

# Understanding the Impact of Video Quality on User Engagement

presented by Jason Lee

# Before we get started...

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Conviva provides real time streaming optimization and performance measurement for content providers to maximize their online video business.

# Optimized Video for Every Viewer



## Insights<sup>SM</sup>

If it's not real time, it's too late. Conviva Insights monitors each viewer, every second, and empowers content owners with actionable insights to make quick decisions that extend viewer engagement.

Read More: [Solutions Page](#)



## What we do



Conviva helps content owners and rights-holders increase engagement and build stronger relationships with consumers by delivering an optimized and personal video experience to each and every viewer – every single time.

## How we do it

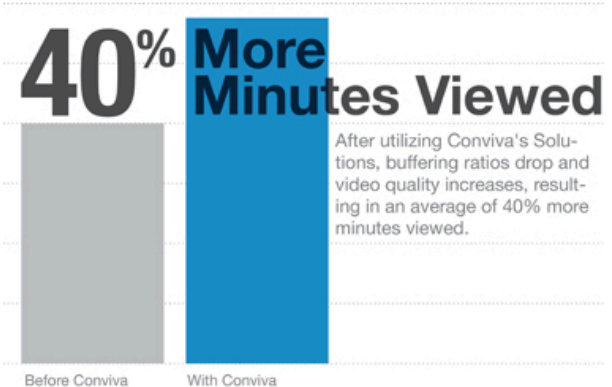
Our solutions allow media companies to:

Optimize every video stream

View real-time audience metrics

Compare timely indicators of performance against critical business goals

Read more: [Case Studies](#)





# Video streaming today

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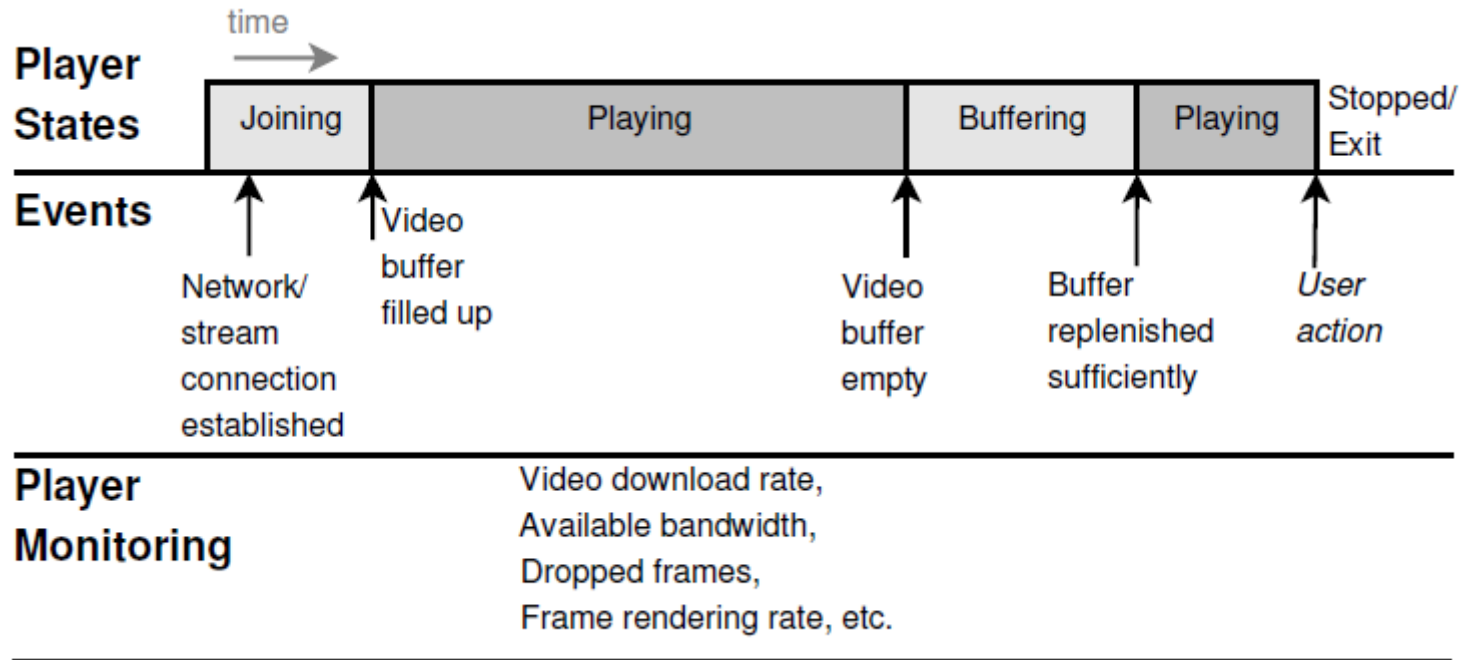
- ▶ Streaming live events (sports, concerts, presidential debates...)
- ▶ Content delivery is cheaper, easier
- ▶ Provided by a variety of groups
  - ▶ Hulu, Netflix, YouTube
  - ▶ Revenue via subscriptions and ads

