

Why Adalyser?

Data Quality

The quality of data is a key component in building accurate attribution models. This document highlights the importance of data quality and why per second data is so crucial.



The difference of a second

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Data quality and resolution makes a huge difference to the quality of attribution. Diagrams 1 and 2 show typical website response curves immediately after a spot has been broadcast. They have been generated as a result of an extensive study covering thousands of individual spots.

Diagram 1
Per minute

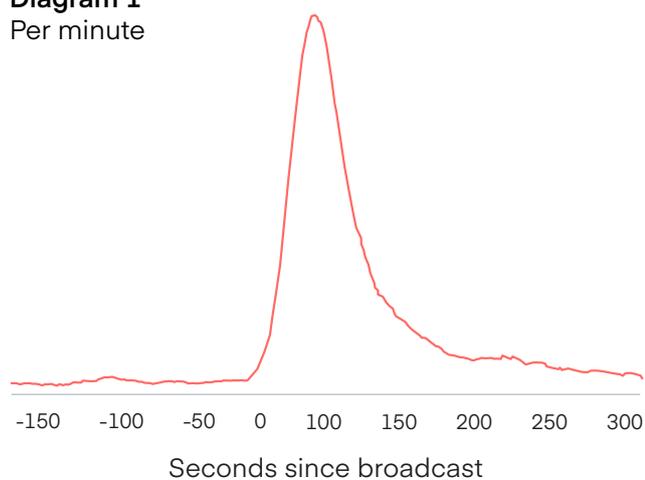


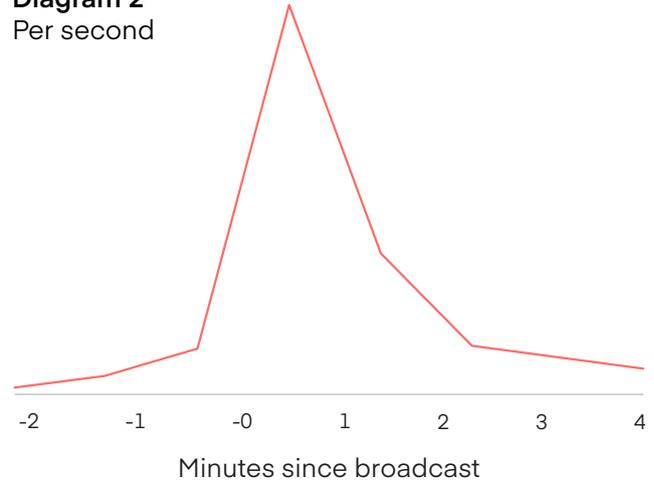
Diagram 1 has been plotted using data accurate to the minute and diagram 2 uses data accurate to the second.

The per second chart reveals interesting information about the way people respond to an advert that is simply not visible in the per minute response curve.

With the per second chart we can see responses start to pick up around the 20-30 second mark, so users are visiting your website before the advert has finished.

There is also a peak at the 50-60 second mark, with a prolonged tail slightly above the baseline level.

Diagram 2
Per second



The bulk of the traffic generated by the spot has occurred prior to the 2 minute mark.

Adalyser attribution models leverage this additional information to provide the most accurate attribution system available and to solve clash resolution.

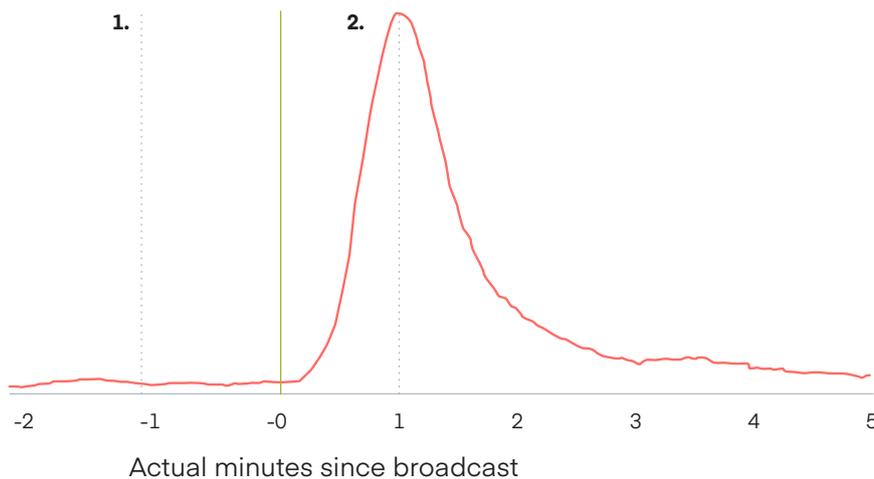
Conclusion

Per second response data exposes insight hidden by minute level data.

Spot broadcast times

It's not only response times where resolution and accuracy is key. Having spot broadcast times accurate to the minute can lead to major inaccuracies when determining the amount of direct response attributed to a spot.

Diagram 3
Actual minutes



Depending upon the type of inaccuracy the spot time could be incorrect by up to a minute of the actual broadcast time causing two primary issues illustrated by Diagram 3.

The green line represents the actual broadcast time of the spot to the nearest second.

Issue 1: The dashed grey line labelled **1** represents a spot where the broadcast time has been incorrectly recorded as being a minute in front of the response peak.

Any pre-determined window sizes will not be fit for purpose and any calibrated algorithms will be looking for response curves that don't exist.

Worst still is if this spot clashes with another spot then responses can easily be attributed to the wrong spot.

