Mobile Discrepancies

Exploring common root causes

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This document was developed by the Mobile Ad Ops Working Group, part of the IAB US's Mobile Marketing Center of Excellence and adapted for the Australian market by the IAB Australia Mobile Advertising Council.

About IAB Australian's Mobile Advertising Council:

The IAB Mobile Advertising Council was established in 2011, since then, its remit has been to:

- Evaluate the needs of the Australian mobile advertising industry
- Establish a program of work for mobile advertising
- Produce, fund and promote mobile research studies
- Produce and promote mobile standards and guidelines

The IAB Mobile Advertising Council meets on a monthly basis and has industry wide representation of mobile experts from across publishers and media agencies. The council provides a broad, collective voice in addressing the key issues and challenges faced by the industry.

Member companies of the Mobile Advertising Council include:

Big Mobile	mi9
Carsales	Network TEN
Fairfax Media	News Corporation
Google	Pandora
Ikon Communications	REA
inMobi	SBS
MCN	Telstra
Mediacom	Yahoo7!

IAB Australia member companies are able to nominate a representative for this council on the IAB Australia website

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About the Mobile Ad Ops Working Group:

The Mobile Ad Ops Working Group is dedicated to improving the operational efficiency of mobile advertising. The group meets regularly to talk through the challenges of mobile ad operations as well as initiates projects via sub groups with the goal of improving the understanding and work process of mobile ad operations.

http://www.iab.net/mobile_ad_ops_working_group

About the IAB's Mobile Marketing Center of Excellence:

The IAB Mobile Marketing Center of Excellence, an independently funded and staffed unit inside the IAB, is charged with driving the growth of the mobile marketing, advertising and media marketplace. The Mobile Center devotes resources to market and consumer research, mobile advertising case studies, executive training and education, supply chain standardisation, creative showcases and best practice identification in the burgeoning field of mobile media and marketing. Our agenda focuses on building profitable revenue growth for companies engaged in mobile marketing, communications and advertising, and helping publishers, marketers and agency professionals understand and leverage interactive tools and technologies in order to reach and influence the consumer. More information can be found at: http://www.iab.net/mobile

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1. Overview

Discrepancies are nothing new to the digital advertising marketplace. With so many different parties counting at different times in the add delivery chain plus the variance in proprietary validation methods, counts will never be exactly the same all the time. Mobile discrepancies vary by campaigns and even placements within a campaign. Sometimes you will experience a close 5% difference while other times you many see a shockingly high difference of over 50%. Why such a difference? New technology is one the main drivers. This includes new technology from within the advertising industry such as new companies and products as well the innovation taking place in the marketplace with new devices and operations systems. The adoption of new tracking methods included device IDs and statistical IDs play a role as well. The mobile marketplace hasn't had a chance to standardise the way the desktop marketplace has. Even so, there are common discrepancy causes for mobile campaigns that can be addressed today.

2. Common Discrepancy

While every discrepancy is unique, there are some common root causes that should be checked for. Many of these causes are similar to what the digital marketplace has experienced with desktop campaigns, but mobile brings in new variables and characteristics that may increase the discrepancy and make it harder to investigate.

2.1. Human Error

All campaigns include some type of manual involvement during setup. Whether it is implementing tracking into the creative, passing along ad tags, enabling settings in an ad server, there are many points within the trafficking process where a mistake may occur.

- **Pixel Implementation:** Publishers and media partners may not accept all third party ad tags resulting in the need for the physical creative to be provided in order to execute a campaign. With many new vendors in the mobile marketplace this is not an unusual request as it takes time to test and certify new tags across a publisher's network of sites and applications. When a physical creative is provided, tracking pixels may be manually implemented which leaves room for errors, especially when this needs to be done for multiple creatives, placements and sites. Common errors include the wrong pixels being implemented (especially with site specific pixels) and pixels being implemented in the wrong place or firing at the wrong time.

