



CURRENCY LAUNCH 2020

Frequently Asked Questions

April 2020

Route Research Ltd. | 7-9 Charlotte Street, London, W1T 1RG

TABLE OF CONTENTS

INTRODUCTION4

DEFINITIONS.....4

Q. WHAT MEASUREMENTS DOES ROUTE PROVIDE? 4

Q. WHAT IS A SPOT AD IN OOH? 4

Q. WHAT IS A MULTI SENSOR TRACKER (MST)? 4

Q. WHAT ARE VISIBILITY AREAS? 4

Q. WHAT IS REALISTIC OPPORTUNITY TO SEE (ROTS)?..... 5

Q. WHAT IS VISIBILITY ADJUSTMENT? 5

CURRENCY CHANGES.....6

Q. WHY IS ROUTE CHANGING?..... 6

Q. WHAT CHANGES HAVE BEEN MADE TO ROUTE?..... 6

Q. WHY ARE THE CHANGES HAPPENING NOW?..... 7

Q. HOW IS SPOT MEASUREMENT DIFFERENT FROM WHAT WAS MEASURED BEFORE?..... 7

Q. WHAT DO THE CHANGES ALLOW ME TO DO NOW THAT I COULDN'T DO BEFORE?..... 8

Q. HOW DOES THE NEW ROUTE DATA LET ME OPTIMISE MY CAMPAIGNS? 8

Q. DOES ROUTE MEASURE SEASONAL DIFFERENCES IN AUDIENCES? 8

Q. DOES THE CHANGES MEAN THAT THE PREVIOUS DATA WAS WRONG? 9

EFFECT ON DATA..... 10

Q. HOW DO THE CHANGES AFFECT THE DATA?..... 10

Q. CAN I COMPARE A CAMPAIGN BEFORE AND AFTER THE CHANGES?..... 10

Q. SO YOU CAN'T SPECIFY EXACTLY WHAT EFFECT EACH CHANGE HAS ON THE DATA IN ISOLATION, WHAT CAN YOU SAY ABOUT EACH OF THEM? 11

Q. ARE SOME ENVIRONMENTS AFFECTED MORE THAN OTHERS?..... 12

Q. WHY ARE THERE NOTABLE CHANGES IN THE BUS ENVIRONMENT?..... 13

Q. WHAT IS THE MINIMUM TIME PERIOD THAT CAN BE USED TO ANALYSE THE DATA? 15

Q. WHY IS THE AUDIENCE DATA ‘STANDARDISED’ AT 15-MINUTE INTERVALS?..... 15

Q. IS THERE STILL A MINIMUM CAMPAIGN SIZE THAT I CAN RUN? 15

Q. WHAT INFORMATION DO I NEED TO RUN A SCHEDULE IN ROUTE? 16

Q. WHY CAN’T I JUST RUN A 1 IN 6 DIGITAL CAMPAIGN LIKE BEFORE? 17

Q. WHAT HAS HAPPENED TO SHARE OF VOICE? 17

Q. WHAT’S THE OPTIMAL SPOT DURATION?..... 18

Q. ISN’T IT A LITTLE CONVENIENT THAT THE AUDIENCE NUMBERS ARE GOING UP? 18

VISIBILITY ADJUSTMENTS / ROTS..... 19

Q. HOW DOES ROUTE TAKE ACCOUNT OF WHETHER OOH ADS ARE ACTUALLY SEEN? 19

Q. HOW DOES ROUTE DEFINE ‘REALISTIC OPPORTUNITY TO SEE’? 19

Q. HOW LONG DOES AN AD HAVE TO BE “ON SCREEN” BEFORE WE START TO COUNT? 20

Q. WHAT WAS THE 5-MINUTE RULE AND WHY IS IT NOW 6-SECONDS?..... 20

Q. HOW DO VISIBILITY CURVES AFFECT THE DATA?..... 21

Q. WHAT IS CHANGING? WHY ARE VISIBILITY CURVES NOW NON-LINEAR?..... 22

TRAFFIC INTENSITY MODEL..... 23

Q. WHAT CHANGES HAVE BEEN MADE TO THE TRAFFIC INTENSITY MODEL? 23

SAMPLE 24

Q. WHAT IS HAPPENING WITH THE SAMPLE? 24

Q. DOES THIS MEAN THE DATA IS NOW LESS ROBUST?..... 24

WHAT IF..... 25

Q. WHAT IF I RUN LOTS OF ONE-SECOND ADS? 25

Q. WHAT IF I ADD TWO SPOTS FOR THE SAME ADVERTISER INTO A 15-MINUTE PERIOD? SHOULD I USE A DURATION OF 10S ON AND BREAK OF 20S OR A 20S DURATION WITH 40 SECONDS OFF. WOULD THIS GIVE THE SAME AUDIENCE? 26

Q. WHAT IF I AM EXPOSED TO THE FIRST TWO SECONDS OF A TEN-SECOND AD, LEAVE THE VISIBILITY AREA FOR SEVEN SECONDS AND RETURN IN TIME TO HAVE A CHANCE TO SEE THE END OF THE SAME TEN-SECOND AD? 26



THE FUTURE.....27

Q. ARE YOU EXPECTING TO MAKE MORE CHANGES TO THE ROUTE CURRENCY? 27

Q. WHEN WILL YOU STOP CHANGING THINGS? 27

OTHER27

Q. IS AN IMPACT THE SAME AS AN ONLINE IMPRESSION? 27

Q. WHY DON'T YOU USE MOBILE PHONE DATA? 28

Q. WHY DON'T YOU PROVIDE REAL-TIME DATA?..... 30

INTRODUCTION

On 30th April 2020, Route, the audience measurement currency for out of home advertising in Great Britain will change. While many of the frames measured will experience minimal change to their audience figures. For a small number, the difference may be substantial.

DEFINITIONS

Q. What measurements does Route provide?

Short answer

Route provides five measures for advertising campaigns:

1. **Reach:** the unique number of people seeing the campaign
2. **Impacts:** the total number of times the ad/campaign will be seen
3. **Frequency:** the average number of times those exposed to the campaign will see it
(Impacts / Reach)
4. **Cover:** the proportion of the target audience who are exposed
(Population / Reach)
5. **Gross Rating Points (GRPs):** a measure of campaign weight. Generated by taking the proportion of target market reached and multiplying it by the number of times the ad is seen.
(Cover * Frequency)

Q. What is a spot ad in OOH?

Short answer

A spot is when an advertising copy is broadcast or displayed on a digital screen (frame). Spot durations will differ by media owner and environment.

