

Getting Attribution Right

An Exploration and Best-Practices For Television Data Inputs in
Attribution Modeling



What is Attribution?

at·tri·bu·tion

/,atrə'byooSH(ə)n/ ◀▶

noun

- The science of allocating credit to exposures for driving sales or other outcomes
- The most scintillating, complicated and elusive topic in the television industry

A measure of ROI and tool for tactical optimization of media elements at the household or device-level

- Requires STB or SmartTV data matched to households or devices

What's Required for Accurate Attribution?

The Schedule	▶	Accurate ID of campaign spots
Exposure Measurement	▶	Average Rating, Reach and Frequency
Outcome Variables	▶	Web visits, retail traffic, sales, ratings
Identity Resolution	▶	Linking all variables
Lift Measurement	▶	Analytics for measuring incrementality

All at the speed of light!

Study Participants And Their Underlying Technology

Providers

605
Alphonso
Ampersand
Comscore
iSpot
NCS
Samba
TVSquared
VideoAmp

Occurrence Detection -Ad Monitoring Services Mixed Technology

iSpot
Hive
Kantar
Nielsen
Plus Proprietary
Approaches

Viewing Detection MVPDs and other boxes Audio/Video Recognition Panel & Mix

Set Top Box
ACR
Nielsen

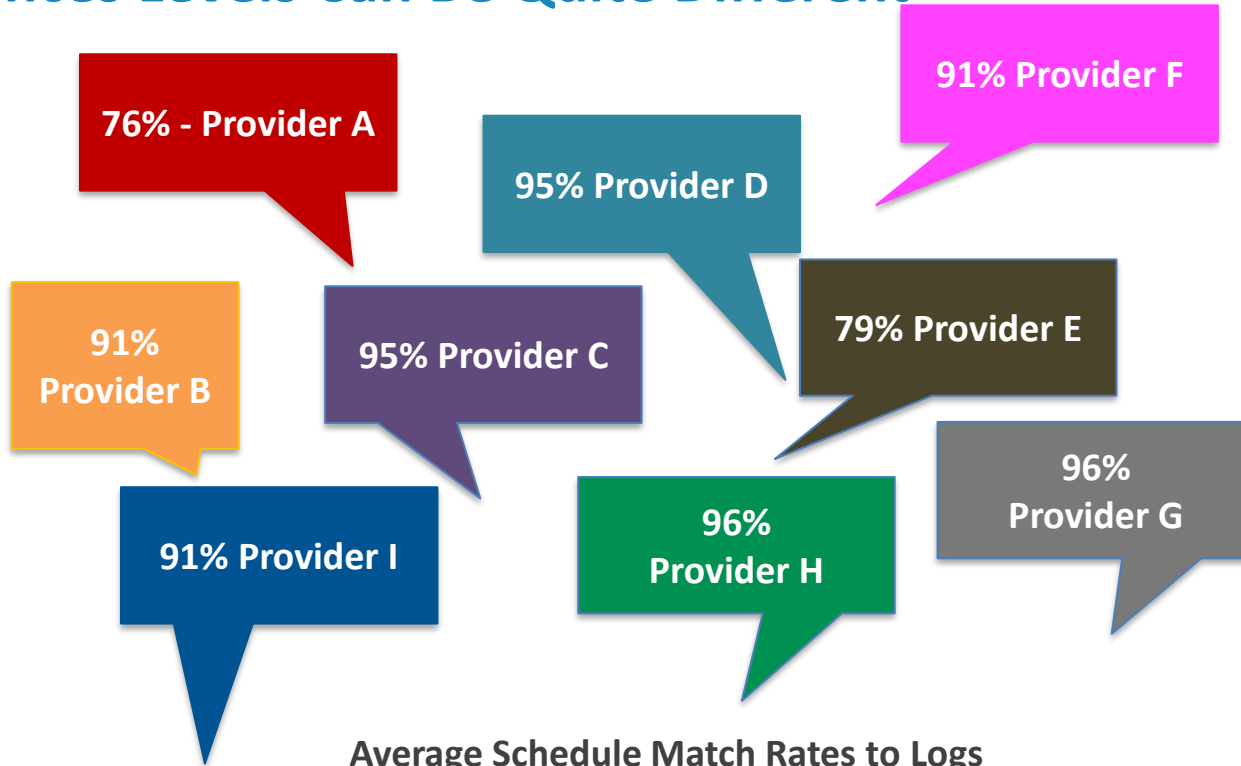
Summary of Key Findings

- Key television attribution inputs are highly inconsistent from provider to provider and across our test schedules
 - The schedules they use might not resemble the advertisers' TV buy
- Outcomes differ inexplicitly by provider
- Provider exposure data impacts outcome measurement approach results more than occurrence data
- Methodology, rather than technology, is the root cause of key differences in inputs and outcomes
 - Differences in underlying technology do not offer simple explanations, e.g., AI, watermarking, fingerprinting for occurrences and ACR, STB or both for exposures

Key Question - Occurrences

How do variations in occurrence data impact TV in attribution models?