# Aims

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- ▶ **Observe interplay among**
  - ▶ Video quality
  - ▶ User engagement
    - ▶ Per video, per user
  - ▶ Content types
    - ▶ Short VOD, long VOD, live content
- ▶ **Answering three questions**
  - ▶ How much does quality matter?
  - ▶ Do metrics vary in how much they impact engagement?
  - ▶ Do the critical quality metrics vary across genres?

# Video lifecycle



# Analyzing quality on engagement

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- ▶ **Quality metrics**
- ▶ **Time-scales of user engagement**
  - ▶ View level (single user, single video: play time)
  - ▶ Viewer level (single user, all videos: views, total play time)
- ▶ **Types of video content**
  - ▶ Long VOD (15~60 minutes)
  - ▶ Short VOD ( 2~5 minutes)
  - ▶ Live content (smaller buffers, synchronized viewing)



# Collecting data

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## Insights<sup>SM</sup>

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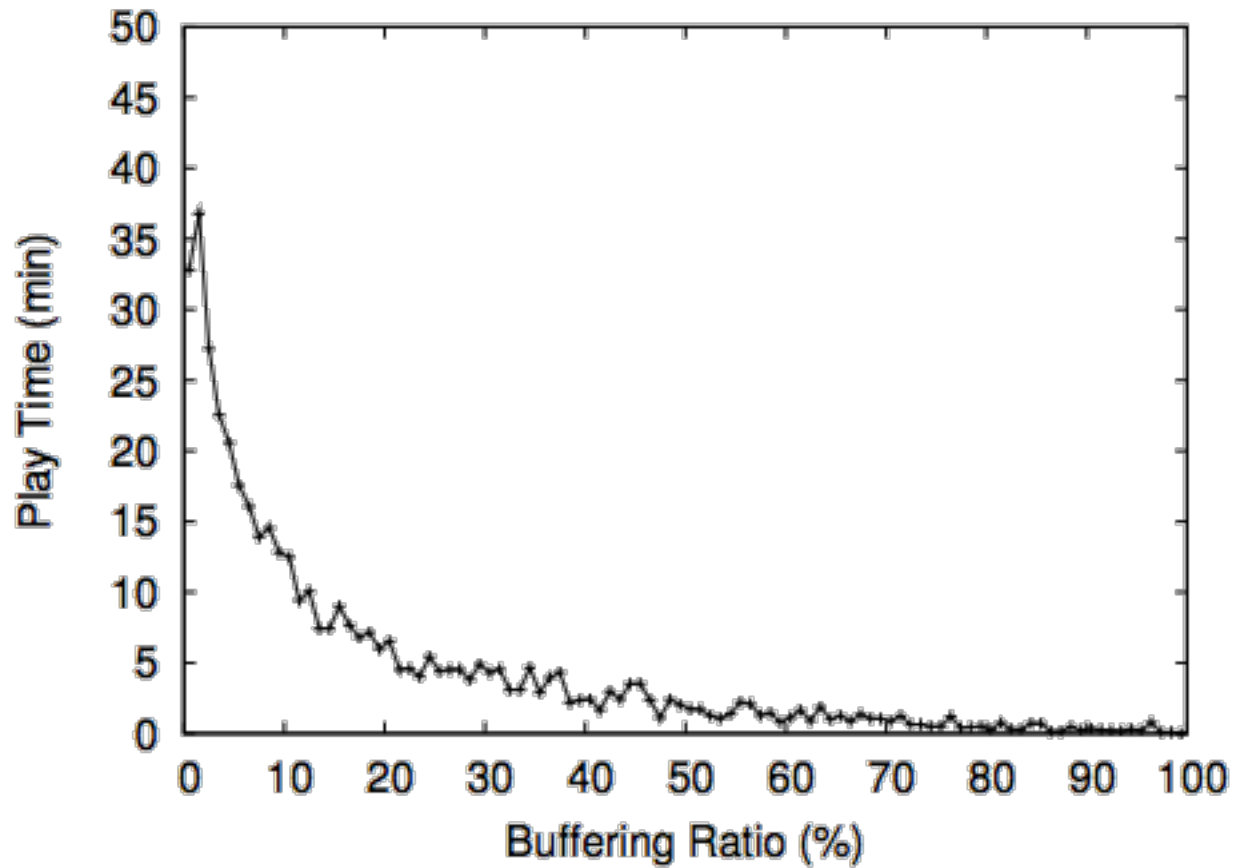