Q. What is a Multi Sensor Tracker (MST)?

Short answer

A multi sensor tracker is a device that we supply to our travel survey participants. This passively collects data on the location of where the participants go during their two weeks. The device uses an advanced GPS chip as its prime means of locating participants and includes another series of sensors which are also used to interpolate movements when no GPS signal is available (such as when participants go underground).

Q. What are visibility areas?

Short answer

The visibility area for an out of home ad is, quite simply, the catchment areas from which it is possible to see at least 90% of the screen or poster. The visibility area is calculated according to the dimension size of the frame. The maximum visibility distance is derived from the results of Route's visual attention research. The area emanates from each side of the frame at an angle of 120 degrees. The visible

areas extend to the maximum visibility distance according to the ad dimensions. These areas are then mapped to the real world and shaped around permanent obstructions such as buildings.

Q. What is realistic opportunity to see (ROTS)?

Short answer

Route does not trade in a currency based on opportunity to see advertising, rather it is more stringent and nets audiences down from those in the vicinity of inventory, to those spending time within areas where at least 90% of the ads are visible to then again determining how many of these people have actually seen the ads. The ROTS is the number of people who travel through the visibility areas of out of home inventory.

Q. What is visibility adjustment?

Short answer

The visibility process calculates how likely those people who are in the visibility areas are to actually look at the posters or screens. This is a complex calculation that is derived from various visual attention studies which Route has conducted. The variables which determine how likely someone is to notice an ad include:

- Time spent within the area (the longer exposure, the more likely to notice)
- The distance from the ad (people closer to ads are more likely to notice them)
- The angle of approach to the frame (the more head-on an ad is, the more likely it is to be seen)
- The distance that the ad is offset from the path of travel (the further the ad is offset from the direction of travel, the less likely it is to be noticed)
- Whether the ad is dynamic – ads which move / transition are more likely to be seen than static ads

The visibility adjustment calculations are applied each time that a participant enters into a visibility area of a poster or screen and are recalculated every 0.1 seconds before being accumulated to determine the overall probability that the person will see the ad.

CURRENCY CHANGES

Q. Why is Route changing?

Short answer

To produce spot-level audiences at 15-minute levels. This development will mean more scope for advertisers to plan effective and efficient campaigns.

Longer answer

Route measures audiences for advertising in public spaces. Technology continues to evolve. With this, the capability of digital out of home has grown in tow. Advertisers now have greater flexibility in what they may show and when their campaigns are broadcast.

To meet the changing nature of the market, Route will evolve to ensure its measurement system remains fit for its purpose within an increasingly digital world.

The developments to Route have required the out of home advertising industry to double its investment in the currency. This facilitated an increased sample of participants and the deployment of ground-breaking passive measurement devices.

The new multi-sensor-tracking devices (MST) represent a significant technical advance. They provide greater detail on travel habits than before. Now we can track movement outside, inside, above ground or underground.

The evolved Route has set out to create a measurement system specifically with digital out of home in mind. We will provide spot-level audience measurement at 15-minute levels for ads on screens.

Q. What changes have been made to Route?

Short answer

Various developments are included in the new Route data. These include:

- Ability to analyse data at 15-minute intervals
- A calculation of realistic opportunity to see (ROTS)
- Facility to differentiate audiences based on variable spot durations
- Inclusion of monthly seasonal variances
- Changes to the calculation of likelihood of seeing ads
- Improved reporting of who sees each ad through standard demographic profiles

Longer answer

The new Route currency includes a number of technical developments that affect the way we calculate out of home audiences. The changes have been introduced to facilitate the measurement of spot level audiences and provide more granular reporting within Route.

The changes include:

- A new means of calculating spot level audiences

- A change to the definition of realistic opportunity to see (ROTS)
- A different application of visibility adjustments so that they are more reflective of real life.
- Facility to differentiate audiences based on variable spot durations, meaning campaigns are evaluated on the basis of the time spent on screen and the frequency with which they play out rather than simply a share of time
- A monthly seasonal adjustment meaning that audiences will differ on a month by month basis and better reflect human behaviour
- A new means of data modelling to facilitate more granular analysis and enable reporting on single screens or posters at 15-minute levels
- Introduction of standard audience profiling
- Introduction of a red/amber/green warning system to signal to users when they should regard an analysis with caution or avoid altogether e.g. looking at very specific time periods for some single frames

Q. Why are the changes happening now?

Short answer

We now have sufficient sample to make meaningful analyses possible. With three years' sample (21,600 participants), each of whom have carried a multi-sensor-tracking (MST) device for a fourteen-day period, we have a robust dataset to measure all OOH ads in Great Britain.

Q. How is spot measurement different from what was measured before?

Short answer

Spot measurement means that we calculate audiences based on the exact amount of time that an ad is on screen. It also enables a more realistic account of the frequency of seeing digital out of home ads.

Before, we estimated how many times the screen would be seen across the full period of the campaign (e.g. two weeks). We would then apportion the impacts for the campaign on the basis of the share of time that it is on screen.

Longer answer

Previously, we apportioned audience estimates for digital frames (and mechanical scrollers) proportionate to the share of voice/share of loop over the duration of a campaign. We did not consider the fact that different ad durations would affect the number of times an ad is shown on screen and consequently the number of impacts that it can be generating.

Take for example, a campaign that is on screen for 10 seconds and off for 50 seconds and repeats for the duration of a week. It is the equivalent of 1 in 6 ads, or a 17% share of voice.

However, if during the same period, a 5 second ad is broadcast instead, and is off screen for 25 seconds, it will still have the same share of voice ($5/30$ seconds = 17%) yet, would play out twice as many times across the week-long period.

We did not take the playout frequency into account within the audience calculations. This would mean **under-reporting** the true number of times that campaigns are seen.



The new system is more sophisticated, and accounts for both contact duration (i.e. how long people spend in front of ads) and the specific spot schedule (i.e. how long the ads are on screen / off screen).

It allows for people to be shown and to see, multiple ads in a single 'exposure' to a screen. In turn, it means that they can potentially generate multiple impacts. Previously this would not be possible. It aligns Route with how other audience currencies work. For example, if you were to take two 10 second ads in a TV / radio break you could generate two audiences rather than a single 20 second audience.

The new measurement reflects the true number of ads that people are actually exposed to.

Q. What do the changes allow me to do now that I couldn't do before?

Short answer

The new data offers an opportunity for planners and automated trading systems to better optimise their campaigns.

Longer answer

The new outputs will create greater variance in the data and enable an unprecedented level of analysis. Audiences for inventory can be analysed at 15-minute levels and can be split out by various demographic targets and spot durations.

There will be greater scope for analysts to create campaigns that are optimised to deliver maximum audiences.

Considering all the variables that can be incorporated into the calculations, the Route system will now be able to analyse in the region of c.606.9 trillion potential digital audiences. Every 15-minute period will have in the region of 808,000 spot audience variations.

