Digital Content Next

Legal and Legislative Committee
September 16, 2015

Dial-in: 866.740.1260
Code: 4731000

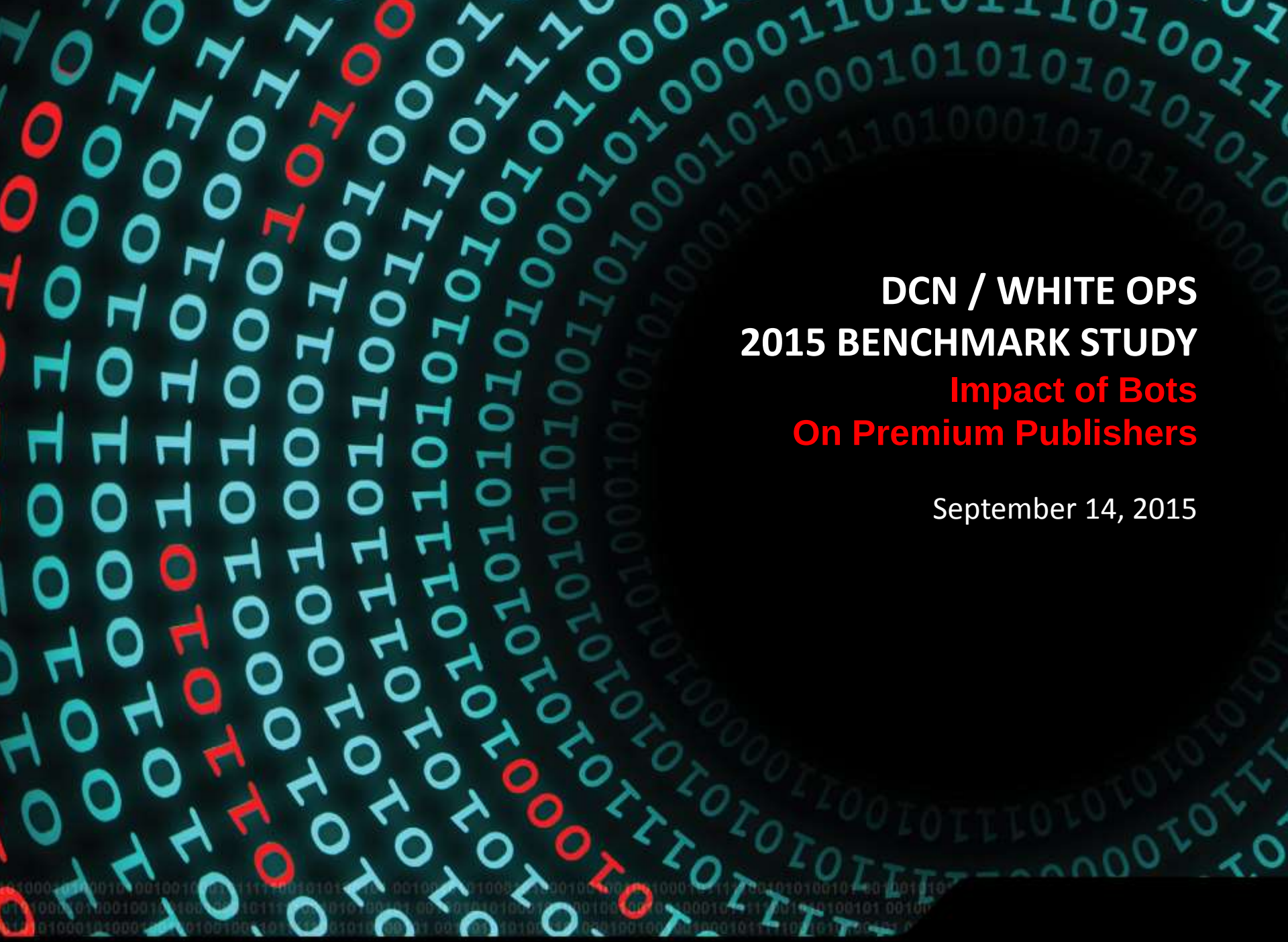
DIGITAL CONTENT NEXT

Agenda

- Review of White Ops Survey of Non-Human Traffic on DCN Member Sites

- Ad Blocking Software: Update and Discussion

DIGITAL CONTENT NEXT



DCN / WHITE OPS 2015 BENCHMARK STUDY

Impact of Bots On Premium Publishers

September 14, 2015

Study Background and Context

Executive Summary

Detailed Findings and Supporting Data

Conclusion and recommendations

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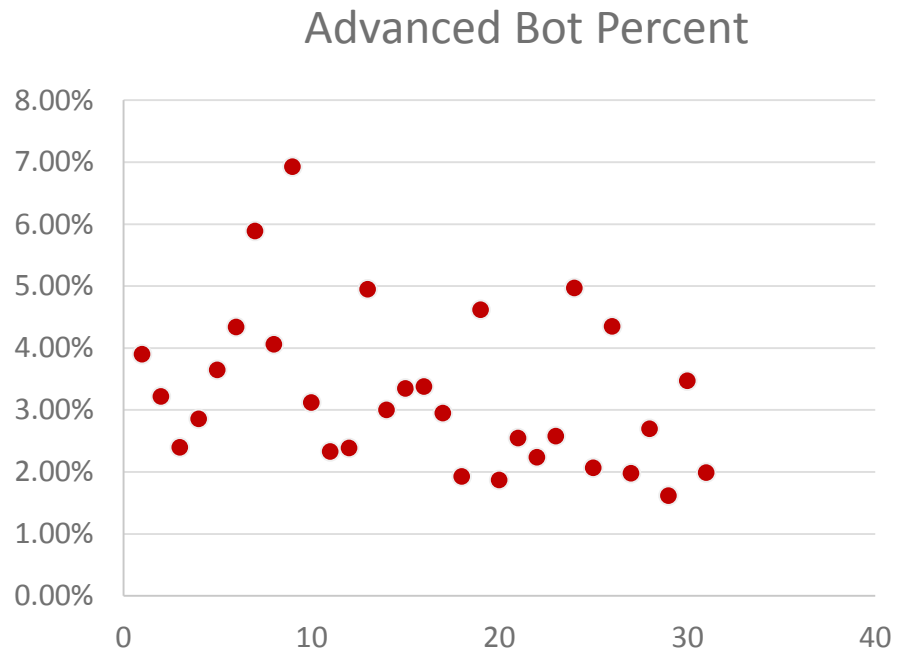
DCN benchmark study overview



DCN Global Results

32 participating organizations

30 billion impressions

3.1% advanced bots

Range: 1.6% to 6.9%

2.8% IAB Bots

Range: .7% to 11.4%

Average (All Bots): 5.9%

Range: .7% to 11.4%

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Implementation details

Testing & QA: **6/22 - 7/1, 2015**
Data collection: **7/1 - 8/14, 2015**

- Compares individual and global DCN results with ANA 2014 study. Analysis is based on deterministic detection of bot traffic
- To match ANA 2014 *The Bot Baseline*, we calculate results using **measurable desktop (non-mobile) inventory.** For total bot percentage calculations, we remove IAB registered bots and spiders.
- No data or results were provided to participants or the DCN during the study
- White Ops Detection Tags were deployed by study participants via their ad server, directly into the pages of their website, or a combination of both
- Media types were specified by participants. Where possible, White Ops deduced media type programmatically at a per-impression level
- For unmeasurable desktop inventory (<10% of total impressions for DCN participants), we assume that the bot percentage is similar to measurable inventory bot percentages.

Some publishers choose to sell inventory across web properties that they do not own and operate, commonly referred to as partner networks, syndication networks or audience extension networks. Such inventory falls outside the scope of the results in this study.

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Definitions

- **Decision –** deterministic identification of a particular impression, page view, or other type of online event as bot or not
- **Advanced bot -** an invalid impression positively identified as a bot using deterministic methods
- **IAB registered bot –** percentage of bots that are on the IAB list
- **Href domain –** the domain where a particular ad impression, page view, video play, or other online event occurred
- **True domain –** verified URL/domain which was loaded
- **Referring domain –** domains that send traffic to the site
- **Incomplete load / non-measurable –** cases where the JavaScript tag was not loaded due to factors such as browser abandonment or site configuration
- **False-positives –** detection results that indicate bot or ad fraud impressions when the impressions are actually legitimate

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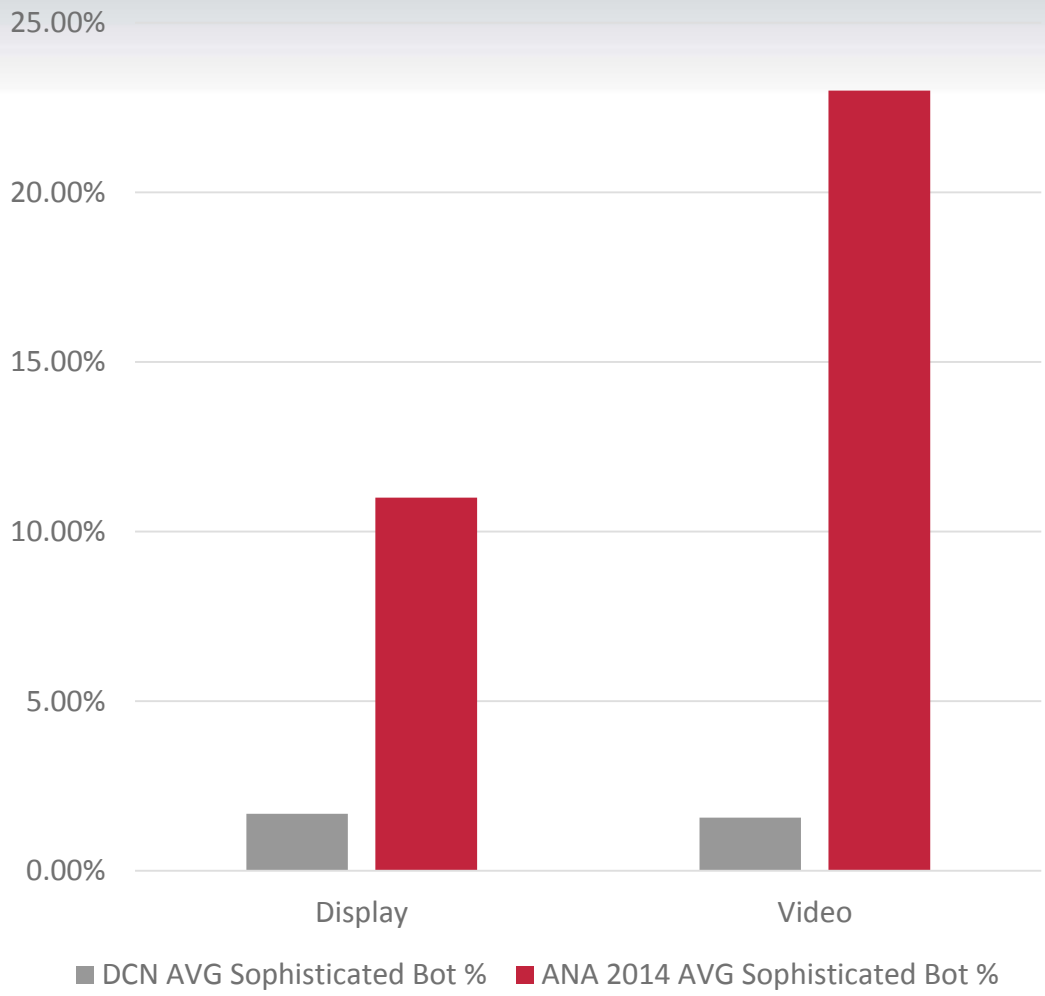
Benchmark Bot % by Media Type

DCN average bot percentage for display inventory was 1/6th the level of ANA 2014 display, and DCN average bot percentage for video inventory was 1/14th the bot rate seen in ANA 2014 inventory.