Occurrences Levels Can Be Quite Different

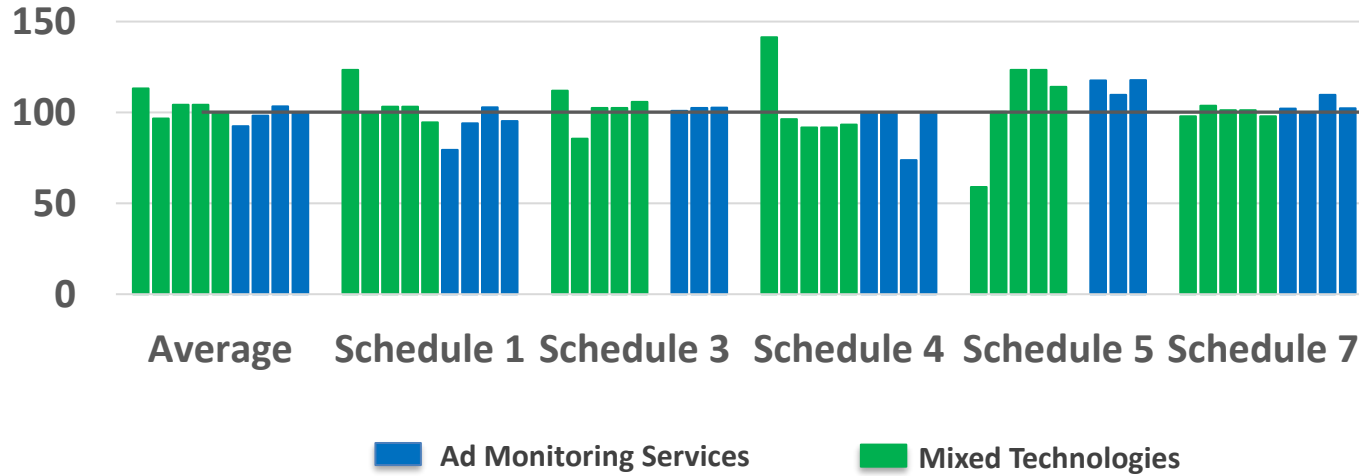


Average Schedule Match Rates to Logs

(+/- 5 minutes)

Why Are Occurrences Different? Not Because of Underlying Technology

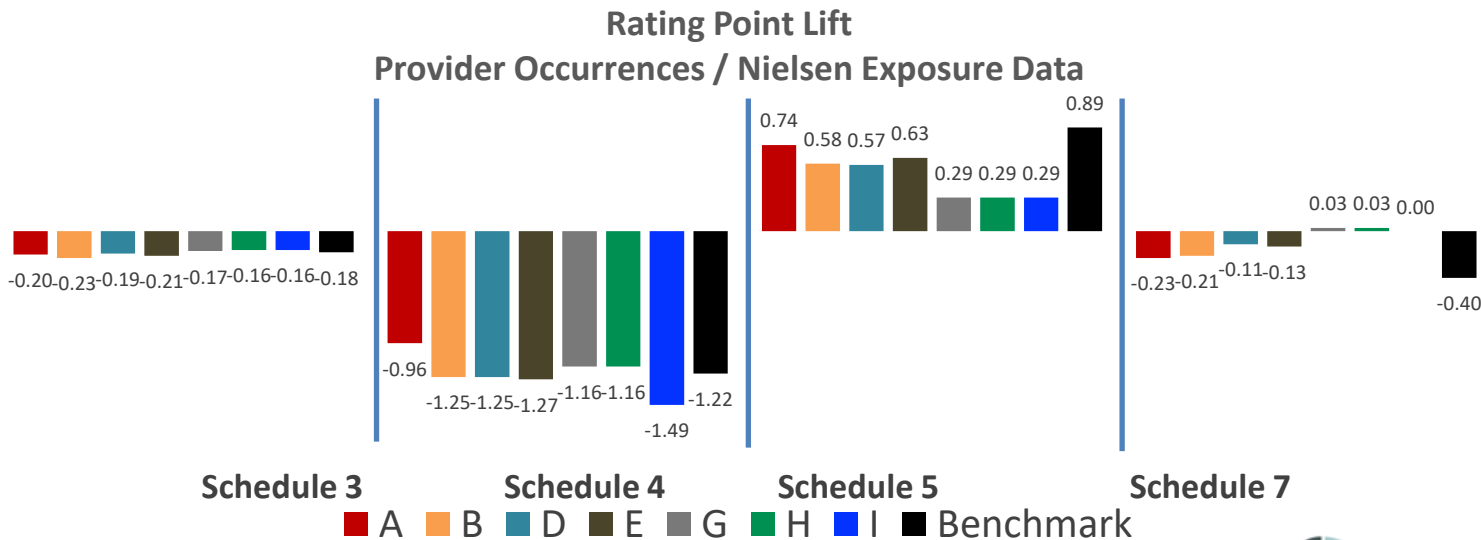
Providers Grouped by Occurrence Detection
Technology
Ad Monitoring Services vs. Mixed Technology



Do Differences in Occurrences Ultimately Matter in Outcome Measurement?