Q. How does the new Route data let me optimise my campaigns?

Short answer

Armed with audience data at 15-minute intervals, advertisers will know more about the relative peaks and troughs of audiences through the day, by month and also by demographic targets. The result is more opportunity to target optimal times when the greatest number of a target audience will be exposed to the advertising.

Q. Does Route measure seasonal differences in audiences?

Short answer

Yes, Route now applies a monthly seasonal factor to the impacts. The factors are applied at an environment level, meaning all roadside frames will follow a similar pattern, which will differ from those in shopping centres.

Longer answer



Yes, Route applies a monthly seasonal factor to the impacts. The factors are applied at an environment level meaning all roadside frames will follow a similar pattern, which will differ from those in shopping centres.

The seasonal factors have been created through the use of external datasets (such as TfL gateline data, CAA airport data, supermarket footfall, ATC road counts, etc). These provide monthly census counts at a relevant point of interest. These have been aggregated and normalised at environment level to create monthly factors. Where no suitable external data were available, the Route travel survey data is used to generate the monthly seasonal factors.

Q. Does the changes mean that the previous data was wrong?

Short answer

No! The data was as precise as it could be with the inputs available. The new data represents an improvement on what was feasible in the past.

Longer answer

No! Quite simply the data was as precise as it could be with the inputs available.

Over the last three years we have introduced new MST meters which help us collect our data. This has refined our measurement of people's movement. We are able to better track where people go and with increased precision. Using additional sensors within the devices we can more accurately predict where people go, including when they are inside or underground, even without the use of our advanced GPS chip. This, in turn, improves our ability to establish who can and does see out of home advertising in Great Britain.

The technical advance also means we can more accurately record how long people are exposed to out of home advertising. The result is that we have a better estimate the number of ads they will see.

New modelling processes have improved the reporting of smaller, more localised campaigns. We will now report on standard audiences for each and every frame through the day.

Arguably, Route is the most sophisticated audience measurement system anywhere in the world. Our work in understanding how people see things is exported internationally to OOH audience measurement systems in 18 international markets.

The changes we are making, reinforce Route's position as a global leader.

EFFECT ON DATA

Q. How do the changes affect the data?

Short answer

Route data will change with the release in April 2020. The changes can be significant on an individual frame level, though not always. Overall there are likely to be more impacts in the market. Users will see greater differentiation in temporal audiences. The improved measurement results in a more accurate reflection of the frequency of seeing digital ads. It is likely to result in an increase in the number of digital impacts. Posters will also experience changes too.

Longer answer

The changes are a result of calculating things a little differently than in the past. The numbers may deviate from what they were.

For a large proportion of inventory, the effect of the methodological changes will be minimal (+/- 5%) of weekly impacts. However, there will be some instances where the audience numbers will be significantly affected.

Fluctuations in audiences can be positive or negative. Generally, it is likely that digital impacts will increase from those reported before. The data will be more reflective of travel habits and the frequency with which ads are actually seen.

Changes are more likely to affect sites with a high proportion of pedestrian audience, those with longer exposure times and, particularly, digital ads. This is because it is possible for a person to see more than one ad and generate more than one impact during a single exposure. Previously it would have been capped.

Q. Can I compare a campaign before and after the changes?

Short answer

The underlying mathematics have changed meaning that direct comparisons will not be possible.

Longer answer

The underlying mathematics have changed meaning that direct comparisons will not be possible.

The algorithm (the mathematics behind how we calculate our audiences) has changed to reflect the various upgrades that are now included in the data.

The refinements now being applied include:

- **A new measure for digital frames.** People now have the potential to see every spot, every time it is presented on the screen. Thus, someone with a very long exposure time will be counted as seeing the same copy more than once. Previously people only saw each ad in a loop once – at which point the audience was capped. At the same time, digital audiences are based on ad duration and the time between plays rather than as a single share of voice. This introduces greater variance into the data also.
- **A new ROTS rule.** If people are exposed to an ad, leave the visibility area and then return to it after a six second period, they are able to generate a second impact. Previously a return within a five-minute interregnum would be joined together into a single exposure with an increased likelihood of seeing.
- **Seasonal footfall.** Audiences will now vary according to the month the campaign is scheduled. This can have significant changes to audiences, particularly within environments more susceptible to seasonal traffic.
- **New Traffic Intensity Model (TIM 6).** The TIM underpins the number of people being exposed to OOH campaigns. The data inputs to the model have been refreshed. It's feasible that road traffic passing screens and posters will have changed. On a frame by frame basis, these changes may be positive or negative. This in turn, will affect the audience numbers produced.
- **New sample data.** The sample is changing from a five-year reporting database to a three-year database. We will remove three years' worth of sample and replace it with one new year's worth. The audience data are influenced by the contacts or exposures which our participants have with the inventory. A different distribution of sample will alter the frames to which people are exposed. This will affect the audiences.
- **New 14-day algorithm.** The new algorithm will be adapted to deal with participants collecting the data for a 14-day period instead of a 9-day duration. It is likely to have a small effect the reach and frequency of contacts.
- **New non-linear visibility adjustment application.** Non-linear visibility curves will be introduced by environment, replacing the current linear curves. The new curves are a better reflection of the actual behaviour that we observe in the travel survey. The effect on audiences will be positive or negative depending on the curves being applied.

Q. So you can't specify exactly what effect each change has on the data in isolation, what can you say about each of them?

Short answer

What we can say about each of the changes are...

- The **seasonality** will affect both impacts and reach and will have more of an effect on environments where there are greater seasonal movements. This will introduce greater variance in the data.
- The **Traffic Intensity Model** determines the number of people passing inventory and so will affect impacts for all frames. Changes in geometry are likely to have a minimal effect at a campaign level though there could be significant changes at individual frame level. These changes may be positive or negative.
- The **sample change** will affect reach figures. Reach is driven by participant contacts with frames within our travel survey. Removing three years' of sample and replacing with one new one means there is a significant variance in the overall sample. Where we have some frames that experience less contacts, there could be a decline in reach, and where we now have more

contacts we may see an increase. It is anticipated that this will balance out at a wider campaign level.