Selectively buying direct-placement digital ad inventory from this group of premium publishers, if quality is maintained consistently across inventory, could allow marketers to **achieve the humanity levels of the top 14% of the ANA 2014 Bot Baseline marketers without instituting any other policy changes or buying decisions.**



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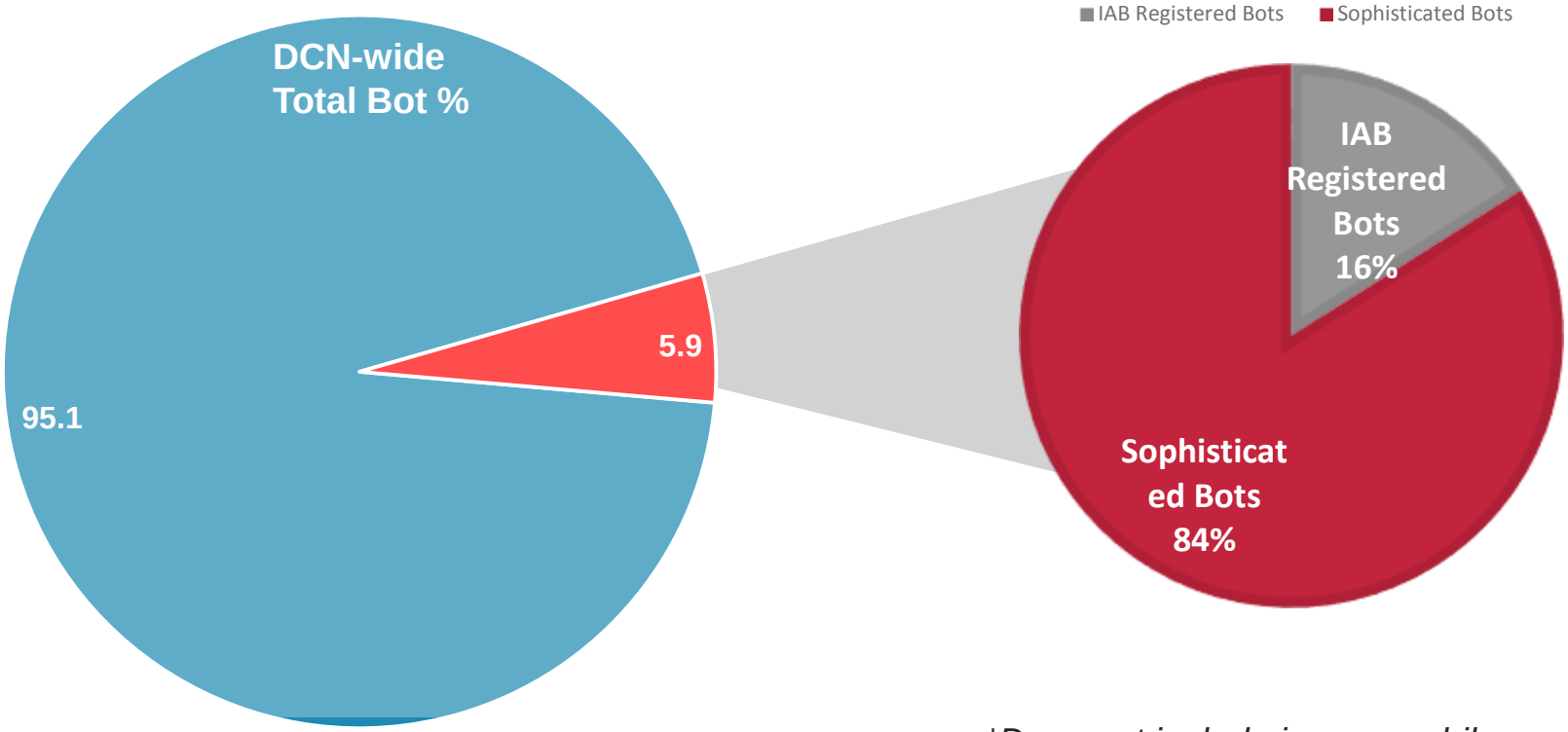
Sophisticated and IAB bot %

The sophisticated bot rate of the DCN publisher group is 3.1 percent, compared to 11 percent for the more general traffic seen in the Bot Baseline report in 2014. About 37 percent of bots could be detected using the IAB lists, while 63 percent are considered sophisticated bots.



*Does not include in-app mobile

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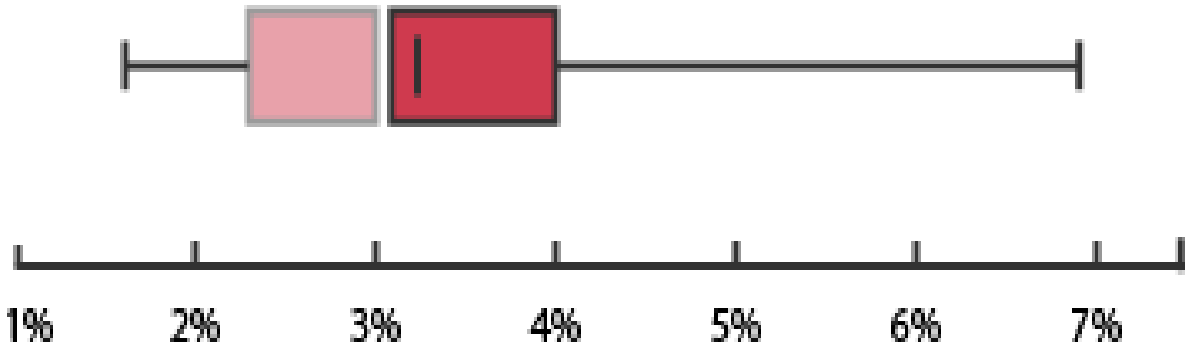
Some premium inventory sees bot hotspots

While the middle-of-the-road publisher in the DCN had a 3.1 percent sophisticated bot rate, a single publisher in the group encountered a 6.9 percent sophisticated bot rate, more than twice the average for the group. Another five publishers had sophisticated bot rates exceeding 4 percent.

Average sophisticated bot rate for publishers: 3.1 %

- Lowest sophisticated bot rate for publishers: 1.6%
- Highest sophisticated bot rate for publishers: 6.9%



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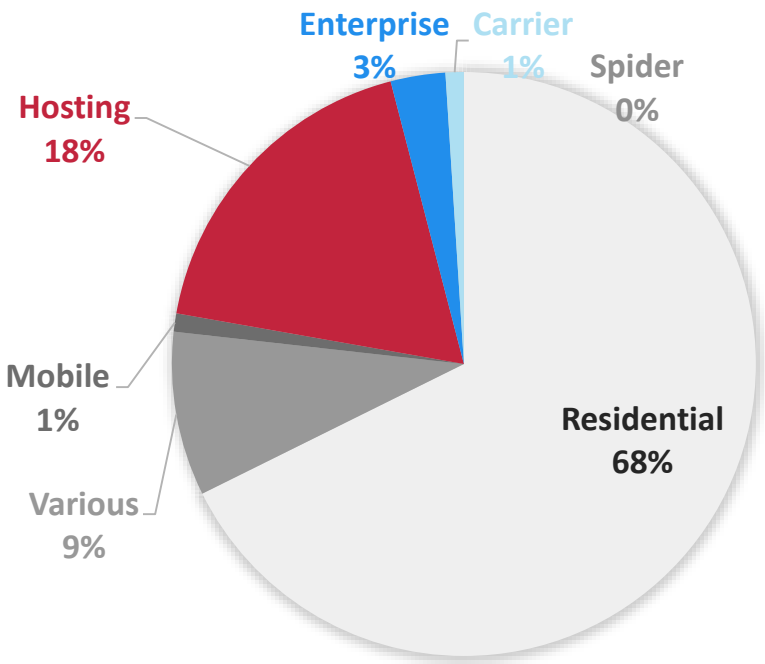
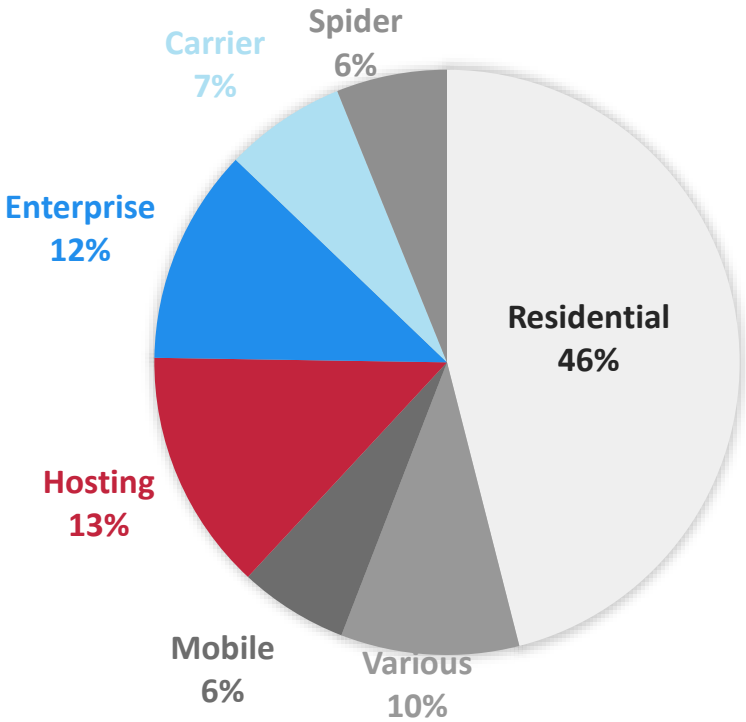
Sophisticated bots are adapting

ANA 2014



DCN-Total



The two most major sources of sophisticated bots, residential networks and hosted data centers, accounted for only half of DCN traffic, down from 85 percent of traffic in the ANA study.