Issue 2: The dashed grey line labelled **2** represents a spot where the broadcast time has been incorrectly recorded as being a minute into the response peak.

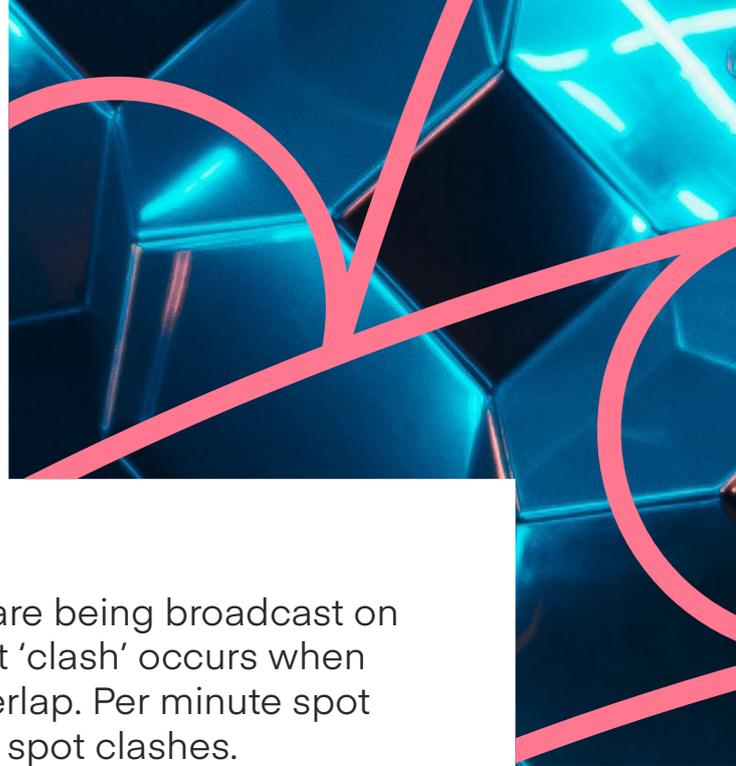
This issue results in a large chunk of the response occurring before the broadcast time and not being attributed at all!

Any adjustments to a models pre and post broadcast time windows will only serve to create inaccuracies for other spots due to arbitrary nature of the inaccuracy.

Conclusion

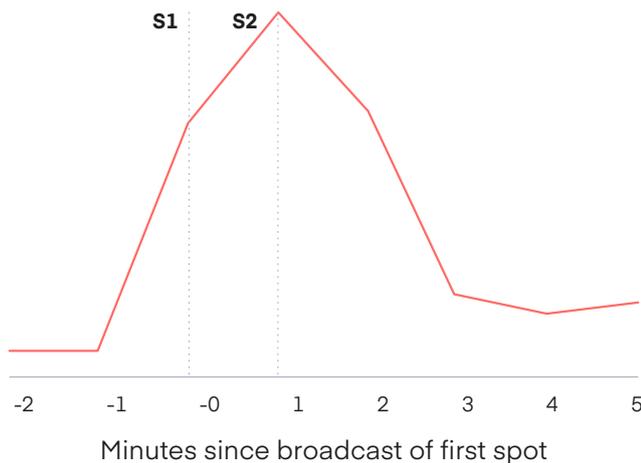
Per second spot data is a pre-requisite for accurate attribution.

Clash resolution



Consider the scenario where two spots are being broadcast on different channels at similar times. A spot 'clash' occurs when the response curves from both spots overlap. Per minute spot and response data is crucial to resolving spot clashes.

Diagram 4.1

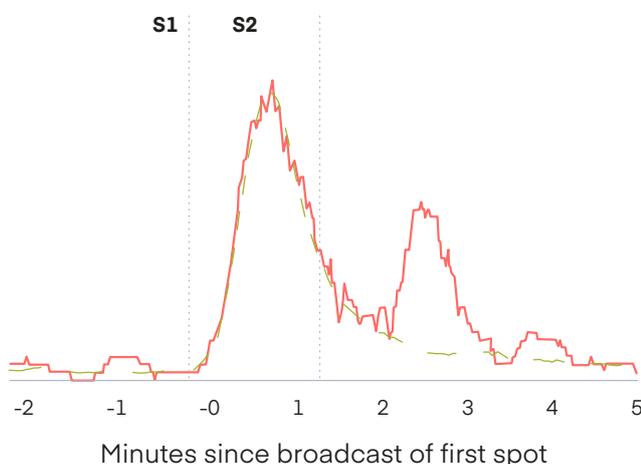


If we plot the response curve using per minute data (Diagram 4.1) then we can observe a single broad peak starting at the broadcast time of spot 1 (S1) and ending approximately 1 minute after broadcast of S2.

To resolve the clash between spot 1 (S1) and spot 2 (S2) the peak response will have to be apportioned between the spots using a metric such as impacts or spend.

Adalyser has proven that impacts do not correlate well with direct response so the share of response each spot receives will not be correct. This is compounded by inaccurate spot broadcast times rendering accurate clash resolution impossible.

Diagram 4.2



Compare the level of attributed response for S2 in both charts. With per minute data S2 is driving more traffic than S1. If we use per second data we can see two distinct peaks, one for each spot.

With per minute data significant amounts of response is being incorrectly attributed to S2 when it should be S1.

Adalyser uses an advanced machinelearning algorithm to find patterns in the data that look like response peaks. The green dashed line represents just such a match and enables Adalyser to identify the first peak and match both signals independently of each other.

Conclusion

Per second spot and response data increases the accuracy of clash resolution.

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