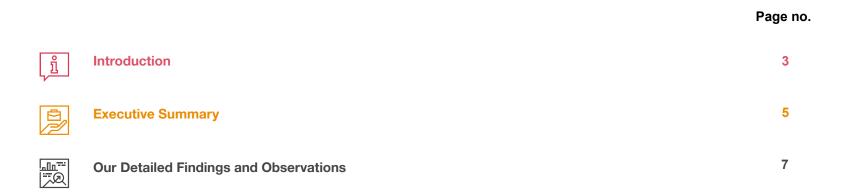
Review of Adform's Utiq solution

June 2023





Contents



Introduction

Background

In recent years, the online advertising industry has witnessed a decline in the use of browsers and devices that support third-party cookies (3P). With Google Chrome planning to phase out support for these cookies by 2024, the transition to cookieless environments has become a pressing concern. For the purposes of this report, cookieless environments refer to those without third-party cookies but with available first-party cookies (1P).

As an alternative, publishers have increasingly adopted privacy-conscious first-party ID solutions, such as Utiq's, and transmit them through programmatic bid-streams to technology partners like Adform. Adform, a global provider of advertising software solutions, supports the use of first-party IDs for various purposes such as frequency capping, audience targeting, and reporting. This study aims to evaluate the performance of first-party IDs, including Utiq, in cookieless environments.

Utiq is a European AdTech company that provides a Telco-powered service for responsible digital marketing. They prioritise privacy control for individuals and enable brands and publishers to engage with consented audiences. By offering secure and encrypted solutions, Utiq ensures privacy standards are met while delivering relevant marketing experiences. Utiq's Authentic Consent Service has gained approval from the European Commission and is supported by major telecom companies. Their commitment to responsible digital marketing aligns with the industry's need to address privacy concerns and create a transparent and trustworthy ecosystem.

PricewaterhouseCoopers LLP UK ("PwC") was engaged by Adform to review access to Utiq IDs using Adform's technology by performing a review of:

- Historical data (6 March to 6 April 2023) A review performance improvement across environments that support first-party IDs
- Live test campaign data (1 to 15 May 2023) A review of marketing efficiency and performance through Utiq first-party IDs

The purpose of this report is to summarize our factual findings following completion of our testing on the above two tests.

Introduction

PwC scope

- A comprehensive analysis of historical aggregated data from previous months to determine the effectiveness of frequency capping and the efficiency of click-through rates (CTR%) achieved through the utilization of the Utiq ID solution in cookieless environments.
- A detailed campaign analysis for an advertiser ("Advertiser 1"), to evaluate the potential of campaigns utilizing Adform integrated Utiq solution in enabling the ability to effectively control frequency capping in cookieless environments and thus, reaching new users.

Limitations and our respective responsibilities

- The services will not constitute a financial statement audit or other regulated assurance engagement. In particular, we will not give formal assurance on the Adform platform. If we were to perform additional procedures or a full financial statement or controls audit of the Adform platform, other matters might come to our attention that we would report to you.
- PwC have relied on representations by Adform. These include the fact that all
 relevant records have been made available to PwC for the purpose of the
 engagement, and that all reports/information provided were complete and accurate.
- All information presented on the named companies was publicly available at the time the information was collected (May to June 2023). PwC will not disclose non-public individual entity data.
- We permit the publication of our report, provided the report is published in full only and is only published on an access controlled page on your website, to enable users to verify that a report by independent accountants on the Adform platform has been commissioned by the directors and issued. In doing so, we do not accept any responsibility or liability to such third parties. Such permission to publish is given by us without accepting or assuming any responsibility or liability to any third party users save where we have agreed terms with them in writing.

Executive Summary - Historical Data Review

Review of Historical Data to Assess Post-Cookie ID Solutions and Marketing Performance Variations among Premium German Publishers



Work Performed

PwC reviewed aggregated and anonymized advertiser and campaign data sets, along with metadata collected by Adform. The focus was on assessing the implementation of post-cookie ID solutions on premium German publishers and analyzing marketing performance variations among them.

Reviewed data inputs for completeness, accuracy, and fair reporting of results at various levels: domain, ID source from bid requests, pricing type (e.g., CPM, CPC, ROAS), browser family, use of 1st party ID, fraudulent traffic, unique cookies, impressions, clicks, and spend.

Conducted a campaign analysis to evaluate the post-cookie ID implementation and its outcomes. We assessed performance across different campaigns, using data visualization tools for analysis.