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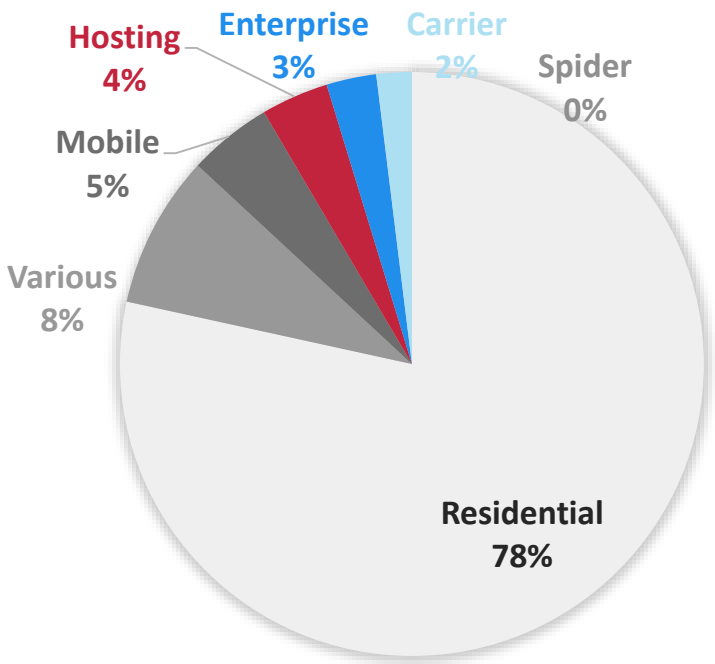
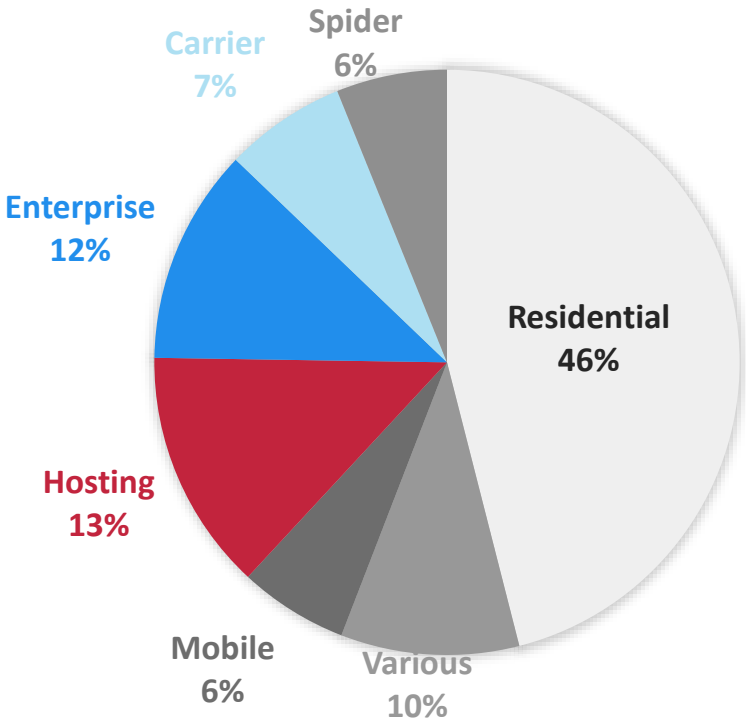
Case Study

Participant



DCN-Total



Some publishers saw increased rates of sophisticated bot traffic from residential IP addresses. 78% of one publisher's bot traffic came from malware-infected computers

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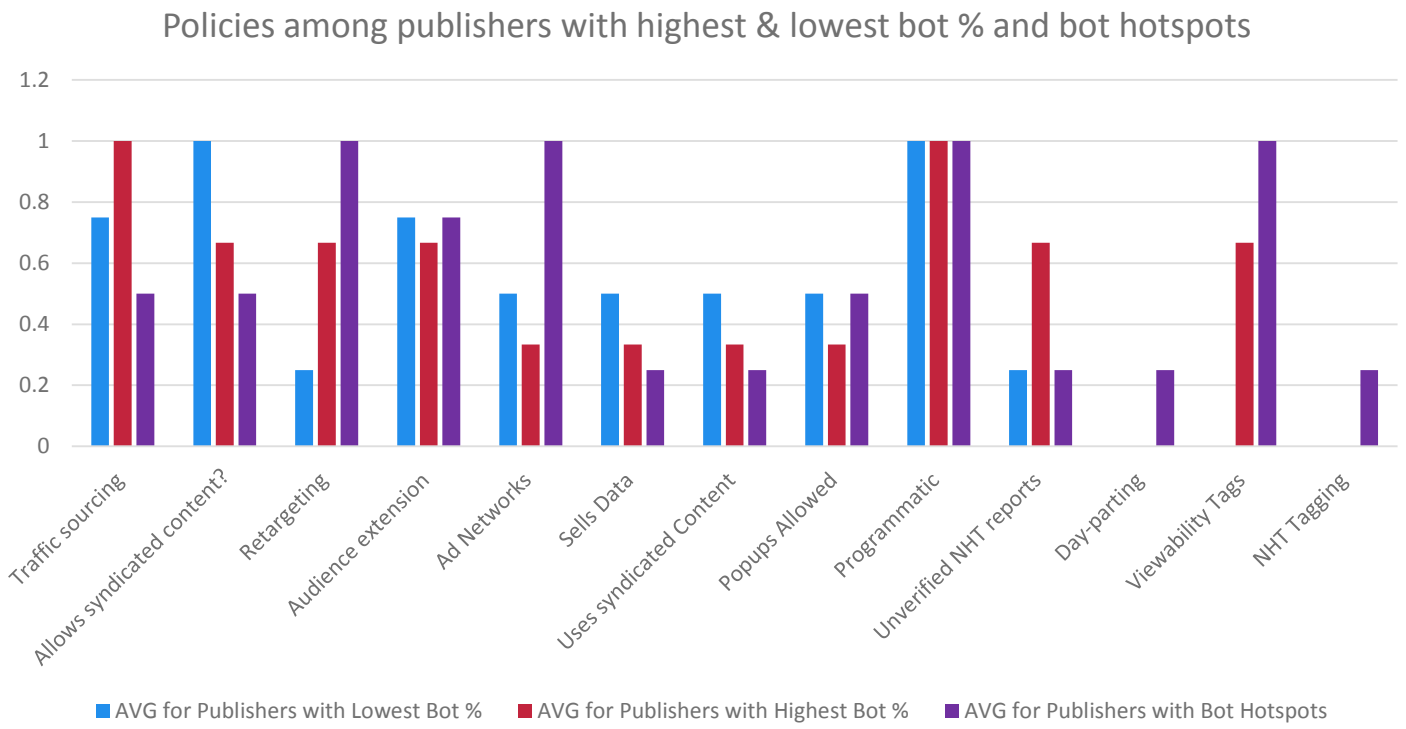
Policies Affect Bot Rates

Participants with a high sophisticated bot rate were most likely to be using third-party traffic sourcing, while participants with significant sophisticated bot rates in some sections of their sites (e.g., hotspots) were more likely to be using retargeting and ad networks.



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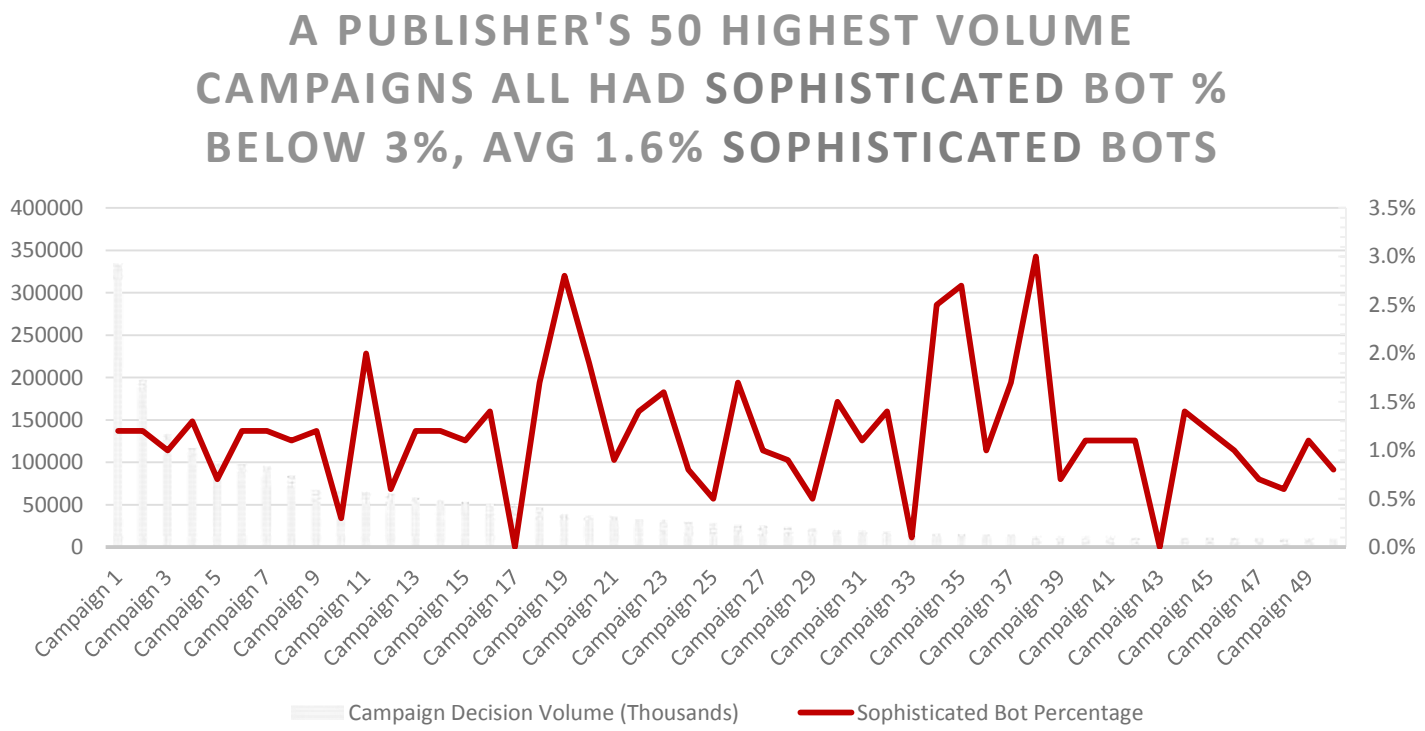
Case Study: Consistent Quality

Some publishers and campaigns have \very low sophisticated bot rates.