Insights monitors the experience of each viewer, every second providing an ongoing audit and independent analysis of the complete video ecosystem.

- ▶ Client-resident instrumentation library
  - ▶ At “edge”
  - ▶ At scale
- ▶ Data aggregation and processing in data centers
  - ▶ ~ 0.5 TB/day from affiliates

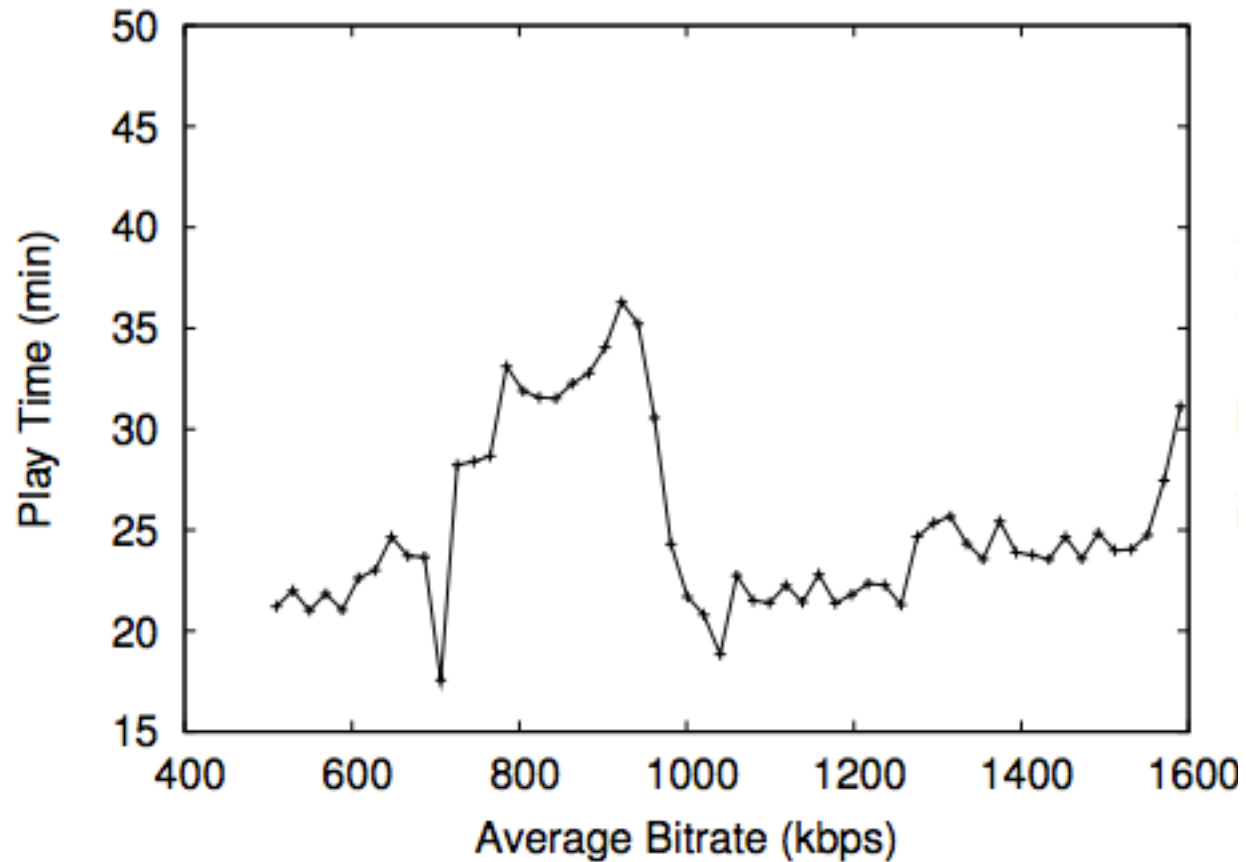
# Buffering ratios can really hurt

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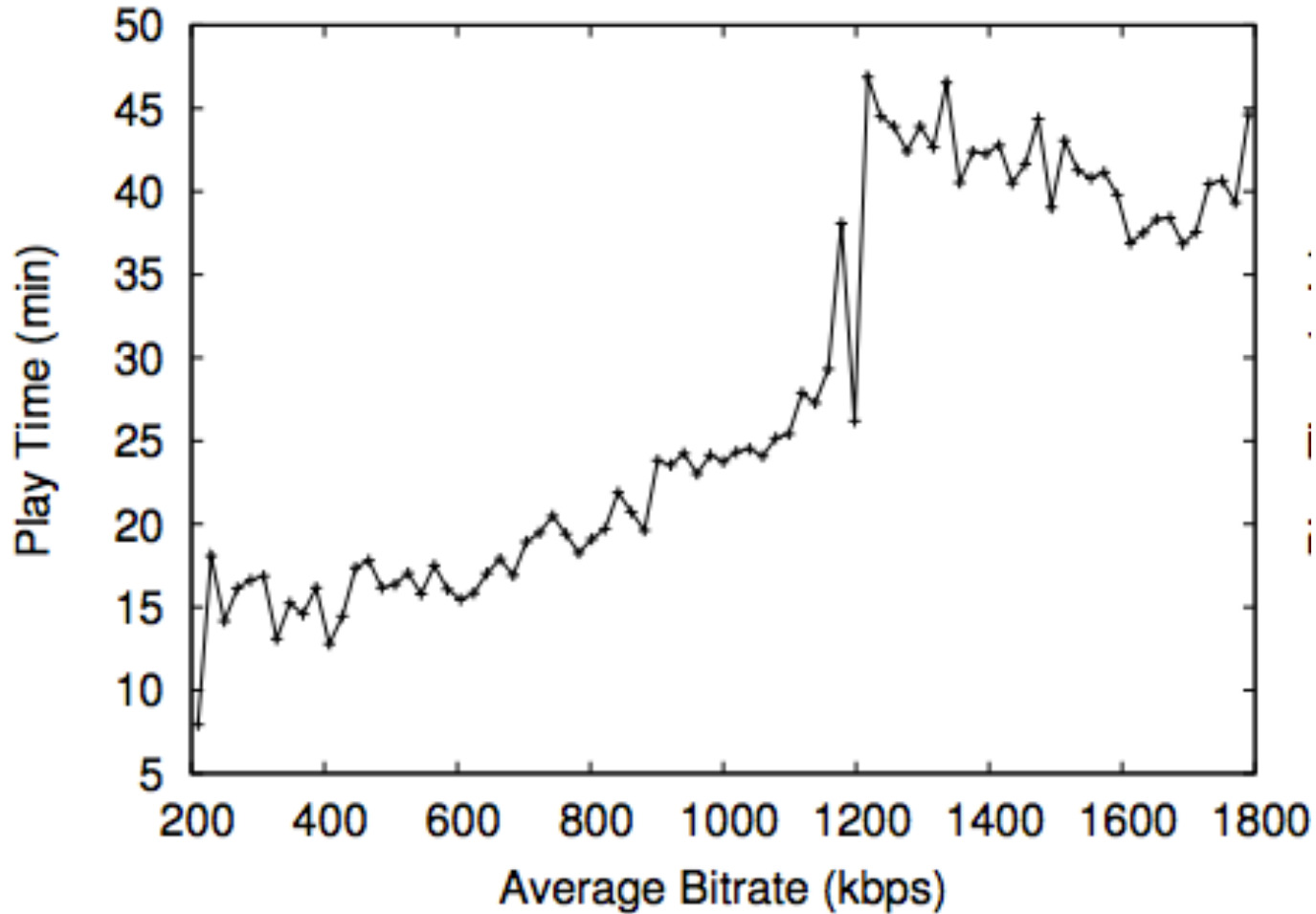
# Average bitrate isn't critical to engagement