- The effect of the **6-second rule** will increase impacts and will affect all frames to some extent. This is more likely to affect frames with a higher proportion of pedestrian audiences (rail / shopping centres etc).
- The **move to spots** will introduce a new way of measuring digital campaigns based on the time which a campaign is actually on screen. This will provide a better measure of the true audience for DOOH. It's likely to result in increased impacts, however reach will not necessarily follow at the same rate. This will result in higher frequency than seen previously. This development will give greater scope for audience optimisation. Users should expect to see more variance in the data at a screen level as the spot duration will affect the number of impacts generated. Shorter spots, will tend to generate greater levels of impacts as they play out more frequently.
- The new **Visibility curves** will affect both reach and impacts. Each time a participant is exposed to an ad, they are assigned a visibility curve determining how likely they are to see the ad. The assigned curve is the result of various criteria including the angle of approach and distance. As there are now more curves in the data (over 2,000 for roadside frames alone), there will be more variance in the output. Depending on the makeup of the participant exposures to each frame, this can mean that the overall likelihood of seeing the ads may increase faster, or slower than we previously assigned meaning audiences increase or decrease as a result.
- The effect of a **new 14-day algorithm** adds robustness to our travel survey data as we make use of two examples of behaviour for each day of the week. This gives us greater confidence in our ability to predict 'normal' one week cover and behaviours for each day of the week.

Q. Are some environments affected more than others?

Short answer

Yes. Generally, environments with larger proportions of digital inventory and where pedestrians are more prevalent will experience more significant changes.

Longer answer

Advertising within indoor environments (such as shopping centres, rail stations, airports and the underground) that have pedestrian only audiences are more likely to be affected than roadside inventory. There are two core reasons for this...

1. They are likely to have more digital screens
2. Pedestrians travel more slowly than people in vehicles. They build up longer exposure times to advertising.

Although internal environments will likely be most affected, there will also be examples of audience change for roadside inventory too.

Q. Why are there notable changes in the bus environment?

Short answer

We have revamped the way that we calculate audiences for bus advertising. We are using more contemporary data inputs for bus routes, timetables, and vehicle and pedestrian speeds. These feed into a new and improved statistical model to calculate the bus audiences. The extensive changes to the model mean that direct comparisons to what went before are unilluminating.

Longer answer

The bus model has undergone extensive review and renovation. It was one of the first environments to be created for Route back in 2013. The review includes learning from the creation of the taxi model, such as considering waiting times and out of area visitors into account. As well as the changes to methodology, there is also a major update to the input data (i.e. inventory, routes, number of buses, distance travelled etc.).

The changes to the model are extensive and have been developed over the course of long review. In summary the changes are:

- Feeding into the new model is a very different set of inputs in terms of inventory, depots, routes, distances travelled, number of buses etc. These have all been reviewed. Previously there were just over 66,000 frames across 418 bus depots, whereas the new inventory set has almost 72,000 frames across 331 bus depots. Most depots have a change in routes or in the number of buses or frames. The degree of change to the inputs makes it difficult to isolate the effect of changes due to the methodology from the changes at depot level.
- The allocation of routes to HERE links has been more clearly defined, which has reduced the scope for mis-allocation. Overall, the number of links along which buses travel has decreased by 28%. The result is a marked bearing on vehicle audiences.
- Bus frequencies have been recalculated. Overall, they are less frequent than before (5% in relative terms).
- Changes to the model include:
 - The addition of waiting time information for each route. The average waiting time is 30 seconds per stop. The range is between 11 and 79 seconds. The inclusion of waiting times brings parity with a key element of the taxi model.
 - Changes to speeds:
 - Pedestrian speeds have increased from 1.0m/s to 1.36m/s
 - Vehicle speeds have increased from 8.7 m/s to 9.8 m/s
 - Bus speeds were previously a standard 4.0m/s: they are now split between stationary waiting times and an average moving speed of 7.8 m/s.
 - The increase in speed means that both pedestrians and vehicles spend less time on links. Furthermore, the increase in bus speed results in a decrease in

frame visibility when buses are moving, albeit partially offset by higher visibility for stationary buses.

- There is now better discrimination of speed and frequency by day-part.
- In respect to calculating exposures to bus advertising:
 - A probability model has been developed for 214 areas. Factors are applied by area in order to reach target numbers of annual visitors. The same approach is used in the taxi model. This change will increase long-term reach for bus frames in areas with relatively high numbers of visitors.
 - There has been adjustment to the previous assumption that the probability of contact increased directly in proportion to the time a respondent was on a link, regardless of the frequency of buses on the link. The hypothesis over-estimated the probability of contact because it did not take account of the fact that buses arrive on a link periodically and advertising exposure is not guaranteed unless a bus is on the link. The new assumption will significantly reduce the probability of contact between respondents and buses and is the main reason for the decrease in short-term reach relative to the old model. Longer-term reach is less affected, and in some cases is higher in the new model.
 - There has been an adjustment to the previous assumption that respondents can only see one bus per route while on a link, which does not consider that on two-way roads buses will be travelling on both directions. The possibility of a contact in either (or both) directions is now allowed.

Q. What is the minimum time period that can be used to analyse the data?

Short answer

The data is structured in a way that encourages flexibility in analysis. Most advert and campaign durations can be accommodated. The minimum ad duration that can be set is 1 second.

However, audiences are normalised at 15-minute intervals. This means that the audience data for each poster and screen will change every 15-minutes through the day.

The result of this in practice is that any ads of similar duration and share of time which are placed within a 15-minute period will be standardised and return the same audience. This ensure the data is robust yet still has sufficient sensitivity for planning purposes. 15-minute segments is a common reporting period for other media currencies.

Q. Why is the audience data 'standardised' at 15-minute intervals?

Longer answer

Audiences are normalised at 15-minute intervals. This guarantees sufficient stability within the data while ensuring that it remains sensitive to changes in behaviour and reflects variance in audiences through the day for advertisers to target.

In practice, a 10-second ad which appears on a specific screen between 9:01am and 9:15am will generate the same audience irrespective of whether it is broadcast at 9:02 or 9:12.

Reporting audiences at 672 15-minute intervals throughout the week means that it will be possible to interrogate audiences at a significantly more granular level than ever before. It represents a significant improvement in the ability to analyse temporal audiences within Route, as previously only eight dayparts were reported across a week.

Moving to 15-minute audiences aligns Route with other media currencies which also work at this level.

Q. Is there still a minimum campaign size that I can run?

Short answer

Route has the facility to undertake single frame and single spot reporting wherever possible. This represents a significant improvement from the previous recommended minimum of 100 frames. This change is the result of a clever statistical modelling process that means we make more use of the data we have available.

The outcome is that single frame reporting is now possible on c. 95% of frames in Route.

A traffic light system is incorporated in the data to help highlight the robustness of the analyses undertaken.

Longer answer

Thanks to a complex and innovative new statistical modelling system, it is possible to produce reliable audience estimates at individual frame level for the majority of frames in the dataset.

In order to support more granular analysis at frame level, we have developed 'contact redistribution' as a way of expanding the travel survey sample.