Publishers or sites with good policies, who are transparent about policies including sourced traffic, and historically low sophisticated bot rates may provide reliable human audience rates.

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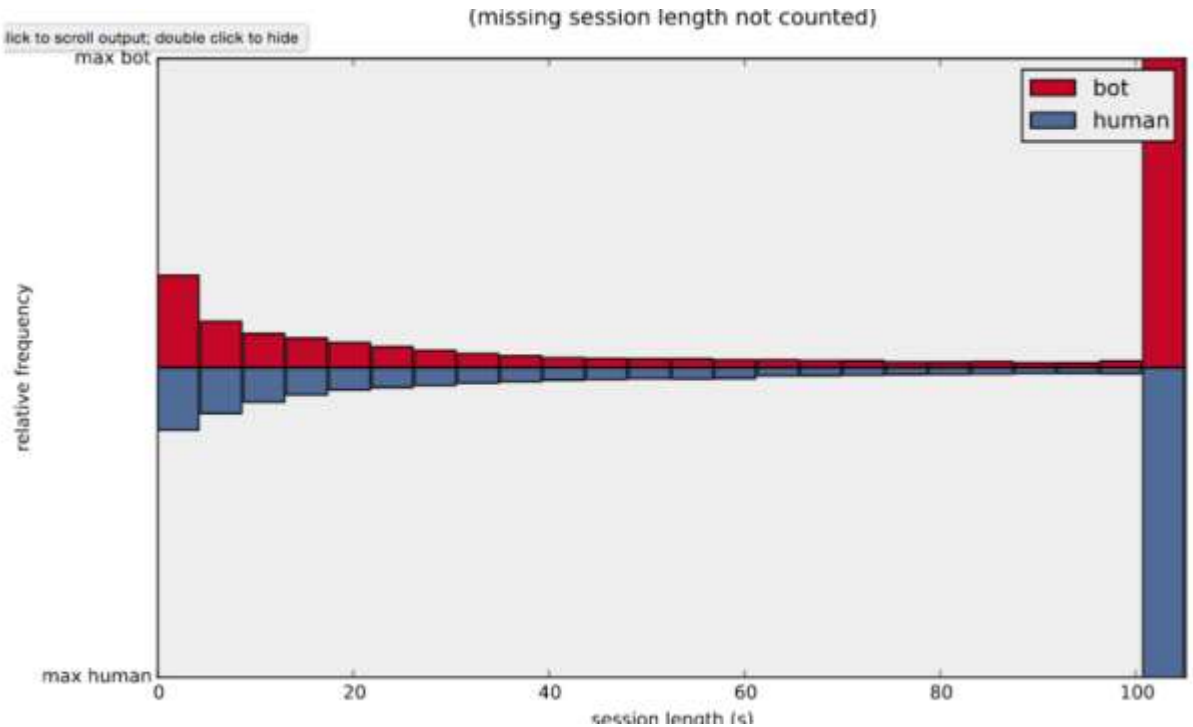
Sophisticated bots mimic viewability

Bots are spoofing viewability in nearly three-quarters of cases. Bots that come from a host dedicated to fraud, with no real human traffic -- referred to as isolation bots -- have high viewable rates and most frequently post back detailed viewability data.



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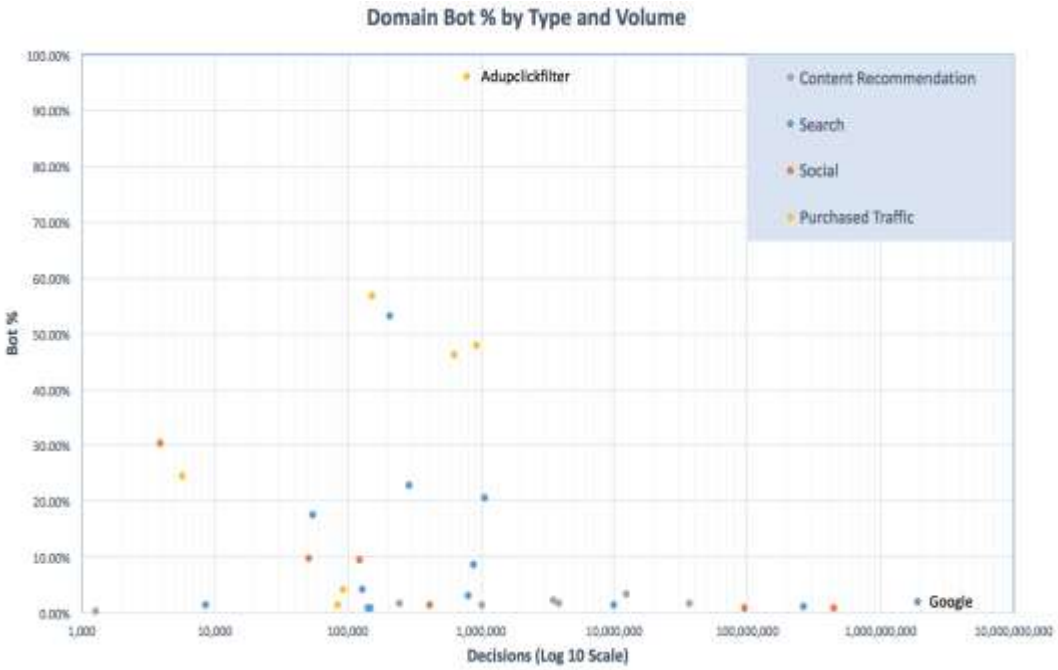
How publishers source traffic affects bot %

- Large content recommenders -- such as Jungroup, Outbrain and Taboola -- refer very little sophisticated bot traffic.
- Traffic from reputable search engines, such as Google and Yahoo, does have large sophisticated bot rates when coming from certain top-level domains.
- Smaller search engines show medium- to high-levels of bot traffic.
- Traffic from social-media sites tended to have lower bot rates.



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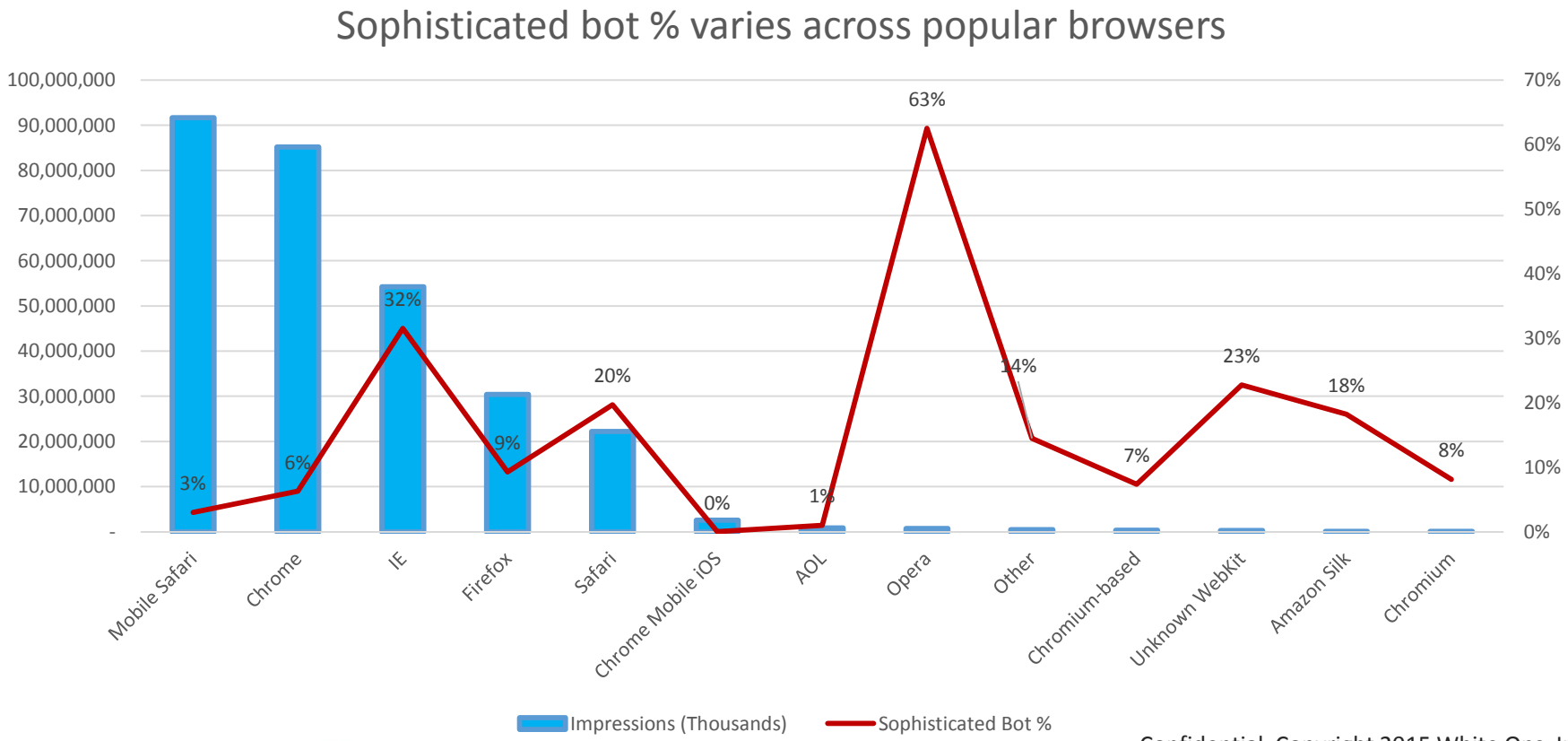
Bot percentage varies across browsers

To maintain quality, publishers can target away from high-bot browsers.