- **Macro Implementation:** Macros which are used for many things, most notably click tracking, are often required to be implemented by hand into creative tags. With new vendors in the mobile marketplace and multiple tag formats there is currently no standard for where to place the macros. Incorrect placement can result in discrepancies including one party not tracking at all.

- **HTML5 Creatives:** Rich Media ad units for mobile are developed with HTML5 which is a code based platform and may include many assets to execute the ad experience. Unlike flash ads HTML5 creative assets are not self-contained in a nice compressed file such as a .SWF file for Flash. This makes it harder to ensure all assets have been received and uploaded into the ad server. If the ad doesn't fully deliver or specific assets are missing this could affect the counting of some metrics.

- **Incorrect Settings:** When trafficking an ad campaign specific information needs to be inputted into the ad servers. Everything from creative dimensions, to flight dates, to designated sites/applications and audience targeting criteria needs to be included for the ad servers to deliver the campaign appropriately. Even with QA steps built into the trafficking process and system errors to flag conflicts, errors can occur.

2.2. Ad Serving Sequence

There are multiple parties that play a role in the delivery and tracking of an ad unit. You have agency ad-servers, rich media vendors, networks, exchanges, publisher ad-servers, analytic companies etc. Each of these parties tracks impressions, clicks and other metrics at different points along the ad delivery chain. While this is true for both mobile and desktop marketplaces, there are additional factors unique or amplified in the mobile environment that could cause the difference in when tracking occurs to become a more significant discrepancy cause.

- **Internet Connectivity Issues/Latency:** Any connectivity issues could result in tracking calls to not be made or completed resulting in a difference in counts. Poor connectivity is more common on mobile devices connected to strained carrier networks. In addition mobile devices are physically moving which results in them jumping from one cell tower to the next or even the loss of connection altogether. (For example, if device is taken down into a tunnel or underground)

- **Short Session Times:** Consumer's behavior on mobile devices, especially smartphones, is different than when sitting in front of a computer browsing the web.

There are more scenarios when a user may launch an app or a website to quickly check something and then close out. In these abbreviated sessions not all parties tracking calls may be called or complete before the consumer exits the app or browser.

- **Caching:** Within an app environment an ad may be called and cached prior to it being delivered to a user. This is done to improve the user experience by preventing the user from having to wait for an ad call to be made and ad unit to load. In this scenario there is a difference when the ad is called from the server and when it is delivered to a user. Depending when each party is measuring an impression, counts could differ.

- **Difference in counting methodology:** In addition to each party tracking at different times, each company will have their own proprietary method for tracking, validating and reporting. These differences could cause variances between counts. See more information under "Reporting".

2.3. Reporting

Some of the most common causes for discrepancy come from differences in reporting methodology. Every company has their own secret sauce for how they handle reporting. Differences exist in the way reports look, metrics are defined, traffic is validated etc. All of these variances result in it being hard to compare reports across different vendors to investigate discrepancies and often end up being the cause.

- **Time Zone:** Different vendors may provide reports based on different time zones. Even different reports from the same vendor could potentially be pulled in different time zones if they allow the user pulling the report to select what time zone they want. When looking at aggregated reporting for long campaigns this delta caused by time zone differences may not be significant. However, when looking at granular metrics on a daily level the difference could be substantial.

- **Traffic Validation/ Report Filtration:** Differences in the way two parties validate traffic can be difficult to detect as methodology is typically proprietary, but can be the cause of major discrepancies.

  - **User Agents:** Traffic can initially be identified via user agent strings that declare information about the application, operating system, device etc. The user agent string is also one way for known bots to identify themselves. Companies will

place rules around validating traffic based on information provided via user agent strings and as a result filter the "invalid" traffic out or not deliver to it all together. Both situations could cause discrepancies with vendors who follow different methods.