The result is a significant fourteen-fold increase in the number of contacts (advertising exposures) available for analysis purposes. It means that c.90% of frames are now expected to have over 100 contacts, compared to the current 20%.

The expansion is done by redistributing contacts from frames which have them to frames that don't. A detailed set of rules is used that considers frame characteristics, audience profiles, geographical proximity and so on.

At the same time, Route has implemented a reporting system meaning analyses undertaken return a traffic light warning based on the health of the sample size and tolerance margin used to generate the audience data.

As a general rule of thumb, the traffic light colour will depend on the number of contacts for the frames within the campaign.

- Green light – more than 100+ contacts
- Amber light - between 30 and 99 contacts
- Red light - fewer than 30 contacts

The actual traffic light colour will depend on the estimated level of tolerance (i.e. the confidence interval on the benchmark reach figure i.e.

- Green light – if the tolerance margin is narrower than +/- 11%
- Amber light - if the tolerance margin is between +/- 11% and +/- 20%
- Red light – if the tolerance margin is greater than +/- 20%

Q. What information do I need to run a schedule in Route?

Short answer

The minimum information that users will need in order to generate audience data from Route will be:

- **Frame IDs** – which posters or screens are included in the campaign
- **Schedule** – when the campaign is scheduled to run. This can either be the specific start/end times or can be a particular month and number of days/weeks
- **Spot duration** – if you are dealing with digital screens you will need to specify how long your spot is (in seconds)
- **Time between plays** – it's also necessary to include the time not on screen, so that the frequency of views can be calculated
- **Target audience** – you will also need to define your target audience, this will default to all adults 15+ if left blank

Q. Why can't I just run a 1 in 6 digital campaign like before?

Short answer

Accounting for people seeing multiple ads in a single exposure and providing a system where each time a new ad begins, so does a potential new impact, it is necessary to understand how many times the ad will 'play out' on the screen. Where previously we based audience estimates solely on the share of time on screen, this did not account for the number of times an ad plays out. Our new measure is now more precise and offers a better measure of true campaign audience.

Longer answer

As we now account for people seeing multiple ads in a single exposure and have a system where each time a new ad begins, so does a potential new impact, it is necessary to understand how many times the ad will 'play out' on the screen.

Where previously we based audience estimates solely on the share of time on screen, this did not account for the number of times an ad plays out.

For example, in a week a 5 second ad and a 30 second ad, both running at 17% share of voice would return the same audience. However, in the new data we will account for the fact that the shorter ad plays out six times as often which will mean that it generates higher impacts.

Of course, this is not to say that a five second ad is better at communicating the message. Route does not evaluate the creative and the message, simply that it will be seen more times.

From April, digital audiences with the same share of voice, will return different audiences according to the number of times that an ad is played. Shorter ad durations, in theory, will deliver higher total impacts, albeit with higher frequency.

Q. What has happened to share of voice?

Short answer

With the release of the new data, Route is moving away from using share of voice to measure digital campaigns. Instead we must now think about the number of individual insertions or spots that are broadcasting on a screen.

This does not mean that Share of Voice is dead (per se), however we do need more information than just the percentage of time that an ad is on screen for.

In the brave new world, we are moving to a place where we need to consider:

How many individual spots we are placing

The time between the spots playing out

Conceptually, the greater the number of spots booked, the higher the audience. At the same time, the shorter the duration between the spots, the higher the audience.

The *I'm-trying-to-break-the-system-and-get-lots-of-impacts* approach would be to book as many 1 second ads as you can, with a 0 second duration between them playing out. Whether this can achieve brand/campaign objectives is discussion for elsewhere.

Q. What's the optimal spot duration?

Short answer

There's no one-size-fits-all approach with this. The optimal duration is likely to depend on the campaign objectives and the creative being used.

However, as a rule of thumb, shorter ad durations will generate greater numbers of impacts. This is because they will play out more frequently. Whether this translates into an effective 'optimal' campaign would depend on the creative messaging and how the campaign is being evaluated.

Audiences for digital inventory will vary depending on both the time on screen in absolute terms (i.e. in seconds) and also as a share of time across a campaign. So for instance a campaign running on a screen for 17% of the time will have different audiences where:

- it's on for 1 second and off for 5
- on for 2 seconds and off for 10
- on for 3 seconds and off for 15 etc.

Q. Isn't it a little convenient that the audience numbers are going up?

Short answer

There are no conspiracy theories at play here. The changes have been made under the watchful eye of the Route Action Group. This is comprised of senior researchers from each of Route's underwriting companies. Members come from both the buying side (i.e. specialist OOH agencies) and the selling side (i.e. media owners). The IPA and Route's independent research consultant are also members of the group.

In addition, while the changes being affected will positively affect some inventory, others will experience a decline in audiences from levels previously reported.

Longer answer

Route is a Joint Industry Currency (JIC). It means that we are an independent body governed by both the buying and selling sides of the advertising industry.

We are tasked to provide the most accurate estimates possible, not the largest audience figures imaginable.

Under the guise of the Route Action Group, methodological changes are reviewed, evaluated and approved by senior researchers from each of the underwriting companies. There is also representation from the IPA and Route's own independent research consultant (Katherine Page). The objective is to ensure that any changes to the methodology are robust and without favour.

The changes being implemented address a recognised under-reporting of the audience for digital out of home. The data will, for the first time, account for the number of individual ads people see on digital screens. Previously, the audience was based on the number of times the screen was seen and apportioning the audience for each spot from there.

We now have a more realistic reflection of the frequency with which people see digital out of home advertising. It allows us to estimate spot level ratings in a manner equivalent to other media. The changes introduce greater variance within the data. We now have more temporal discrimination and offer analysts much more scope to interrogate the data at shorter time periods (15 minutes). It will highlight relative highs and lows within frame audiences.

Some inventory will experience a decrease in audience as a result of the changes being made to the measurement.

VISIBILITY ADJUSTMENTS / ROTS

Q. How does Route take account of whether OOH ads are actually seen?

Short answer

Central to Route's audience measurement calculation is the concept of visibility adjustment. In this process we apply a reduction factor to audiences exposed to OOH ads. This enables us to go beyond the provision of opportunity to see an ad (OTS), and instead measure those who have actually seen them. Probabilistic visibility curves help calculate the likelihood of seeing out of home advertising while people are exposed.

Q. How does Route define 'realistic opportunity to see'?

Short answer

Route's measurement of out of home advertising goes beyond opportunity to see (OTS) and is based on realistic opportunity to see (ROTS).

ROTS is a measure of those exposed to OOH advertising within strict parameters. It's the number of people who travel through a defined area from which it is possible to see out of home advertising, and who travel in the direction of the ad. This is a measure of all those exposed to OOH advertising.