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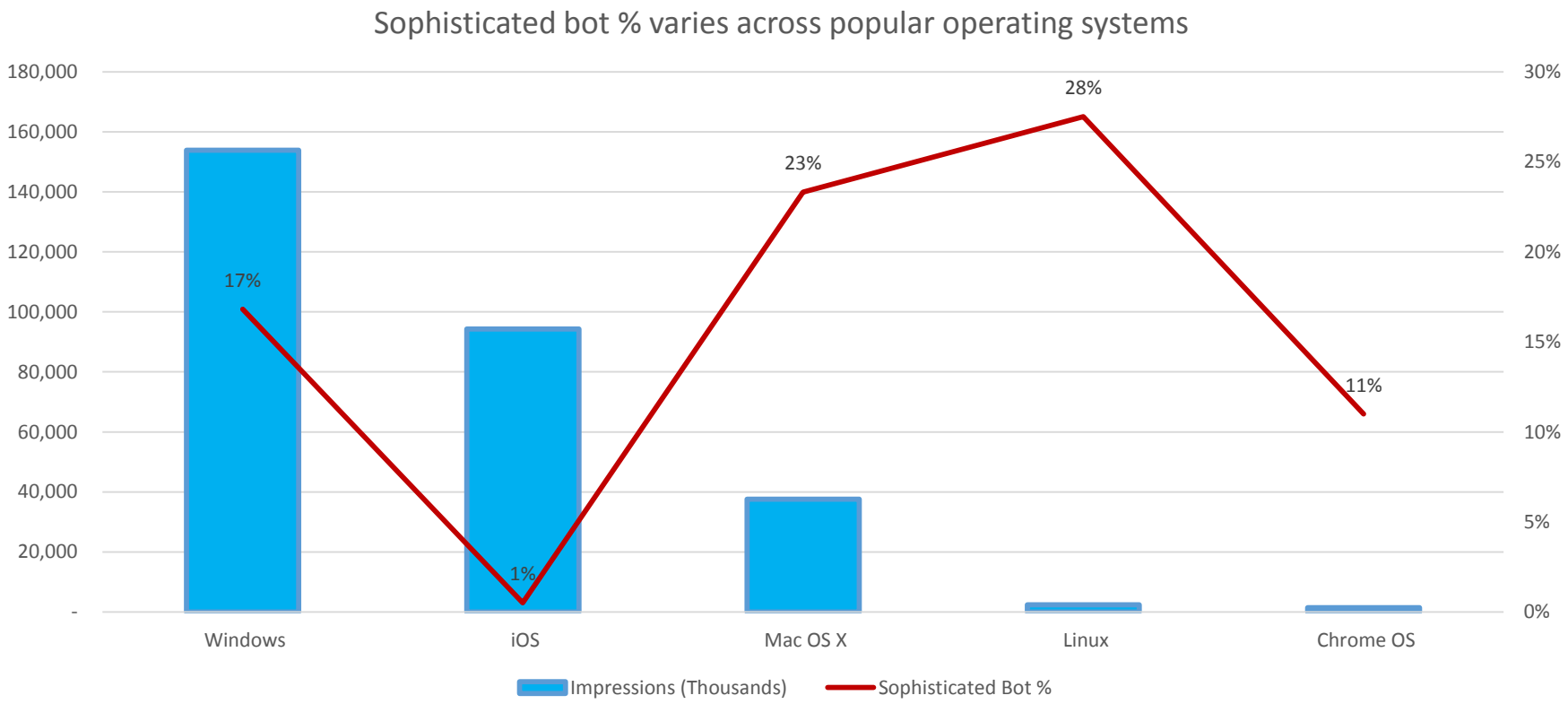
Bot percentage varies by operating system

To maintain quality, publishers can target away from high-bot operating systems.



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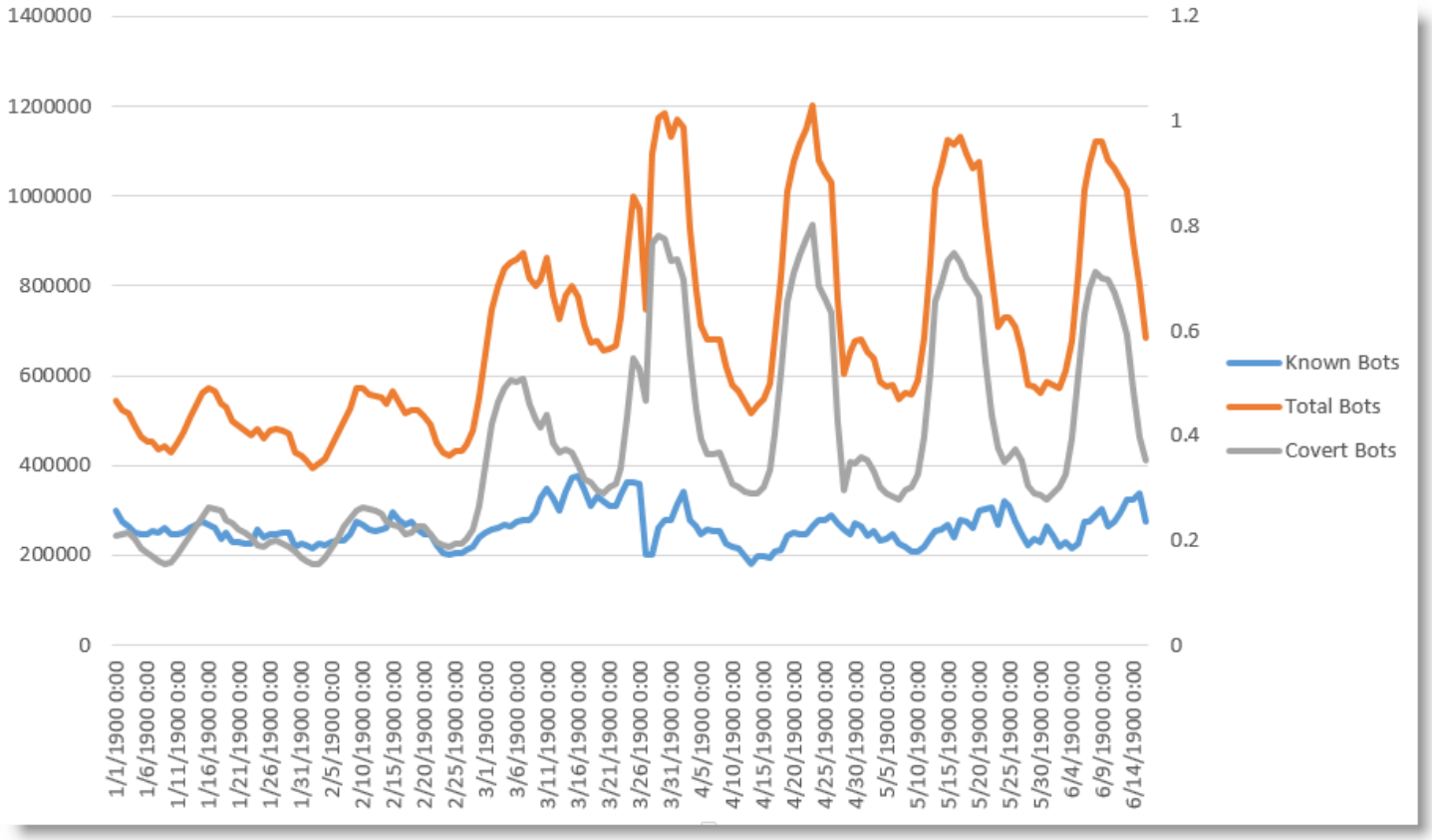
Smart bots mimic human usage patterns

Sophisticated bots still account for a greater proportion of traffic at night.



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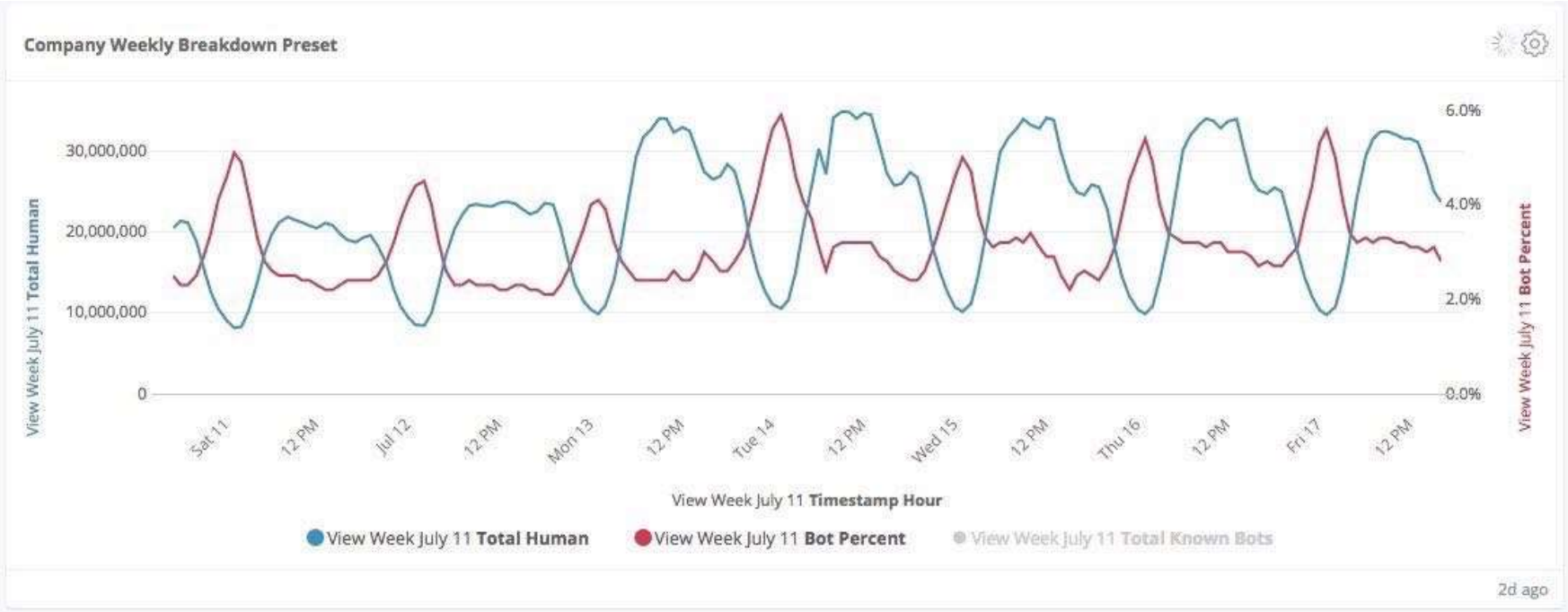
Sophisticated bots drop slightly on weekends

On weekends, the range for both human and bot traffic tends to be smaller.



