

# Measuring Audience Engagement through Analytics

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June 12, 2014

@DCMediaInnov | #DCMediaInnov

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# Our Mission

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- Discover what's being done now
  - Share new ideas and prototypes
  - Learn ways to better engage with users
  - Have fun
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# Meet the Organizers

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**Annyce Davis:** Software Engineer with 10+ years of programming experience implementing database driven software applications. Specialize in Java Web Frameworks and Android Development, with a special interest in mobile gaming.



**Vidya Viswanathan:** Principal Architect with 15+ years of design and development experience on web and mobile platforms. Special focus on Video across platforms in the last few years.



**Alex Remington (@alexremington):** Product manager, working on digital subscriptions and vendor relations. Interested in pay models and digital content. A former obituary writer and still-occasional baseball blogger.



**Angela Wong (@afwong):** Digital product analyst working on product design and data initiatives. Also interested in journalism, tech, innovation, and machine learning.

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# Work at AddThis and The Post

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- AddThis ([addthis.com/careers](https://addthis.com/careers))
    - Data, Java, web engineers
    - Product marketing
  - Washington Post ([careers.washingtonpost.com](https://careers.washingtonpost.com))
    - Data scientists
    - Front-end, iOS, and software engineers
    - Mobile product manager
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# Agenda

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- Startup Corner: Zoomph's Amir Zonozi
  - Chartbeat's Josh Schwartz
  - NPR's Stephen Haptonstahl
  - AddThis's Charlie Reverte
  - Panel and Audience Q&A
  - Drinks at Stan's
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# Startup Corner

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Interested in giving a 5-minute talk or demo?  
Contact one of the organizers.

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# Startup Corner: Zoomph

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## Zoomph Demo

@Zonozi



**AMIR ZONOZI**  
Chief Strategy Officer  
[amir@zoomph.com](mailto:amir@zoomph.com)

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# Chartbeat's Josh Schwartz

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@joshuadschwartz

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# Efficient A/B Testing: Embracing the Null

Stephen Haptonstahl, PhD

Data Scientist

@polimath

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# A/B Testing

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- Compare two versions (A and B) of software, site design, etc.
  - Requirements
    - a. Metric to gauge whether A or B won
    - b. Random assignment
  - Experimental research design yields clear causal inference -- other factors average out
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# A/B Tests Should Answer...

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1. One of them won (A or B), *or...*
  2. It was a tie, *or...*
  3. You need  $k$  more observations to reach a conclusion
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- Most software only answers #1
  - Rules of thumb can suggest #3
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# Why not conclude it's a tie?

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Hypothesis tests cannot conclude that  $A == B$   
(the null hypothesis) because:

$$\Pr(A == B) = 0$$

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# A solution

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Define a **minimum meaningful effect**  $M$

- def: diff less than this isn't worth the effort
- Substantive question, not methodological
- Cost-benefit analysis

Use: If  $|A - B| < M$  then conclude it's a tie

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# (moderately more) Specifics

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1. Calculate difference of means and standard error SE of this difference
  2. Treat SE as SD of a variable (Bayes!)
  3. Use area under curve to estimate
    - $\Pr( A-B ) > M$  (A wins)
    - $\Pr( |A-B| ) < M$  (tie)
    - $\Pr( A-B ) < -M$  (B wins)
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# Results

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1. Easy to conclude A or B won
  2. If a tie, move on to other tests (time == \$)
  3. Same approach used to estimate amount of data needed to reach #1 or #2
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# Demo

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Metric: daily usage time for a mobile app

Implementation: R + shiny

<https://polimath.shinyapps.io/abtest/>

<https://github.com/shaptonstahl/abtest>

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# AddThis's Charlie Reverte

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@numbakrrunch


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# AddThis



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- How do I drive more engagement?
  - What is engagement anyway?
  - What about personalization?
  - What about mobile?