Somewhat.

- Holding exposures constant, providers generally agree, *directionally*, vs. the benchmark
- Some 2x and 3x magnitude differences
- Provides good directional guidance but risky ROAS estimates



Overall Findings – Occurrence Data

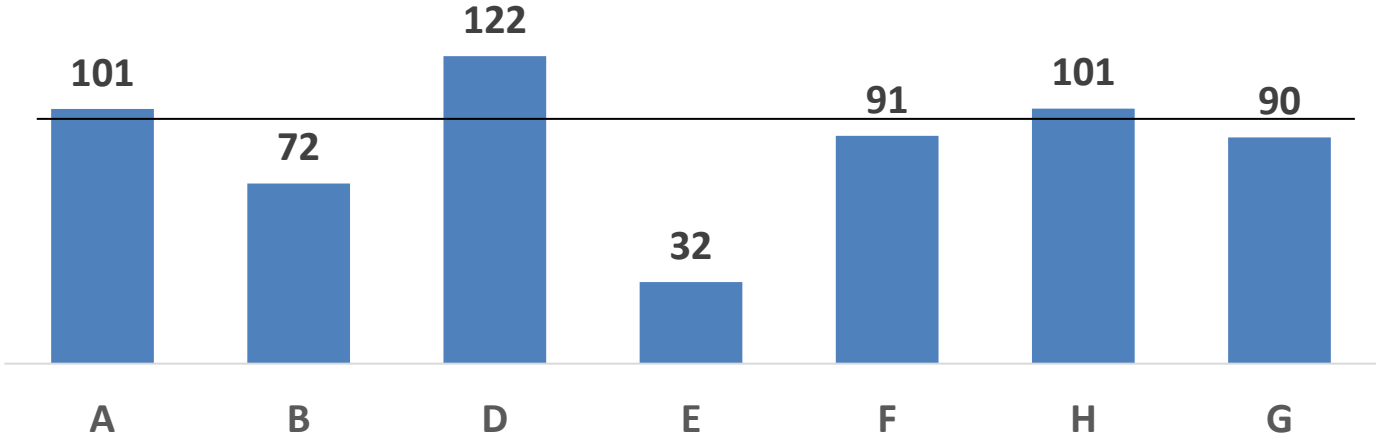
- Poor match rates to logs for some providers
 - But all providers show weaknesses for some schedules
- No consistency across providers in categorizing spots by:
 - Length, Daypart, Date
- Some ads are more difficult to detect
- Posts and logs aren't perfect
- Potential for clock drift or signal latency to offset ad and viewing timing
 - Very few matches on exact date/time
- Results not due to underlying technology

Key Question - Exposure Data

How do variations in exposure data impact TV in attribution models?

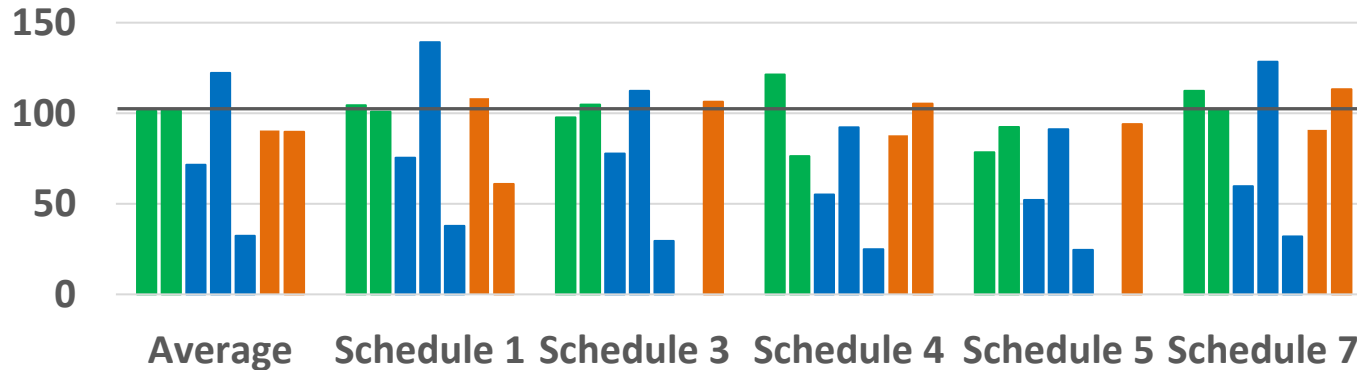
Provider Exposure Data Streams Produce Inconsistent Schedule Ratings