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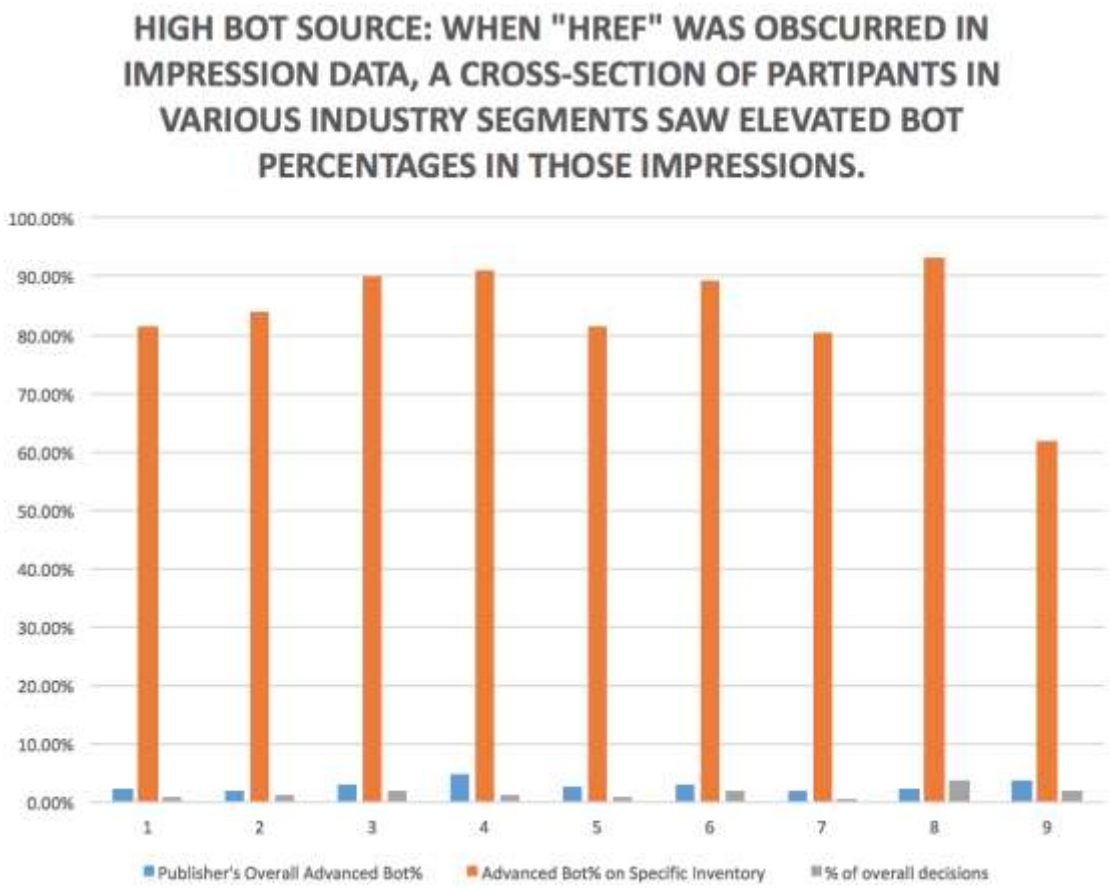
Bots try to evade detection

Sometimes, what bots do to escape detection can be used against them.



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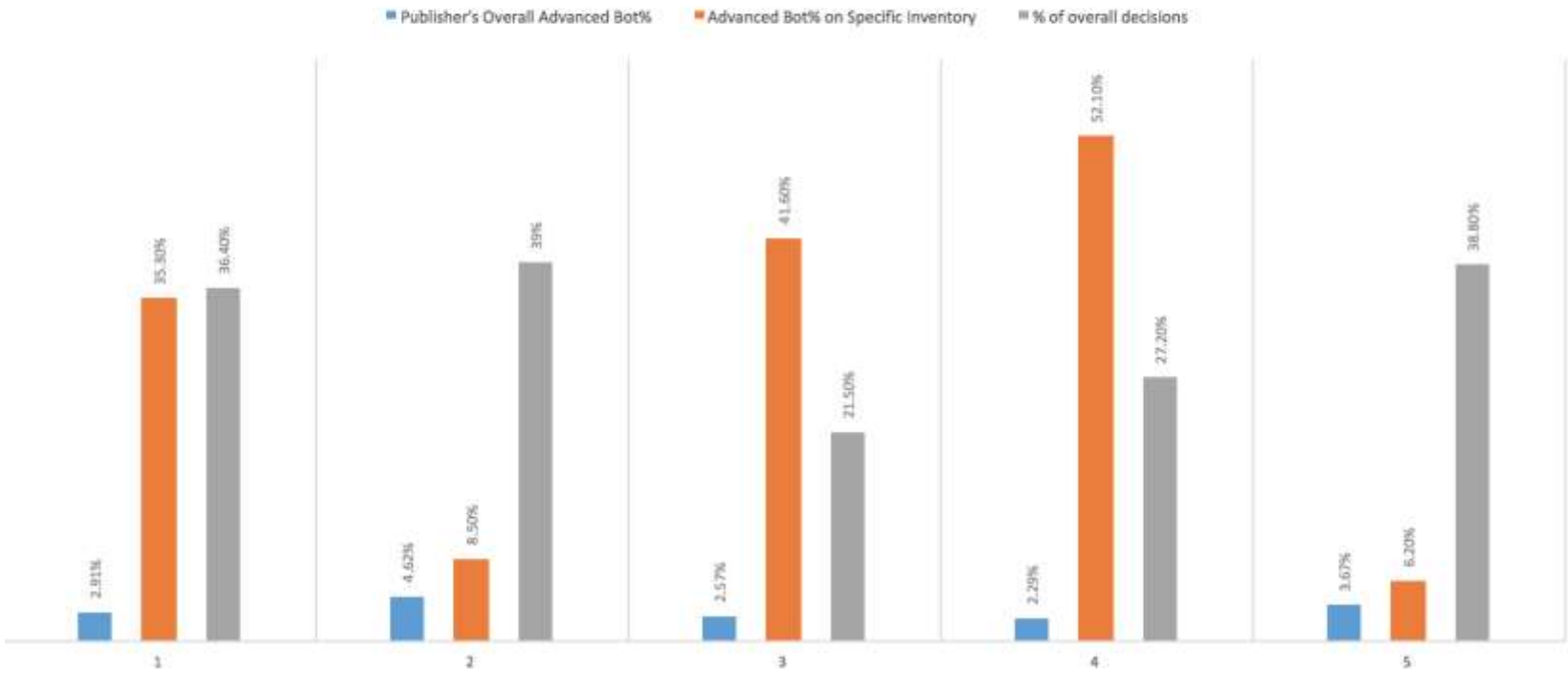
Sometimes, what bots do to escape detection can be used against them.

HIGH BOT SOURCE: WHEN "REFERRER" WAS OBSCURRED IN IMPRESSION DATA, SEVERAL PARTICIPANTS IN LIFESTYLE, STYLE AND FASHION, AND NEWS INDUSTRY SEGMENTS SAW ELEVATED BOT PERCENTAGES IN THOSE IMPRESSIONS.



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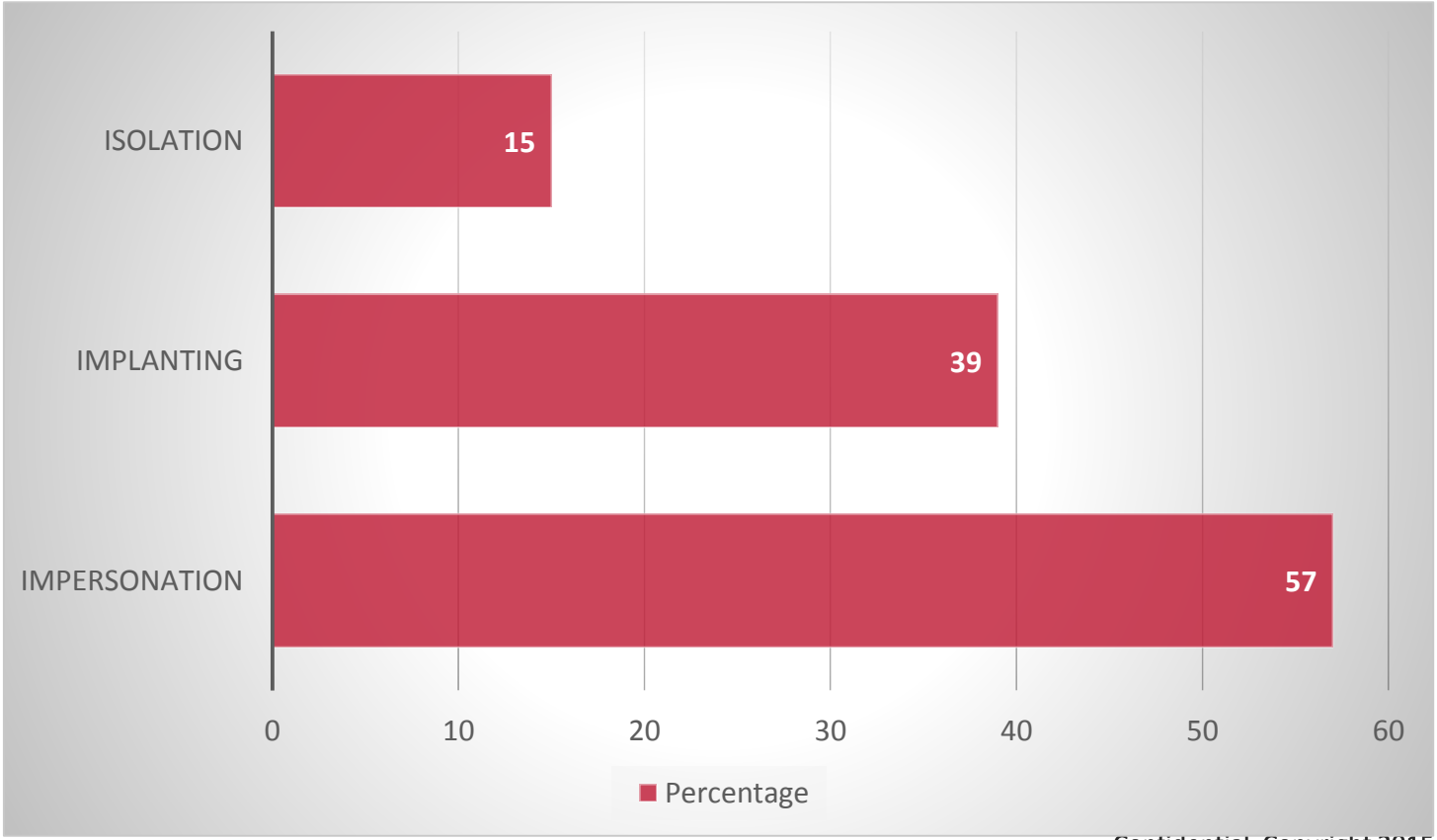
Profile of sophisticated bots

Most sophisticated bots impersonate a specific browser in an attempt to be seen as human.