In order to produce metrics of those who have actually seen out of home ads, we reduce the ROTs by applying a visibility adjustment. This accounts for the fact that not everyone passing ads will look at them.

Longer Answer

Route's measurement of out of home advertising goes two full steps beyond opportunity to see (OTS) – a measure commonly used in other media. Rather, Route produces measures of those who have actually seen out of home advertising.

OTS for out of home advertising is our starting point. We know how many people travel on links within the vicinity of out of home advertising.

From there, Route captures the number of people who travel on links within a tightly defined area from which it is possible to see out of home advertising. This is then reduced by only accounting for those who are travelling in the direction of the ad and so have a real chance of seeing the ad. This gives us a measure of all those exposed to OOH advertising. This is termed the 'realistic opportunity to see' (ROTS).

The 'visibility areas' are determined by eye-tracking research. The maximum distance from which it is possible to see a poster/screen is calculated on the basis of its surface area.

Once the ROTs estimate is produced, Route then applies another step to take our metrics from having a realistic chance of seeing the ads to those who actually see them. This is done through the application of a visibility adjustment factor. In this step, we account for the fact that not everyone exposed to an out of home ad, will actually look at it.

The visibility adjustment calculation is derived on the basis of results from various visual attention studies.

Q. How long does an ad have to be "on screen" before we start to count?

Short answer

The definition used in Route is that the viewer must fixate on the ad for at least 100 milliseconds. At the point that someone enters the visibility area, we start to build the probability of them seeing an ad and then generating impacts. We do not consider a minimum time on screen.

Q. What was the 5-minute rule and why is it now 6-seconds?

Short answer

The "5-minute rule" is part of the ROTs calculation. It helps determine how many impacts should be generated when people move outside and back into visibility areas. The previous rule dictated that anyone who moves out of a visibility area and back in within a 5-minute period should generate only one impact (the second exposure would increase the overall likelihood of seeing the ad for the first time).

This rule is too blunt in the current landscape where digital screens may transition content every few seconds, particularly if our goal is to provide measurement for each and every spot broadcast. Therefore, change was required.

Statistical analysis identified 6 seconds as the best option to capture the variations in behaviour represented in the travel survey. It also has the benefit of not generating such a large volume of readings to the extent that data became unusable.

Longer answer

The “5-minute rule” was part of the calculation of the realistic opportunity to see (ROTS). It governs how we calculate the likelihood of someone seeing an OOH ad based on the amount of time to which they are exposed to the advertising.

Part of the definition relates to the occurrence where people are in the visibility areas of ads, leave them and then return to be exposed to advertising for a second time.

Before, any second exposures to a frame within a five-minute period were combined into a single exposure. The time exposed to the ads was simply added together. This would increase the likelihood of seeing the ad for the first time.

This rule was developed in a time where digital ads were few and far between, where the ad which people were exposed to tended to be a static poster and hence didn't change very frequently. In that way, people returning to the visibility area were seeing the same advertising creative, so it makes sense to collate their exposure time in the manner set out.

However, today's landscape is more dynamic. There are more digital screens than ever before. There is greater scope for someone to bear witness to new advertising should they to go away and come back to a screen or poster within a five-minute period. Given this, with fast moving digital ads in mind, the rule needed to be rewritten.

The new definition of a ROTS will therefore change from 300 seconds to 6 seconds. There can be a new impact every 6 seconds rather than every 300 seconds as currently.

This change was made in order to identify variations in behaviour and types of contact that the 300 second rule was too blunt to capture. Statistical analysis identified 6 seconds as the best option to capture these variations without generating an unwieldy volume of data. The change in definition is a significant one for Route's outputs. It will usually increase impacts, though with considerable variation by environment and frame type.

Q. How do visibility curves affect the data?

Short answer

The visibility curves determine the likelihood of seeing out of home advertising while people are exposed to it. The steeper the build of the visibility curve, the more quickly people are likely to see the ad. The likelihood of seeing an ad is based on visual attention (eye tracking) research findings.

Q. What is changing? Why are visibility curves now non-linear?

Short answer

Previously, it was assumed that the likelihood of seeing an ad increased in a linear fashion with the time spent exposed to it i.e. if you are exposed to an ad for 10 seconds, you are twice as likely to notice it as if you were exposed for 5 seconds.

We now have better data based on more reliable behaviours drawn from our travel survey. We can be more sophisticated in how the visual adjustment of audiences is applied. The likelihood of seeing an ad now builds with a non-linear curve. Depending on the exposure type and the curve being applied, the likelihood of seeing the ad may grow more rapidly or slowly compared to what was in force before.

The application of these curves will be a better reflection of people's real behaviour as derived from our travel survey. It will result in a more realistic measure of who is actually seeing advertising campaigns.

Longer answer

Central to Route's audience measurement calculation is the concept of visibility adjustment. Unlike television, published media and radio, Route does not provide a simple measure of opportunity to see (OTS).

We provide a measure of those who have seen the ad and the number of times it has been seen.

We first determine the area from which it is possible to see an ad (the visibility area). We then calculate how long people spend within that area (exposure time). This is our realistic opportunity to see (ROTS) measure.

For each and every person exposed to an ad we calculate how likely they are to actually see it. We do this on the basis of their distance from the frame, the angle at which they are from the display, and the degree to which the ad is offset from their direction of travel.

We calculate the probability of seeing for each 0.1 seconds that people are exposed to the ad. We then accumulate the probability that the ad will be seen for each and every exposure people have to each and every ad broadcast.

The probability is applied to the total traffic passing through the visibility area to net down those with a realistic opportunity to see an ad to our measure of those who have actually seen it.

Previously the probability of seeing was applied in a linear fashion with the time people are exposed to the ad.

In practice, someone who is exposed to an ad for 10 seconds was assumed to be twice as likely to notice an ad as someone exposed to one for 5 seconds. However, this is not necessarily how things work in real life. People scan around. They are more likely to notice something for the first time when it first moves into view. The probability of seeing an ad tends to grow quickly when you are first exposed to it and then slow down to a greater or lesser extent depending on the situation and the exposure type through time.

The data from the MST devices afford us greater ability to apply different curves in different scenarios creating greater variance in the data.

For some ads, the non-linear visibility curve (the new likelihood of seeing the ad) may build at a slower rate than the linear application which was applied previously and the audience will be reduced. In other situations, the curve may build more steeply in which case the audience would grow.

Each environment is treated differently and various visibility curves are applied depending on the exposures which people have with the ads according to our travel survey.

TRAFFIC INTENSITY MODEL

Q. What is a traffic intensity model and how does it affect the numbers?

Short answer

The traffic intensity model (TIM) is a statistical calculation that determines the number of people who are travelling on each of the 27million 'links' that make up our map of Great Britain. In Route, the TIM estimates the number of people travelling through areas from which it is possible to see out of home advertising.