Average Schedule Rating By Provider Indexed To Benchmark



Variability in Providers' Average Rating Levels Despite Similar Underlying Technologies

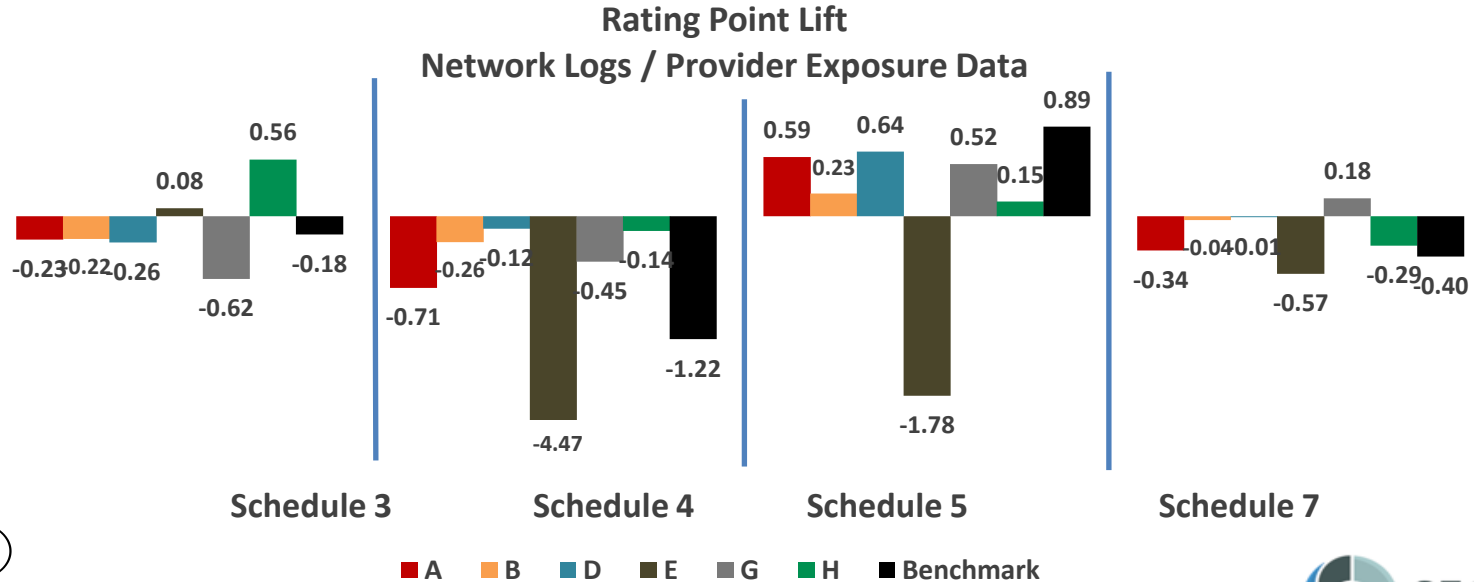
Average Rating - ACR vs. STB and "Both"
Posts/Logs & Provider Exposures
Indexed To Benchmark



STB ACR Both

However, Differences In Exposures *Really* Matter in Outcome Measurement

- Holding occurrences constant, no agreement across providers, directionally
- 10x magnitude differences
- Little conformity with benchmark
- No indication of reliability for directional guidance or ROAS estimation



Key Findings - Exposures

- Very large differences in GRPs found across providers and among schedules within each provider
 - Even when all providers used the same post logs
- Very large differences by Average Rating, Reach, Average Frequency by provider and schedule
 - But not always consistent across these measures
- Results not due to underlying technology
- As a result, the schedule may not accurately represent the schedule the brand bought
 - And the outcome measurement approach and ROAS results will reflect the impact of more/less exposures, HHs reached, and frequency of exposure

Call Out to Industry & Attribution Providers

Television attribution results will more consistent and reliable when providers adopt more stringent media measurement standards

Weighting

Implement a robust panel weighting scheme that addresses variables that align with TV viewing - DMA, HH size/Presence of Children, Income/Education/Occupation

Unification

Create standard process for unifying the database for ROI measurement; provide a common base of viewers with opportunity for exposure and opportunity for response

Reach


Conduct evaluation of Reach reporting from exposure data across schedules. Compare to industry norms at different GRP levels (i.e. reach of Primetime TV schedule at 300 GRPs)

Exposure Qualification

Settle on standard exposure criteria - 1 second, 3 seconds, 5 seconds, 10 seconds, 1 minute

Occurrences

Quality control rigorously to re-create as-run schedules



Download the full paper at www.cimm-us.org
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