This review provided insights into the implementation of post-cookie ID solutions and variations in marketing performance among premium German publishers.



Key Findings

- 1. First-Party IDs accounted for 24% of the total spend on Safari and Firefox
- 2. Historical data indicates 100% increase in Click-through-Rate (CTR%) when utilizing Utiq IDs compared to 1P cookie-based IDs in performance-based campaigns

Some points for Adform's consideration:

- We observed that 97% of the spend on Chrome and other browsers, and 79% on Safari and Firefox, did not have associated IDs and were consequently excluded from the analysis and calculations. Within the remaining spend, the majority was attributed to 1P cookie-based IDs, accounting for 99% and 88% in the respective browsers. Among the various types of 1P IDs, Utiq constituted approximately 1% of the total remaining spend.
- The analysis of CTR% focused specifically on campaigns utilizing performance-based pricing models such as CPC, CPL, and ROAS.
- Spend volumes hold significant importance in this analysis, particularly considering it was a proof of concept.

Executive Summary - Live Test Campaign

Assessment of the Potential of Adform Integrated Utig Solution in Enabling Effective Frequency Capping and Expanding Audience Reach in Cookieless **Environments**



Work Performed

PwC performed a comprehensive campaign analysis for Advertiser 1 with the aim of evaluating the effectiveness of campaigns utilizing the Adform integrated Utig solution in controlling frequency capping in cookieless environments. The analysis focused on assessing the solution's potential in reaching new users, expanding the campaign's audience reach, and realizing additional benefits such as reduced fraudulent traffic.

To ensure a fair set up of the test environment, PwC conducted detailed walkthrough sessions with Adform and media agency Pilot to discuss campaign implementation. Weekly technical catch-up meetings were held to address specific implementation questions, revise the campaign targeting approach, and evaluate performance.

Throughout the process, campaign settings were closely reviewed before. during, and after the live test to ensure adherence to the agreed-upon changes and avoid any unauthorized modifications. Regular delivery reports were received and reviewed to monitor campaign pacing and ensure performance aligned with the planned objectives.



Key Findings

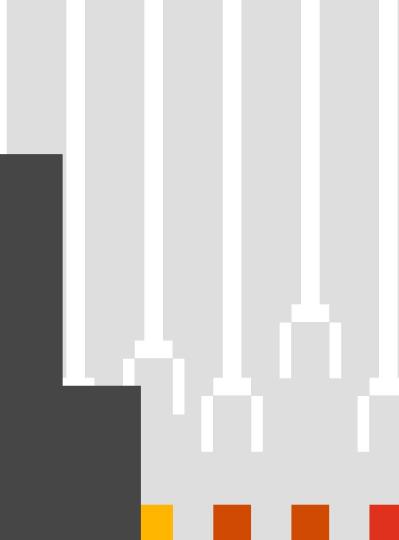
- 1. The proportion of Utiq IDs compared to all IDs is 3.75 times higher in cookieless browsers (31%) than browsers with third-party cookies (8%).
- 2. The Utiq ID achieved a 25% better result (1.4 vs 1.1) compared to other 1P ID types in cookieless environments when the objective was to improve frequency from 1 to 3 per user
- 3. 100% of traffic with a first-party ID, including Utiq, was found to be fraud-free, while 0.02% of traffic without ID was fraudulent.

Some points for Adform's consideration:

- Frequency was adjusted in phase two from 1 to 3 impressions per user to showcase the campaign's frequency capping capability.
- Bid price was modified in the second phase from 8.5€ to 4.5€ CPM to address the high 50% win rate observed in week one.
- Testing focused on specific publisher domains (bild.de, welt.de) and included various ID types beyond Utig, such as 1P cookie-based IDs and 3P cookie IDs.
- Ad fraud levels for 1P IDs were minimal, but it's important to consider potential variations beyond the analyzed sample.

Our detailed findings and observations







Review of Historical Data

Background

Dataset

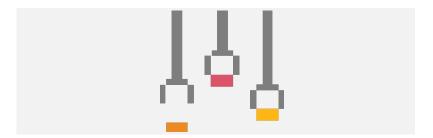


As part of our historical data review, PwC examined the implementation of post-cookie ID solutions on major publishers in Germany (bild.de and welt.de) and analyzed the marketing performance variations among them.