## Recommended for you

**Introducing Social Sign In**

www.addthis.com

Promoted Content

**The Most Common Ways People Squ...**

Money.com

AddThis

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author Keesan
s: Matthew
n: Keesan
f/www.facebook.com/keesan
i: keesan
["id":"112111905481230","name":"T
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employer":
80915728","name":"AddThis"},"posi
80527695408","name":"Director,

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Today marks another milestone in the evolution of AddThis. When you sign in today, many of you will notice a brand new dashboard that has something for everyone. Previously we had two different dashboards: one for free users and one for our Pro customers. [Continue](#)

# Engagement And Your Funnel

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## Acquisition

- Sharing, Search, Referrals

## Retention

- Recirculation, Bounce rate, Email opens,

## Conversion

- Purchase, Subscription, Ad clicks

# Driving Engagement



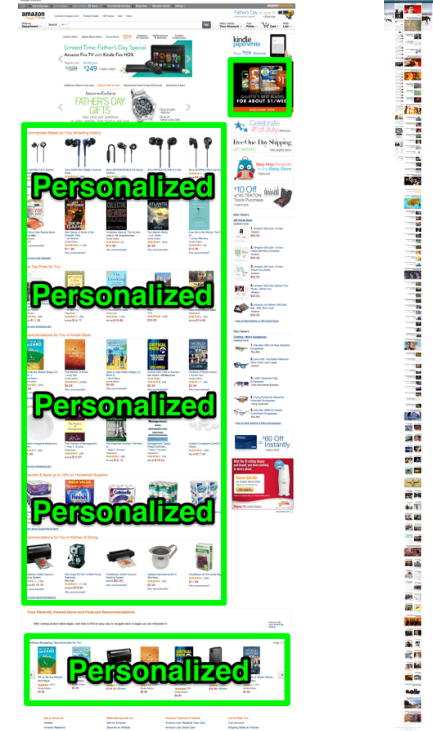
- Recirculation boosts sharing, following
- CPM at the top, CPC at the bottom
- **Leverage your evergreen content**
  - Recent content != best content
  - Ebb and flow of user interest



# Personalization



- Increase relevance!
- Don't just add noise
- Personalize
  - User interests
  - Referrer
  - New vs. Returning
  - Mobile vs. Desktop
- Think discovery



# What About Mobile?



Apps aren't everything.

Your mobile website:

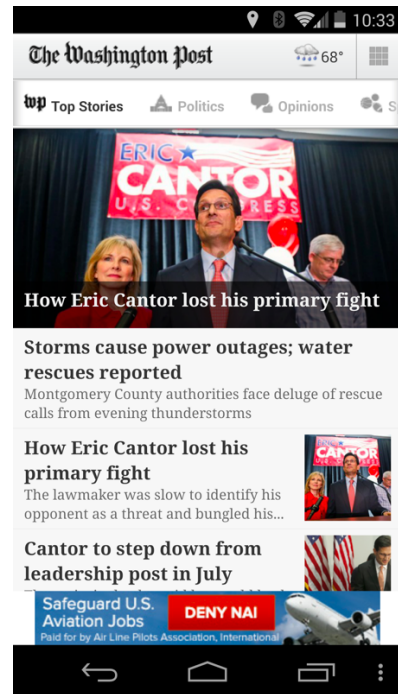
- All social user acquisition
- All new search traffic
- All inbound links
- All referring signals

Invest in your site to grow

Invest in your app to retain



Mobile Web



Mobile App



# AddThis

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Charlie Reverte  
VP Engineering  
[@numbakrrunch](#)

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# Panel and QA: #DCMediaInnov

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@Zoomph: Amir Zonozi (@zonozi)

@Chartbeat: Josh Schwartz (@joshuadschwartz)

@NPR: Stephen Haptonstahl (@polimath)

@AddThis: Charlie Reverte (@numbakrrunch)

@DCMediaInnov Moderator: Angela Wong (@afwong)

Use the hashtag #DCMediaInnov

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# Zoomph: Avoiding Click Bait

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How should organizations avoid falling into the dump of click bait garbage?

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# AddThis: Avoiding Click Bait

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How important should the number of social shares be to publishers as an engagement metric?

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# NPR: Old School vs. New School

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As a news organization, are you leaning towards the old-school engagement metrics or the new school of thought that advocates for attention metrics? Has that changed the way you are tracking your analytics?

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# NPR: Long-Form Stories

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Do you track engagement differently on your long-form pieces? How is engagement tracked on NPR's long-form pieces?

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# AddThis: Analytics Transparency

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How can opening up analytics to the newsroom or other departments such as engineering, marketing, and sales be good or bad for a news organization?

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## Next Meetup...

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# Building New Products at News Organizations

If you are interested in participating, please contact one of the organizers. More info on the Meetup page.

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# Drinks at Stan's Restaurant

One block down L  
Street

At corner of L Street  
and Vermont Avenue

1029 Vermont Ave  
NW, Washington, DC  
20005