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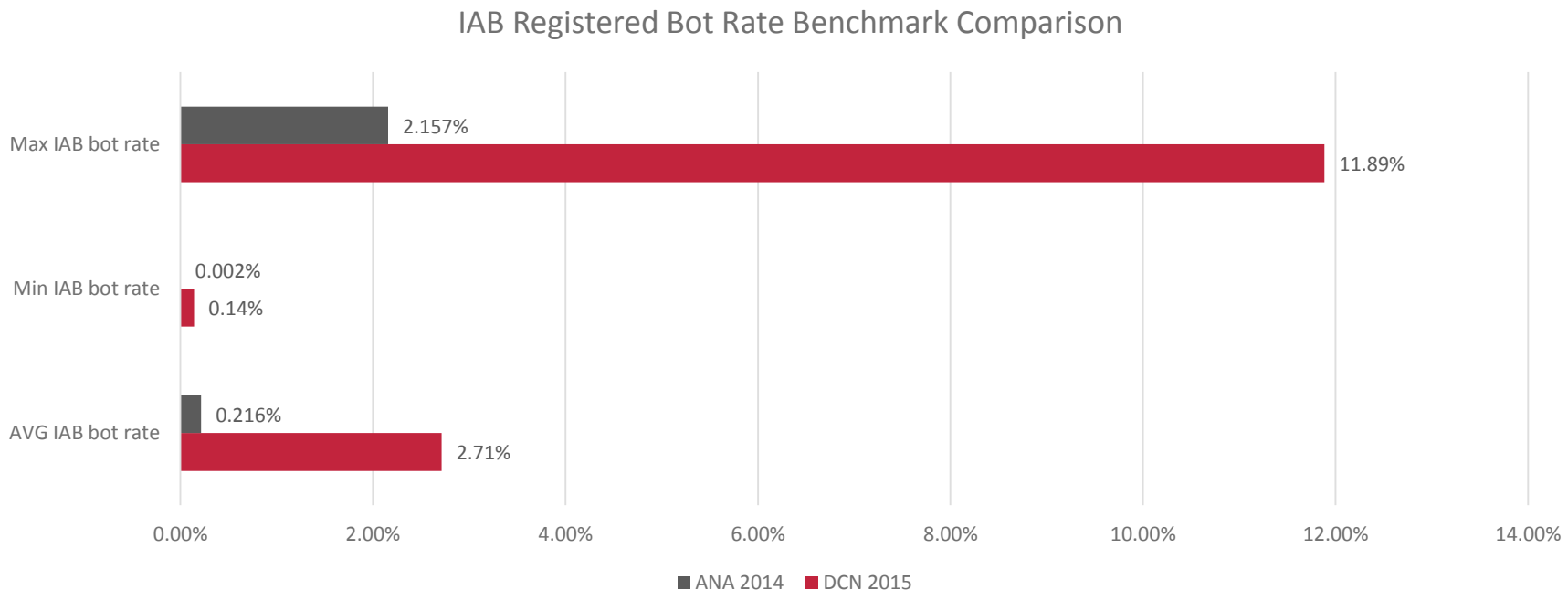
Profile of IAB registered bots

Participants in The Bot Baseline showed average IAB registered bot levels of 0.22%, with a range of .002% to 2.26%, while DCN Benchmark study participants showed an average IAB registered bot rate of 2.71%, with a range from 0.14% to 11.89%.



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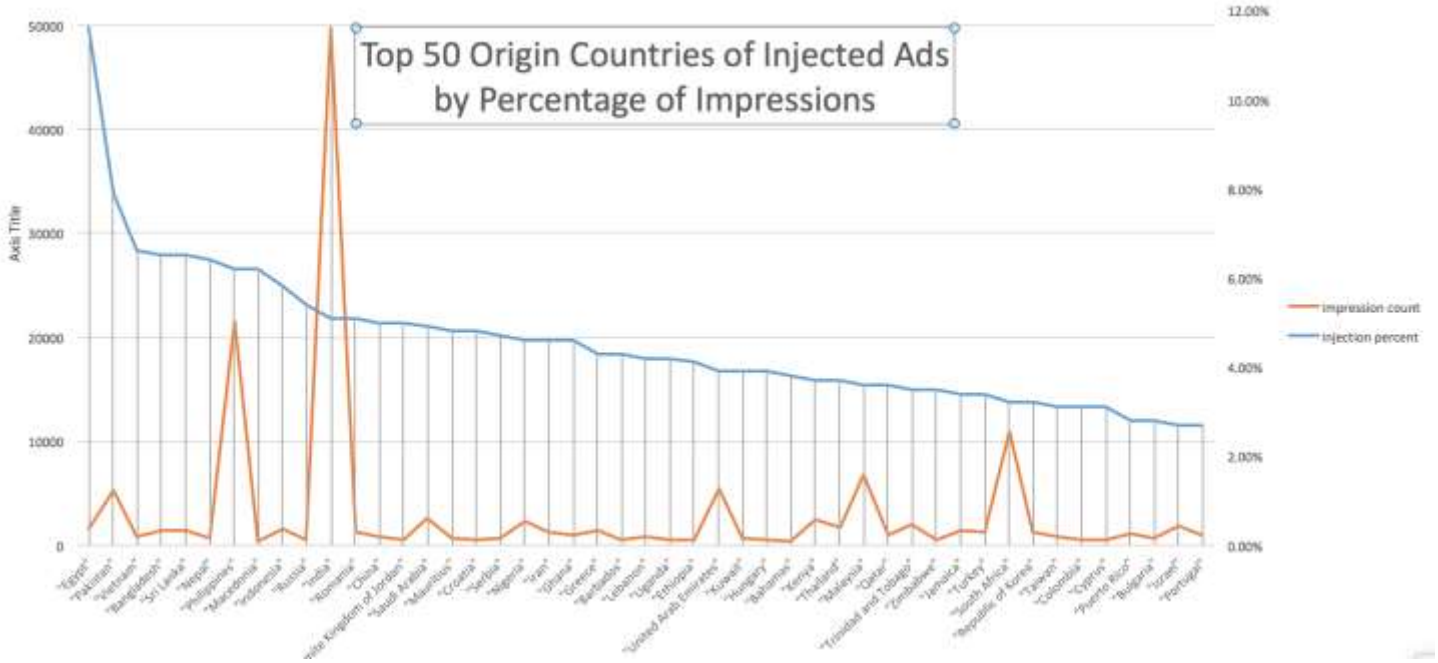
Ad injection affects publishers

CASE STUDY: A participant's ad injection rate was higher than their sophisticated bot rate. **Ad injection to one participant was greater than 3%, while sophisticated bot traffic was less than 2%.** Similar levels of injection likely affect similar publishers.



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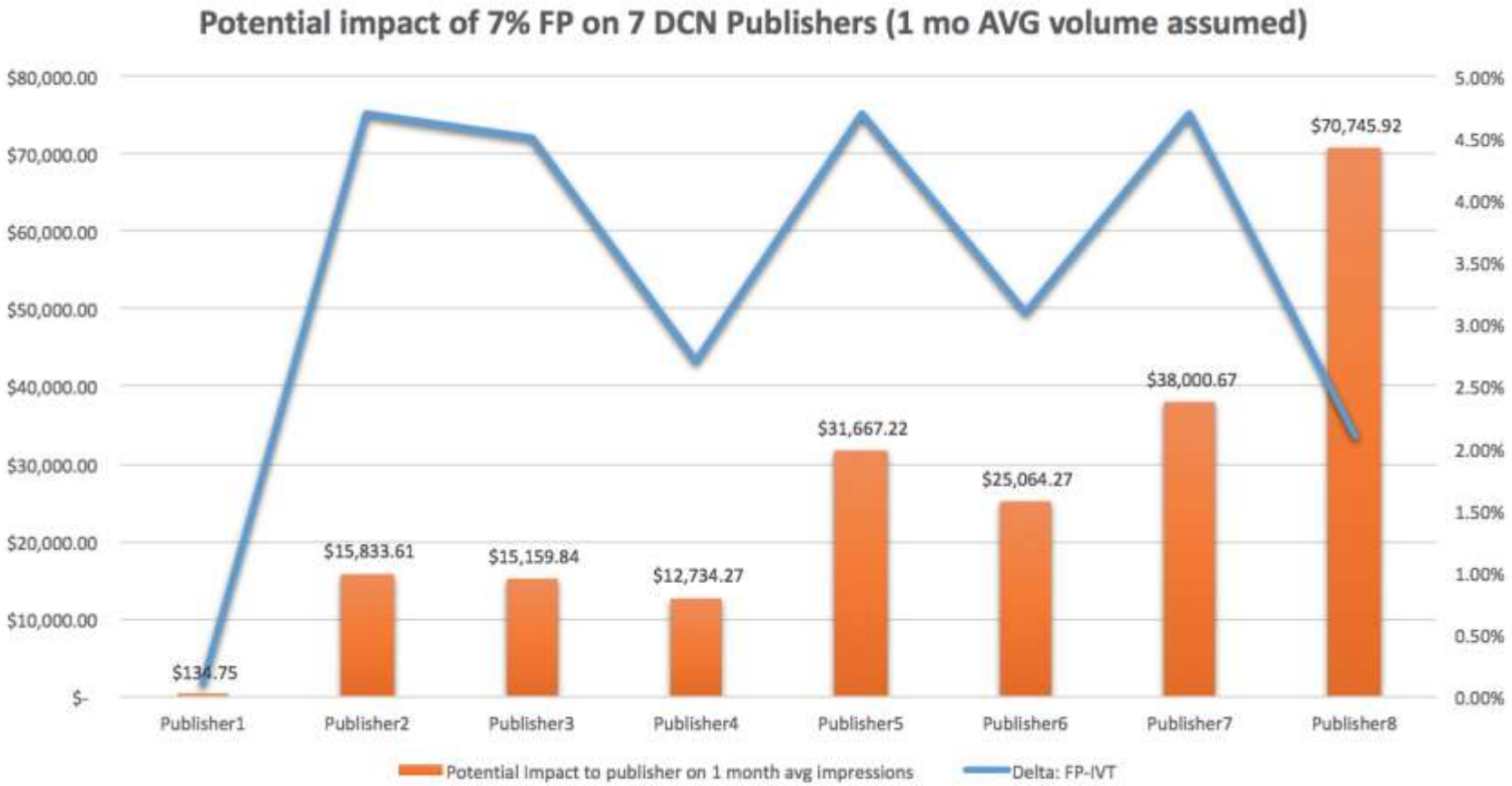
False-positives affect publishers

A sample of DCN publishers and their potential monthly losses from 7% FPs in vendor reporting This graph uses the vendor's White Ops-detected sophisticated bot % with the vendor's self-reported CPM, volume averaged over the group.