- PwC analyzed performance across nine browsers between 06/03/2023 and 06/04/2023
- PwC grouped browsers that block third-party cookies by default into one group "Safari and Firefox" and grouped those supporting third-party cookies into "Chrome and Others"*
- Grouped pricing types into performance and awareness bases (CPC, CPL, & ROAS and CPM, CPMV, and DCPM, respectively)

Others*; Android, Edge / Edge Mobile, Explorer, le Mobile, Nokia Browser, Opera

Our approach

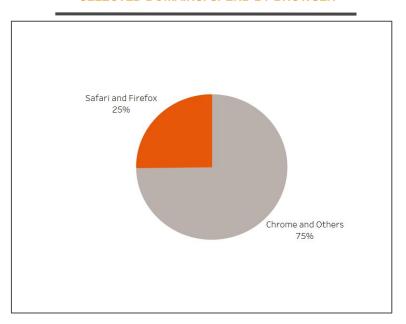


- PwC reviewed aggregated data across the period (March and April 2023) across multiple client accounts and multiple campaigns with different campaign objectives
- PwC then reviewed and recorded performance of different ID sources as defined by campaign objectives e.g. (CPM,CLP, ROAS etc.) across browsers and domains that support Utiq by conducting visual analysis in Tableau.

Findings

Deprecation of third-party cookies on Chrome impacts targeted advertising and audience segmentation

SELECTED DOMAINS: SPEND BY BROWSER



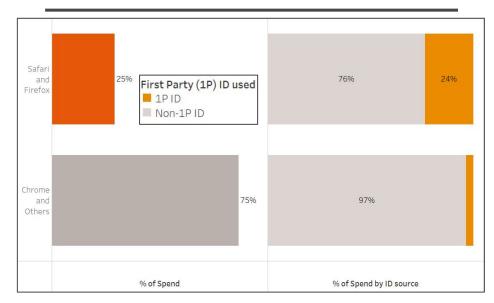
- Chrome and other browsers accounted for 3/4 of the total spend for the selected domains.
- Deprecation of third-party cookies can limit the accuracy and effectiveness of targeted advertising, audience segmentation, and measurement.
- Advertisers need to explore alternative data collection methods and adopt privacy-conscious strategies for effective digital marketing.
- Adoption of privacy-conscious strategies is crucial for effective digital marketing in the post-third-party cookie era.
- Relying on first-party data and incorporating privacy preferences and consent management tools are important steps for advertisers to maintain effectiveness and comply with evolving privacy regulations.

With a quarter of media spend for the selected domains allocated to Safari and Firefox, opportunities exist in leveraging first-party data in cookieless environments

METHODOLOGY

- PwC conducted a review of 1P IDs performance compared to non 1P IDs across the selected domains based on different browsers.
- The analysis focused on awareness-based pricing types:
- o CPM, CPMV, and DCPM
- IT also looks at performance-based pricing types:
- o CPC, CPL, and ROAS

SELECTED DOMAINS: SPEND BY ID SOURCE



IMPLICATIONS

- 24% of the total spend on Safari and Firefox is attributed to 1P IDs.
- On Chrome and other browsers, the percentage of spend on 1P IDs is significantly lower at 3%.
- This highlights the importance of leveraging first-party data in 3rd party cookieless environments.
- By utilizing first-party data effectively, advertisers can capitalize on the opportunities presented by these cookieless browsers to enhance targeting, personalization, and overall campaign performance.

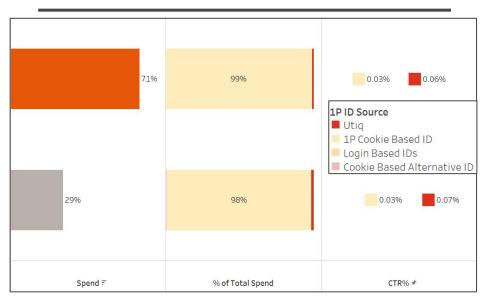
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Utiq represented 1% of the overall spend on 1P IDs, exhibiting a 100% increase in CTR% when compared to other 1P cookie IDs

METHODOLOGY

- PwC conducted a review of 1P IDs performance across selected domains based on different browsers.
- The analysis focused on performance-based pricing types:
- o CPC, CPL, and ROAS
- Spend on No IDs (Null) was excluded from the analysis. This equalled to 97% on Chrome and other browsers and 79% on Safari and Firefox.
- IDs with spend lower than 1€ were also excluded from the analysis.