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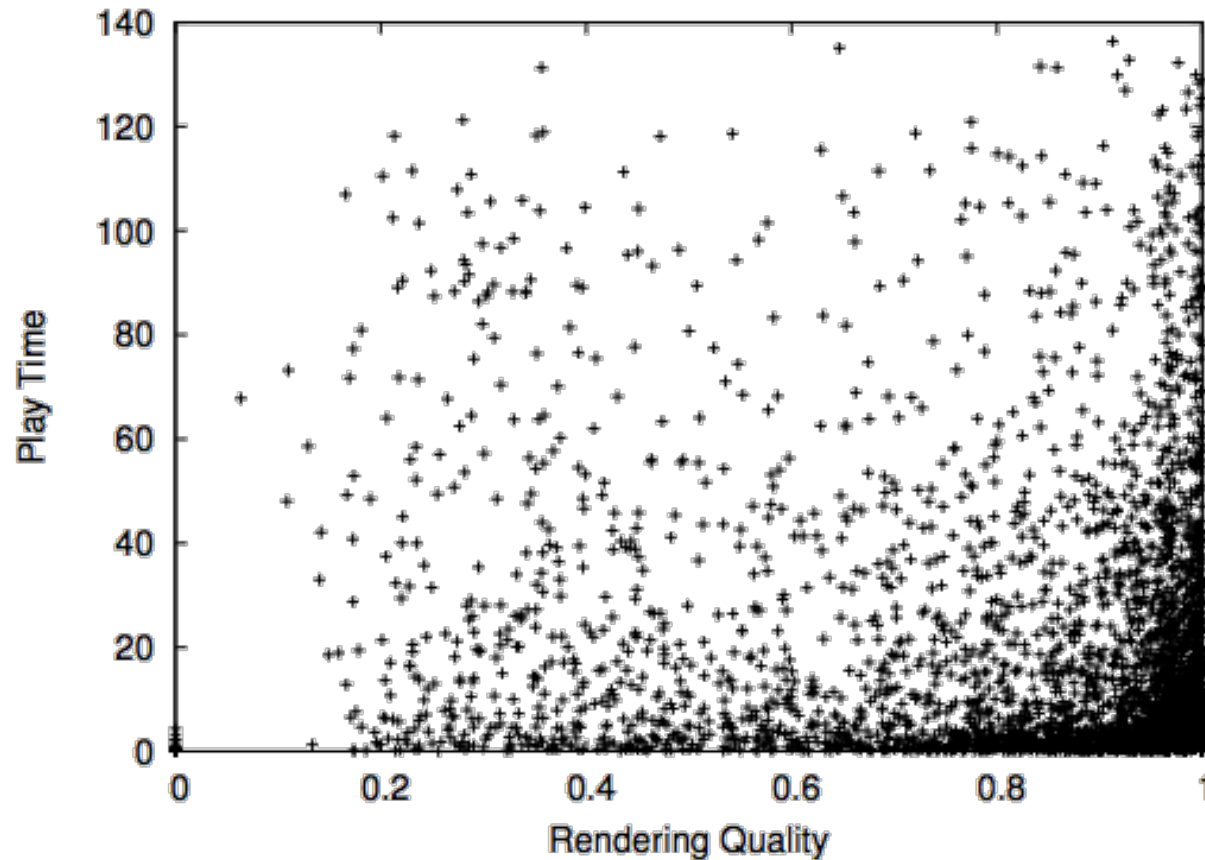
# But is more important for live video