- o **Behavior Validation:** Most vendors have checks in place to filter out any activity that is suspect due to the pattern in user behavior. Take the fat-finger scenario for example. If a user clicks/taps on an ad, but immediately closes it, that click/tap could have been an accident. Double clicks/taps in another example where if not filtered out reported clicks/taps could be inflated. We are still learning what should be considered "normal" behavior when interacting with different mobile websites and applications so there may be more variance in these types of validation filters across vendors.

- **No Referral URL:** When traffic to a website is directed from an application there is no "referral" URL, because it is an app, not a webpage. Sometimes this information is used to confirm clicks/taps or click conversions that drove traffic to a specific landing page, typically via website analytic reports. Without a referral URL it can be challenging to tie the traffic on a website back to the campaign and publisher application that drove causing a discrepancy.

- **Server Side vs. Client Side counting:** Some parties track client side while others service side which means one party tracks when the ad is served from the ad server while the other party tracks when the ad is delivered on the device. If there is latency or any other reason the client side call was not complete as noted in section 2.2 Ad Serving Sequence you will result in a discrepancy.

- **Differences in Terminology / Definitions:** Even though two reports may include columns that are named the same thing or refer to similarly named metrics there could be differences in how a company defines and measures the metric. For example there can be a served impression, delivered impression and viewed impression which are all "impressions". It is important to confirm you are comparing apples to apples and not apples to oranges.

2.3. Targeting

The ability to targeting based on mobile characteristics such operating system and precise location is in-demand for optimising mobile advertising campaigns. As a result there are multiple solutions providers available for media providers to partner with in order to provide these targeting features. Depending on the methods used to receive the device characteristics you may see discrepancies.

- **Targeting by Device Characteristics:** When comparing reports from two vendors you may see a difference in the types of devices the campaign was delivered to. It is not easy to determine device characteristic, especially the more granular you go. For example you might know it is an IOS device, but are unable to tell what exact version. With operating systems like Windows 8 that run across tablets and computers, it is becoming even more of a gray area. Depending on what targeting services are used by the vendor, you may result in disagreements when trying to target specific device attributes.

- **Geo/Location Based Targeting:** There are multiple ways to obtain a user's location on mobile devices. These different methods have different levels of geographical precision and requirements for opt-in. Sometimes location will be derived via one method and translated to a more specific location such as post code derived from an IP address converted to latitude and longitude coordinates. Different vendors have unique ways of identifying and validating location which can result in discrepancies

3. Prevention

While there are many reasons discrepancies occur there also many things that can be done to prevent them in the first place. Yes it is true that some causes are out of our control, but many can be avoided by putting in some extra care.

Many of the mobile discrepancy root causes are due to differences in methodology and terminology between vendors. It is important to identify those differences before campaigns go live. Some of these comparisons can be conducted during new vendor certification processes while others needed to be confirm on campaign bases.

1. Confirm time zones of reports
2. Check what level of granularity reports can be pulled. E.g. with time stamp, by ad
3. Compare reporting metric terminology
4. Determine how location is obtained, validated and classified
5. Confirm the ability to provide true test environment so ads can be accurately tested before launch
6. Name assets in a logical manner that includes ad dimensions to help matching up correct tags etc.
7. Discuss targeting heavy creative such as video to Wi-Fi connections
8. Provide all assets well before launch to give ample time for Q&A
9. Pull reports and compare across all parties at the beginning of a campaign (continue to pull reports throughout campaign lifetime)

4. Conclusion

Even though mobile discrepancies percentages currently range greatly from campaign to campaign, they will level out as the marketplace continues to mature. IAB Australia continues to working with our members to develop guidelines to help the market. The important thing is to not be scared away from running mobile campaigns. The common root causes of discrepancies are nothing the industry hasn't dealt with before, just with a few new obstacles mixed in. As long as campaign launches are not rushed and ample time is provided for Q&A by all parties involved, we will see discrepancy's decrees. As you work through investigations and discover new trends and root causes share them with the industry as we are all working together to solve the same challenges.