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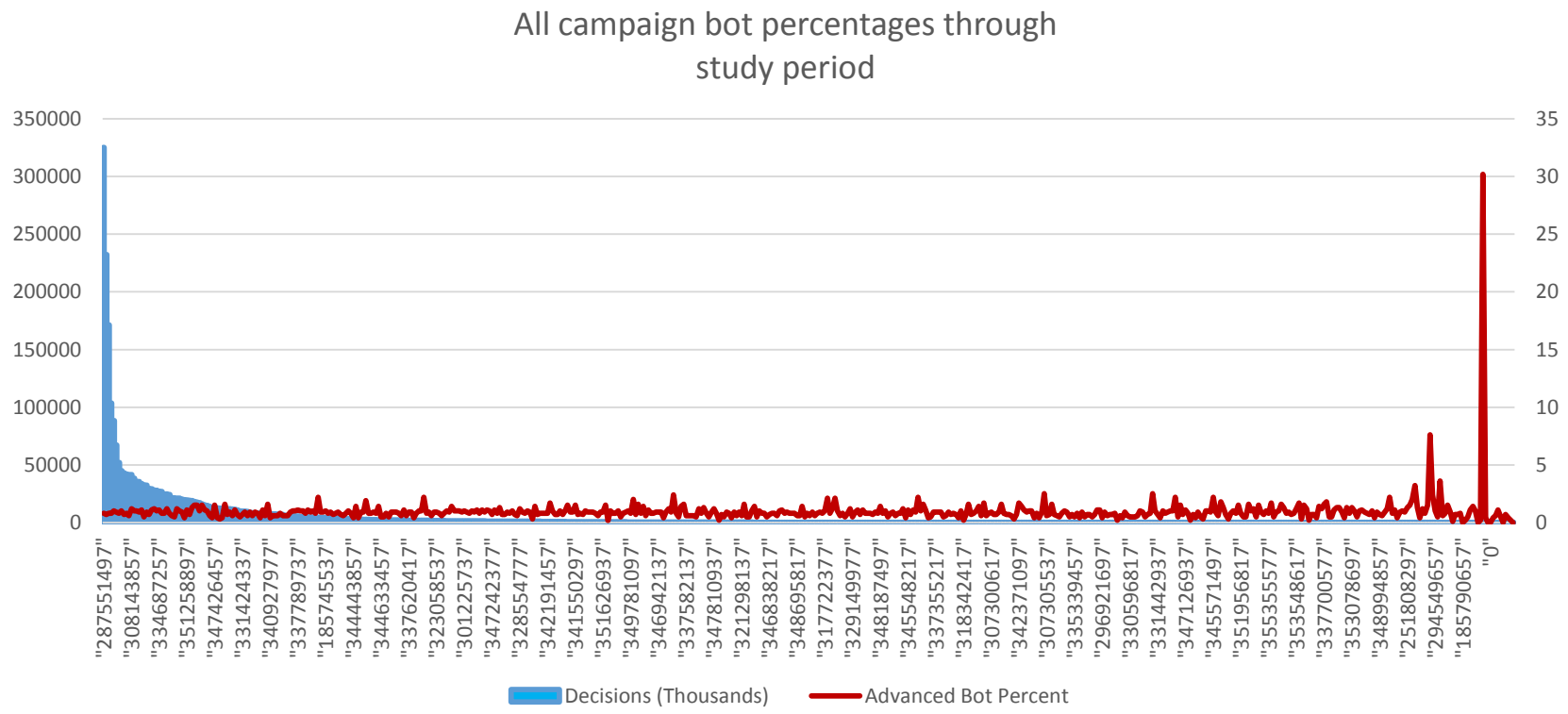
Strategies improve inventory quality

Case study: A top-volume publisher who did not source traffic and only sold inventory via direct buys had a very low bot average.



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Conclusions

While high-quality publishers have a lesser sophisticated bot problem than the advertising ecosystem in general, **publishers can maintain high humanity levels through policies and strategies.**

Sophisticated bots will continue to better emulate humans. Increasingly, parasitical bots target cookies or implant themselves in legitimate browsers, allowing the automated traffic to don the cloak of legitimacy and appear to be an actual human visiting sites.

Data-informed strategies can help publishers avoid third parties who provide traffic with high sophisticated bot rates.

Direct buys to premium publishers who demonstrate the commitment to maintain low sophisticated bot rates can consistently yield human audience levels of 97% or more.

Publishers can protect their marketers by agreeing to transparency in inventory quality, allowing tracking of inventory quality for validating traffic bot and humanity percentages, and by agreeing to bill based on humanity.

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Recommendations

Publishers can win more RFPs, secure larger shares of advertiser budget and justify higher CPMs by selling on your biggest market advantage: a premium human audience.

- **Safely source traffic**
  - Monitor sourced traffic to protect marketers from increased risk
- **Defend against unverifiable NHT reports**
  - Use a monitoring solution to prove verifiable bot levels
- **Control bot hotspots and problem areas to protect inventory quality**
  - For inventory with irregular humanity percentages or high CPMs, monitor for bot activity so you can limit bot spikes
- **Improve page measurability to precisely manage inventory quality**

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Thank You!

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Ad Blocking Software

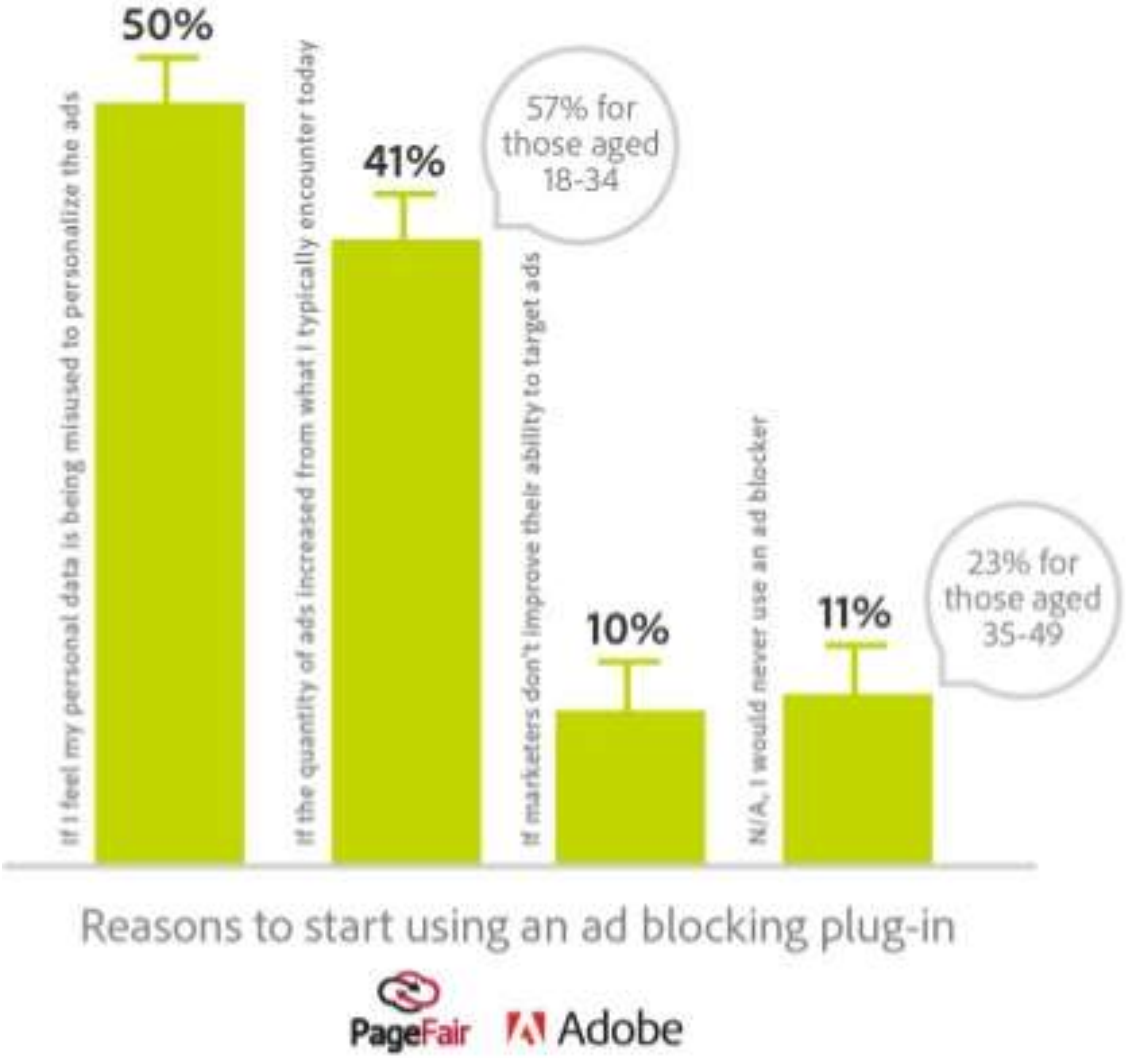
- According to PageFair/Adobe 2015 report, there are nearly 200 million consumers using ad blocking software
  - 41% increase year over year
  - 16% of US population (48% increase)
  - Estimated loss of revenue = $21.8 billion

- Apple to allow apps to have access to “content blocking extensions” in iOS9 (released today)
  - Apps could block ads, beacons, cookies, etc

Ad Blocking Software

- Early testing shows big improvement to consumer experience
  - Crystal app tested on 10 sites (NY Times, Business Insider, Macworld, Wired, The Verge, Vice, PC Gamer, iMore, Kotaku, Huffington Post)
  - On average, pages loaded 3.9x faster and used 53% less bandwidth

Ad Blocking Software



PageFair/Adobe, December 2015

Ad Blocking Software

- Solutions?

Ad Blocking Software

- Next Steps
  - EFF Proposal
    - ads would be allowed on sites that honor DNT
    - Partners include Ad Block, Disconnect, Medium, others
  - Publisher-led effort to define “acceptable advertising”
    - Better creative in advertising
    - Load times
    - Limits on 3rd party data collection/use (not just for consumers who have opted out)