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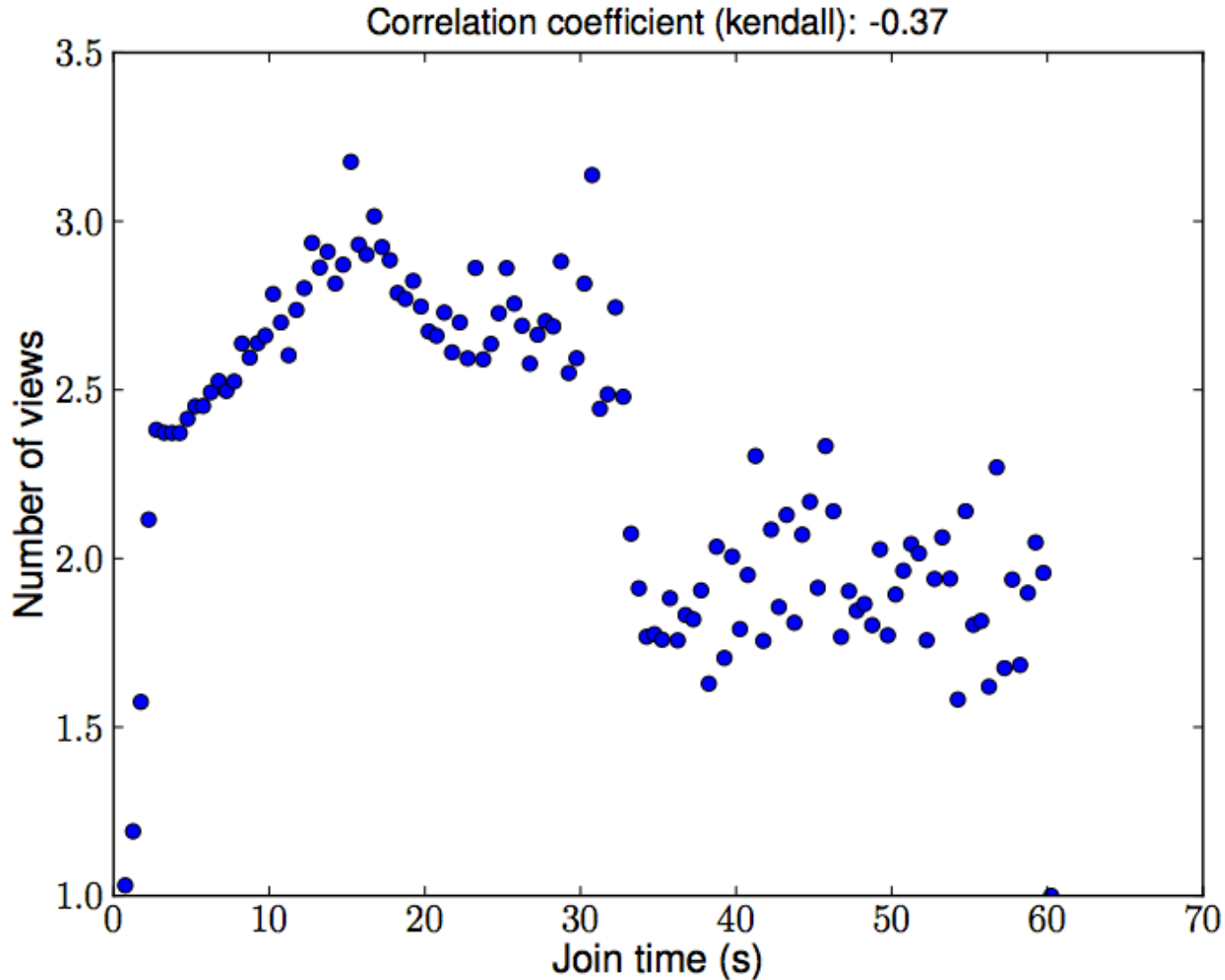