SELECTED DOMAINS: PERFORMANCE BY 1P ID SOURCE



IMPLICATIONS

- 71% of the total spend on 1P IDs across the selected domains was attributed to Safari and Firefox.
- Amongst the 1P ID types, 1% of the total spend is attributed to Utiq.
- 1P cookie based IDs constituted the majority of the remaining spend in the period analyzed, 99% and 88% respectively.
- Utiq IDs exhibited a 100% increase in CTR% compared to 1P cookie-based IDs in performance-based campaigns.
- Spend volumes are an important factor to note in this analysis.

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PwC 1



Live Test with Advertiser

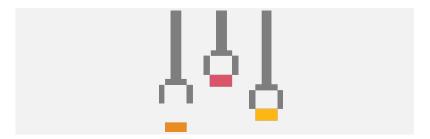
Background

Dataset



- A live campaign test was conducted with four line items looking at Utiq usage across different combinations of browsers. The total budget allocated for this test was 10,000€, distributed among the four line items according to their respective caps (see slide 14 for detailed set up).
- The testing process involved multiple iterations to demonstrate the campaign's
 effectiveness in reaching new users within cookieless environments, as well as
 effectively implementing frequency capping.
- The analysis focused on assessing the variations in marketing performance across a specific set of publisher domains, namely bild.de, welt.de, and faz.net. These domains were selected due to their inclusion of Utiq and other 1P ID traffic.

Our approach



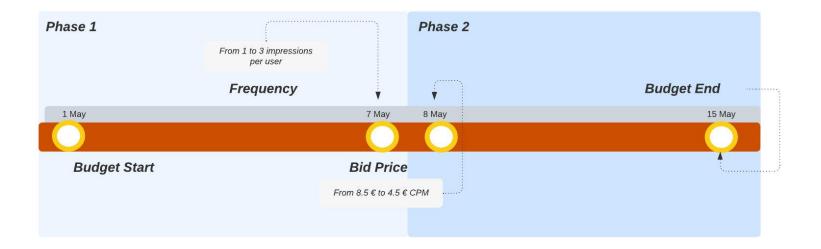
- PwC informed, reviewed and monitored the campaign set up in the Adform
 platform in order to assess the methodology underpinning the live test and its
 execution.
- PwC analyzed the outcomes of the live test campaign conducted by Pilot in May 2023, which aimed to showcase the efficacy of utilizing alternative 1P ID solutions such as Utiq.
- The datasets considered in the analysis spanned from 1st May 2023 to 15th May 2023.

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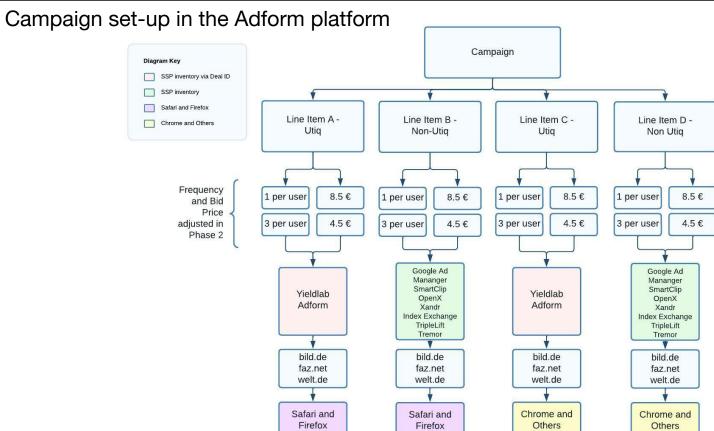
PwC 1

Background (continued)

Campaign timeline



Background (continued)



Background

The campaign was set up with control and variation groups, had a clearly defined frequency goal, testing duration, and iteration based results

METHODOLOGY

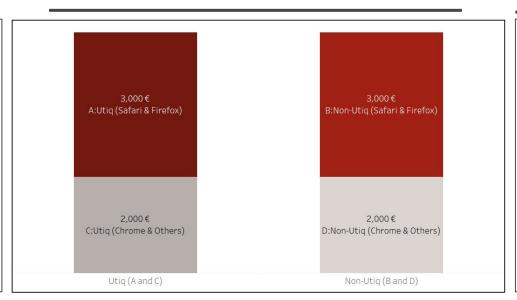
Four Line Items were set up targeting:

- A. Utiq on Safari and Firefox
- B. Non-Utiq on Safari and Firefox
- C. Utig on Chrome and Others
- D. Non-Utiq on Chrome and Others

Total budget for this test was 10,000 €, with caps for each line item of:

- A. 3.000 €
- B. 3.000 €
- C. 2,000 €
- D. 2,000 €

CAMPAIGN SPEND BY LINE ITEM



IMPLICATIONS

- The campaign budget was distributed equally between line items A and B (3k+3k) and C and D (2k+2k). The test ran from 1st to 15th May 2023, and comprised of two phases.
- Frequency was adjusted in phase two from 1 to 3 impressions per user to demonstrate the ability to frequency cap.
- Bid price was adjusted during phase two from 8.5€ to 4.5€
 CPM as a results of the high win rate in week one (50%).