Longer answer

The traffic intensity model (TIM) is used to understand how many people are driving, cycling, walking or otherwise passing along every public pathway in the country. 'Public pathways' include not just major roads and city streets, but the corridors inside underground and overground stations, the escalators inside shopping centres, the inside and outside of airports and the interiors of trains. In short anywhere people go and could potentially be exposed to OOH advertising. The traffic intensity model (TIM) enables traffic flow estimates for each link in the network.

It uses a combination of traffic counts, sets of attributes for each kind of road and a modelling process to create these estimates for outdoor environments along routes where people pass in view of a poster or digital screen.

Q. What changes have been made to the Traffic Intensity Model?

Short answer

Each of the data inputs into the traffic intensity model (TIM) has been refreshed. They have been updated to be as up to date as possible. We have also refreshed the underlying maps and their associated links (roads / public pathways), the vehicle and pedestrian counts, the number of people using rail stations, tube stations and airports. We've also incorporated the latest bus timetables, which are used to generate the frequency with which buses travel on links.

In this manner, the TIM is updated annually.

SAMPLE

Q. What is happening with the sample?

Short answer

Route is going to be made more contemporary. From March 2020, it will be based on a 3-year rolling sample. The total sample will be in the region of 21,600 (7,200 per year) adults aged 15+. The data will be weighted to ensure the sample is reflective of the GB population aged 15+.

Longer answer

Route data was rolled up into a five-year reporting dataset. This represented the travel patterns of participants who each carried their tracking devices for a 9-day period. The data was rolled into a cumulative sample in order to have enough scale to report on all inventory within GB.

This meant that the average age of the underlying data was 2.5 years old. We wanted to improve on this to make the data more up to date. We have reduced the span of the data set to a 3-year rolling database.

This means that the average age of the sample is now 1.5 years. From March 2020, the total sample on which Route is based will be 21,600 adults aged 15+, each of whom will have participated in the research for 14 days each.

Q. Does this mean the data is now less robust?

Short answer

No. We've designed the data collection process to ensure that we actually have more research days to underpin our data than we had in the past.

Longer answer

No. The data will still be robust. In the past Route was based on a five-year rolling dataset. The dataset was based on the behaviours of c.27,000 individuals across a period of 243,000 research days.

In making the data more contemporary we have reduced the number of years with which we roll up the data from five to three.

However, to offset this reduction we have increased both the annual sample of participants (to 7,200 per year) and also the number of days that people must carry the devices for (from 9 to 14 days).

The overall effect is that we have significantly increased the base of the data in terms of research days from c. 243,000 days to 302,000 days – an improvement of nearly 25%.

At the same time, the new MST devices are more precise than ever before. Having the additional sensors (such as the accelerometer, gyroscope, barometer and 3D magnetometer) enables us to smooth the data and remove noise, something not possible previously. The outcome being that we are better able to accurately track where people go for longer and further than before.



To ensure confidence in the data, Route has also implemented a sample health reporting system which returns a traffic light classification on all analyses. The light is allocated on the basis of the sample size and tolerance margin used to generate the audience data.

As a general rule of thumb, the traffic light colour will depend on the number of contacts for the frames within the campaign.

- Green light – more than 100+ contacts
- Amber light - between 30 and 99 contacts
- Red light - fewer than 30 contacts

The actual traffic light colour will depend on the estimated level of tolerance (i.e. the confidence interval on the benchmark reach figure), i.e.

- Green light – if the tolerance margin is narrower than +/- 11%
- Amber light - if the tolerance margin is between +/-11% and +/- 20%
- Red light – if the tolerance margin is greater than +/- 20%

WHAT IFS...

Q. What if I run lots of one-second ads?

Short answer

You'll get lots of impacts. Ultimately, each time that an ad appears on a screen, it has the potential to generate more impacts. With more spots, come more impacts.

Q. What if I add two spots for the same advertiser into a 15-minute period? Should I use a duration of 10s on and break of 20s or a 20s duration with 40 seconds off. Would this give the same audience?

Short answer

In this situation by doubling the spot length (i.e. running a single 20 second ad instead of two 10 second ads) you will effectively have half the number of spots playing out. Although the screen time will be equal across both options and they will both have the same share of voice as a result, this does not mean that they will both have the same audience.

Running two ten second ads will result in 30 spots being played in a 15 minute period compared to 15 spots booked every minute. With more spots there will also be a greater potential to generate impacts and reach. In this sense, shorter more frequent spots will tend to generate higher impacts.

Q. What if an advertiser books an entire 15-minute period?

Short answer

The audience for a campaign where an advertiser books a screen domination for a 15-minute period meaning that no other brands are broadcast will depend on the creative that is displayed.

If the ad is a simple static ad which plays for the full 900 seconds and never changes then it will have the potential to be seen once by everyone who is exposed to it – much like a poster.

However, if this is actually a 30 second ad which is looped to repeat for the full 15 minutes with no other ads on display, then it will be treated as a 30 second spot, broadcast 30 times. In this sense, it will have the potential to be seen afresh each time the creative begins and so could potentially generate 30 impacts.

Q. What if I am exposed to the first two seconds of a ten-second ad, leave the visibility area for seven seconds and return in time to have a chance to see the end of the same ten-second ad?

Short answer

In this instance, you will build two exposures – in effect, as you have “refreshed” your experience by going away and looking at something else, the second encounter with the copy is a new one. This would then begin to generate the probability of a second impact.

THE FUTURE

Q. Are you expecting to make more changes to the Route currency?

Short answer

In the next year, there will be more changes to the currency. These include an upgrade to the visibility research which determines how likely people are to see ads under different conditions. They also incorporate the implementation of full second-by-second MST data for internal environments. While these will both have an influence over audiences, they are unlikely to be as significant as the changes being deployed in R34 in March 2020. These evolutions are scheduled to occur in December 2020.

Q. When will you stop changing things?

Short answer

The December 2020 implementation of the second by second MST data for internal environments and the application of new visibility research are the last scheduled developments to the currency. However, the pace of change through technology is such, that opportunities to improve the currency may emerge, in which case they will be evaluated and deployed in a timely fashion.

OTHER

Q. Is an impact the same as an online impression?

Short answer

No. An impression is a measure of an ad being served. An impact is a measure of an ad being seen. They are different things. While both are used as the base measures for advertising audience, there are some crucial fundamental differences. Online impressions are not really a human measure. Rather they are a count of the total number of times that an ad is served on a page. Alternatively, impacts are a better measure of campaign audience as they relate to the number of times that an ad campaign is seen.