# Rendering quality doesn't have to be great

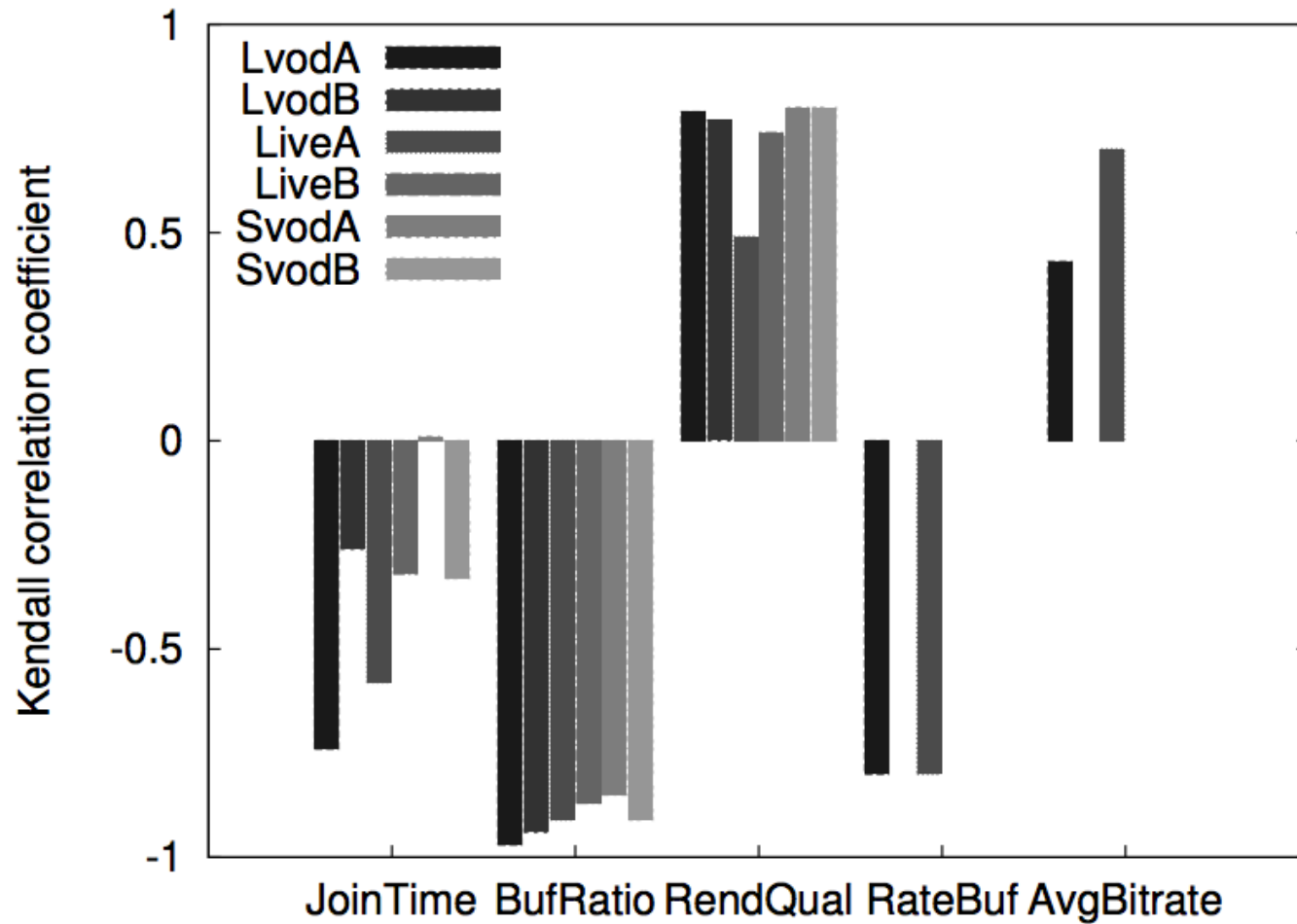
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# Join time matters the least



# All together now



# Wrapping up

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- ▶ **Blind men + elephant**
  - ▶ Complementary analysis techniques are good!
  
- ▶ **Lies, damned lies, and statistics**
  - ▶ Don't just rush to conclusions, look at context
  
- ▶ **Ultimate goal?**
  - ▶ Video quality index

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**Video AdVantage<sup>SM</sup>**

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Providing a high quality viewing experience that keeps your audience captive means more ad completions and ultimately, more revenue per viewer.