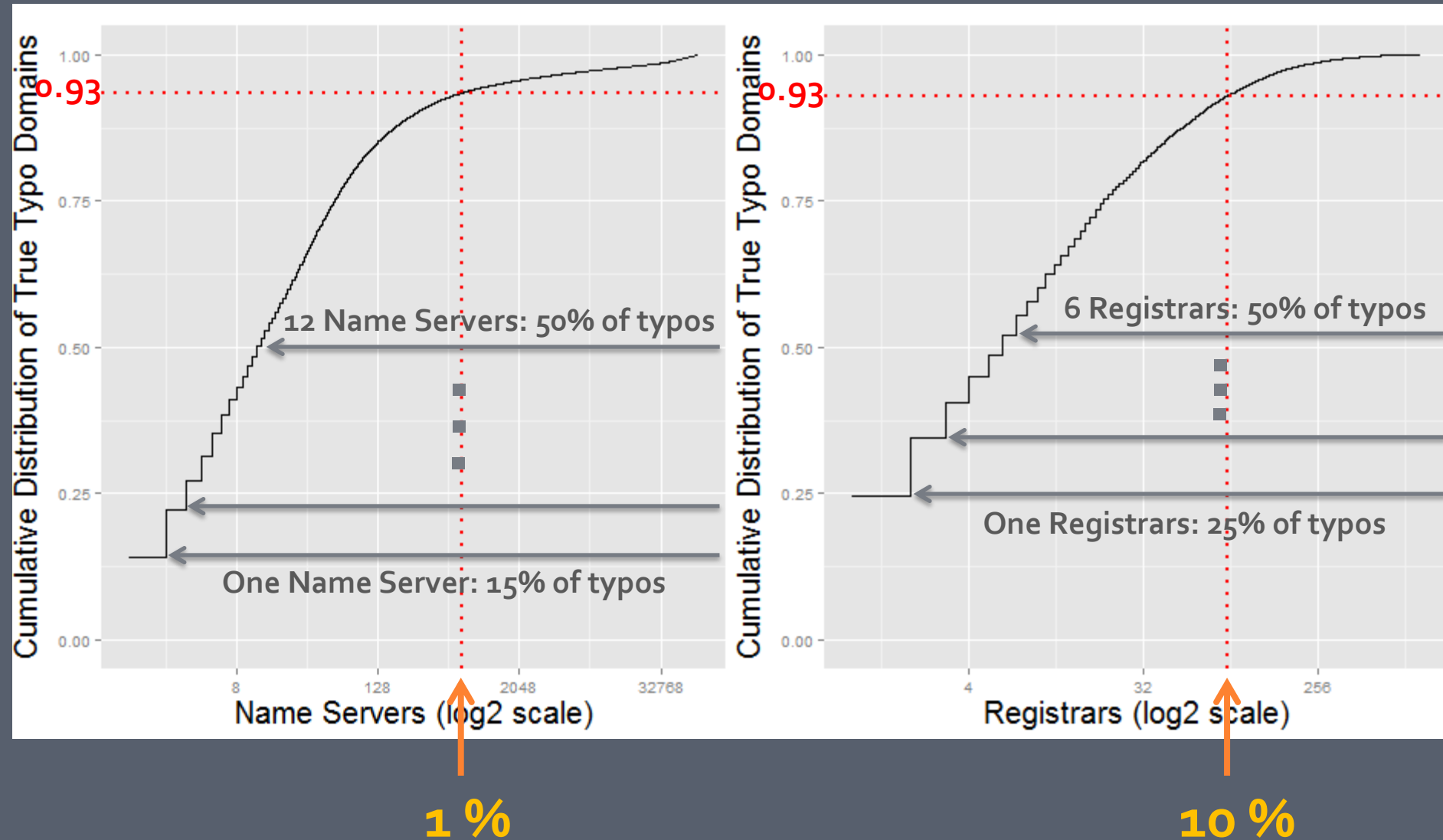

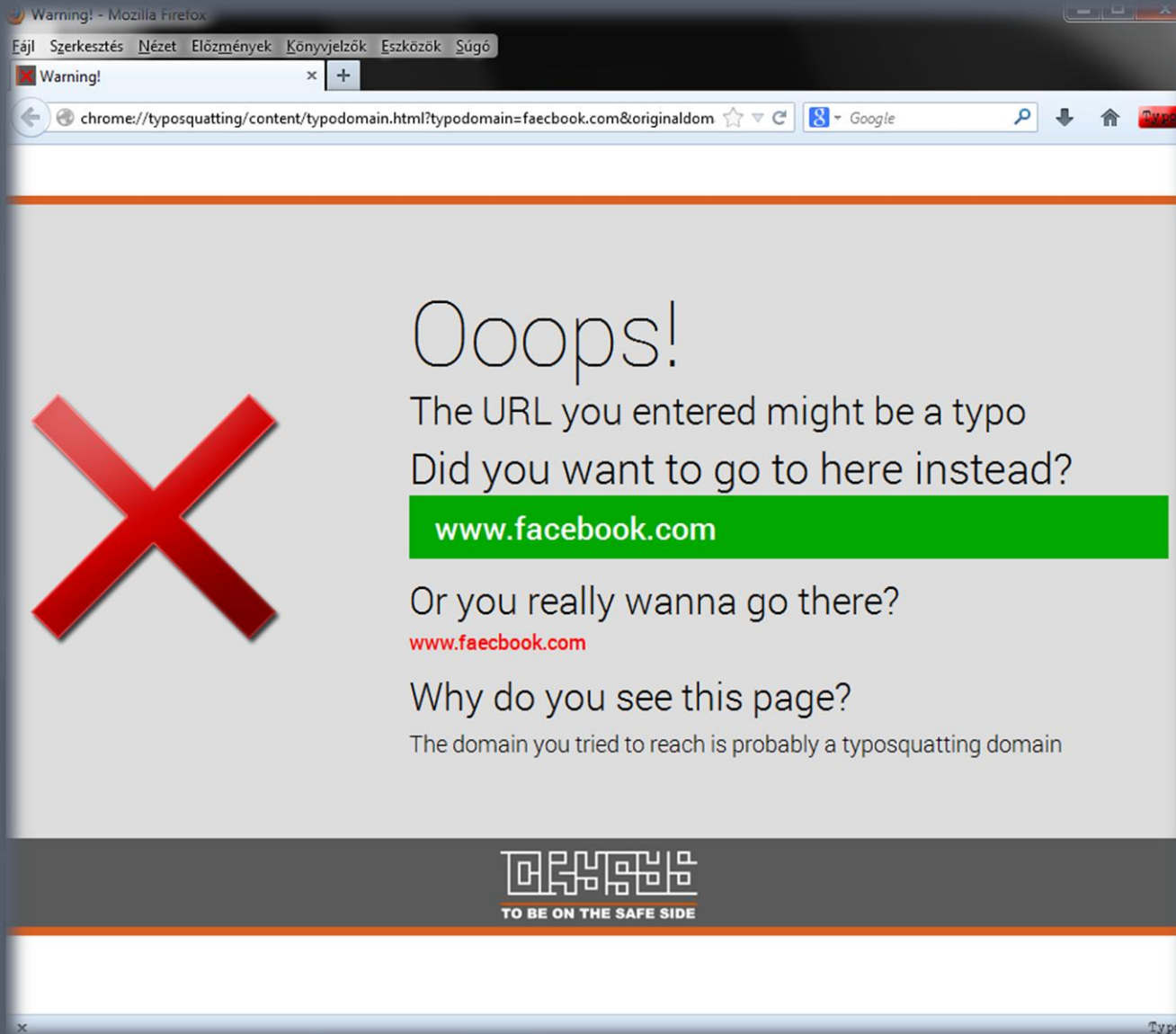>= 71% of typo domains remained registered for over one year

BAD Name Servers

Name Server	True Typos	All .com domains	Typo Ratio
aof.net	5221	6332	82%
citizenhawk.net	8819	12004	73%
easily.net	18281	36890	50%
domainingdepot.com	51854	132864	39%
next.org	9426	30252	31%
domainmanager.com	23493	90929	26%

Infrastructure & Intervention

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Tool

Takeaways

- Typosquatters invest significant resources

- Typosquatting steadily **increases**

- Typosuatting could be **contained**

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