Longer answer

While both impressions and impacts act as the base measure for trading online and out of home, they are not equal or directly comparable measures.

Route's impact measure is a count of the number of times that a campaign has been seen. We take the traffic passing through an area whereby at least 90% of a poster or screen is visible and then adjust the audience on the basis of their likelihood of actually looking at the ads.

Online impressions are not as stringent as this.

The [IAB](#) define an impression as:



“Measurement of responses from a web server filtered from robotic activity and error codes, recorded at a point as close as possible to opportunity to see the page by the user.”

This means it is a provision of the number of times that an ad is served to a webpage that has been loaded. This does not equate to the number of times that an ad is seen online as there will be sometimes when the page is loaded and ad is served to non-human traffic.

Additionally, the impression figure does not necessarily mean that the ad was loaded on a page that could ever be seen by a human. Sometimes ads are placed at the bottom of web pages which people do not scroll to, or are loaded onto a page that is not in focus. This leads to a subset of impressions which are ‘viewable impressions’. 2019 estimates from the [IAB](#) suggest 70% of digital ads are viewable.

Again, the [IAB](#) define a viewable impression as:

The occasion where an ad has >50% of its pixels on an in-focus browser tab on the viewable space of the browser page for greater than or equal to one second, post ad render (for video ads it’s 2 seconds)

In other words, it is a measure where at least half of an ad has been visible for at least one second (two seconds for video ads).

The measure is an improvement on the inflated impressions figure, however it still does not mean that anyone has ever actually looked at or saw the ad. Recent research by Lumen has indicated that 82% of viewable impressions are never actually seen. ([see here](#)).

To equate impressions with impacts it would be necessary to apply reductions factors to the starting impressions to first determine how many were viewable (0.70) and then again how many of those viewable ads are actually seen (0.18 – for desktop display). This would equate to around 12.6% of the number started with.

To put out of home in context of online impressions, an impact could be deemed to be a ‘viewed impression’ however, no such standardised digital measure currently exists.

Q. Why don’t you use mobile phone data?

Short answer

With the ever-increasing popularity of smartphones, the data generated by mobile devices is alluring. Yet, Route has rejected the siren call of mobile data in favour of deploying the MST meters.

Before opting for MST meters, data from both mobile operators and mobile SDK providers were tested. These were rejected on the grounds of precision, comprehensiveness, transparency and ownership and security of supply.

Mobile datasets are a great resource to help understand the profiles of people while they are out and to inform on the relative traffic patterns across time in specific locations. However, for the purposes of calculating absolute numbers within fixed areas, to the level of precision required, they just were not right for our purpose.

Route remains open to evaluating any data source that may help to improve the measurement system.

Currently the comprehensive second-by-second data returned by the MST meters are GDPR compliant, accurately record location, speed, direction, altitude to a precision of 1m and can operate in areas where mobile signals are not available. For our purpose, the chosen methodology remains the best in class.

Longer answer

There are three primary means by which location-based data can be derived from people's mobile phones. Each of which were tested and compared against the MST devices.

- Option 1: pooling data from mobile operators
- Option 2: utilising GPS data via SDK kits installed on mobile apps
- Option 3: install a proprietary mobile app onto participant devices

The strengths and weaknesses of each approach are outlined in turn below:

Mobile Operator data:

The mobile operator data summarises the periodic locational 'pings' from each of the mobile handsets active on the network in question. This offers a huge volume of data with the facility to update things with a relatively quick turnaround.

However, the data which is available from the mobile operators is not precise enough for our purposes. We need a solution that will allow us to determine whether people are able to see OOH advertising. It needs to work equally across the spectrum from those seeing a large 'jumbotron' digital screen to those seeing a small paper poster in a pedestrian precinct. As the mobile operators use cell-tower triangulation, they are able to locate the device to a range of around 150m. This is, quite simply, not precise enough for our purposes.

This will undoubtedly improve in time as the take-up of 4G and particularly 5G increases (it's estimated that 5G will lead to an accuracy closer to 5 metres). However, until these antennae are nationwide, there will continue to be variable levels of accuracy. The need for a level playing field across the industry meant that this is not something that we could accept.

Mobile SDK data

This is derived by taking GPS stamps from mobile phone users each time they have mobile apps open. Some apps collect the location as part of the core functionality, others are slightly less transparent and capture this when an ad is served. The data location returned from the SDKs tend to be much more precise than the operator data, however it also poses two problems.

The first of which is that the data can only locate users when they are using mobile apps. It means that the data collection is not continuous. It is only available for when the apps are open or ads are served.

Analysts with a specific location in mind may interpret the readings to show where handsets have been used within one geometric cordon have also been used in another. However, it will not reveal how people get from one point to the next, where else they go, or what they do when the apps are switched off.

Yet, the main issue with the SDK data is the lack of transparency around its provenance.



No SDK data provider could, or at least was willing, to share the sources used to generate the datasets. This poses problems when we convert these behaviours to a total known population.

Without knowing where the data comes from we cannot correct for any inherent biases associated with the data. Route provides a measure of all adults aged 15+.

If the data is based only on mobile users, then there needs to be a way to correct for the fact that the data collection is coming from a skewed subset of the population (i.e. that we don't have people without smartphones in there).

If the universe is known – such as it was all smartphone users, then this could be worked around as we know the base and can make assumptions to correct for likely skews.

However, with the SDK data derived from unknown sources, it is not possible to make any necessary adjustments before extrapolating behaviours that we know will have skews to a wider population.

This lack of transparency means that the data cannot be used for our purposes. We must understand the inherent biases and correct them where required.

Installing an app on participant devices

The third method which was considered for our data collection means was to install a proprietary app onto devices owned by participants. This would allow us to measure the whole population, as we could provide devices to a representative sample, including people that did not possess a smartphone. However, smartphones are used for a variety of purposes. Collecting second by second GPS data is not necessarily one of the core functions. Installing an app that was constantly running in the background with the aim of collecting the GPS location every second, places a massive strain on battery life. The result would be defunct mobile phones, patchy data collection and irate participants which would ultimately affect the feasibility of the study.

Instead we opted to create a dedicated device that does exactly what we need it to - the MST. These have the advantage of capturing extremely precise second by second location data. They are able to report when people are inside, outside, above ground or below. They are futureproofed. As participants agree to take part, they are entirely GDPR friendly.

Q. Why don't you provide real-time data?

Short answer

The chosen methodology means it is not possible to provide real time audience data or to measure unique traffic to live events. The approach makes use of validated volumetric data sources and a sample of people participating in a passive travel survey. We use these to inform typical travel habits. We provide unparalleled estimates of average audiences during specific months of the year, days of the week, hours of the day and even to 15-minute periods.