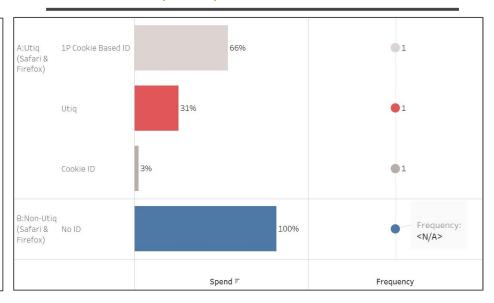
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First-party data IDs like Utiq enable precise frequency control in cookieless environments

METHODOLOGY

- The methodology involved comparing line item A (with Utiq) and line item B (without Utiq) with the same frequency goal of 1 impression per user (Phase 1) in cookieless browsers.
- Testing was conducted on selected domains.
- Both line items had a budget of €2,000 each in phase 1, which they both spent in full.

PHASE 1 (A AND B): FREQUENCY BY ID SOURCE



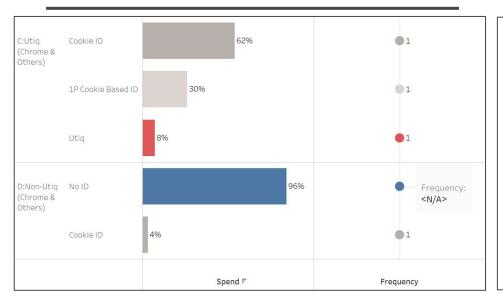
- Line item A, utilizing Utiq, successfully achieved the frequency goal as all ID sources, including Utiq, contributed to meeting the target.
- The majority of impressions in line item A were delivered on 1P IDs, with Utiq accounting for half of them.
- Line item B, without Utiq, faced challenges in measuring and controlling frequency due to the lack of user IDs in Safari and Firefox, as expected.

Lack of IDs in non-Utiq traffic limits frequency measurement and control, highlighting the need for effective 1P ID alternative solutions

METHODOLOGY

- The methodology involved comparing line item C (with Utiq) and line item D (without Utiq) with the same frequency goal of 1 impression per user (Phase 1) in browsers that support 3P cookies, such as Chrome and others.
- Testing was conducted on selected domains.
- Both line items had a budget of €1,333 each in phase 1, which they both spent in full.

PHASE 1 (C AND D): FREQUENCY BY ID SOURCE



- In the non-Safari, Utiq scenario (C), 62% of the traffic relied on 3P cookies, while 38% used 1P IDs. Note the platform follows a waterfall approach, utilizing first 3P cookies if available, and other ID sources when they are not.
- All IDs in the Utiq scenario met their frequency goal.
- In the non-Utiq scenario (D), the majority of traffic had no ID, resulting in the inability to measure frequency, as expected.

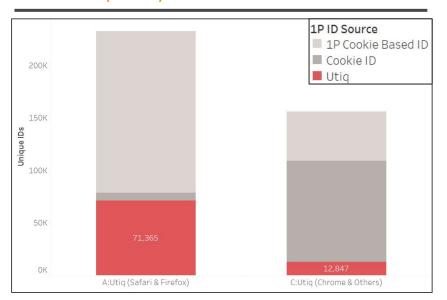
The proportion of Utiq IDs compared to all IDs is 3.75 times higher in Line Item A than in Line Item C

METHODOLOGY

- The calculation compares the proportion of Utiq IDs to all IDs for Line Item A and Line Item C.
- For Line Item A, there were 71,365
 Utiq IDs out of a total of 232,337

 IDs, resulting in a proportion of 0.30716158 (rounded).
- For Line Item C, there were 12,847 Utiq IDs out of a total of 155,917 IDs, resulting in a proportion of 0.082396403 (rounded).

PHASE 1 (A AND C): UNIQUE IMPRESSIONS BY ID SOURCE



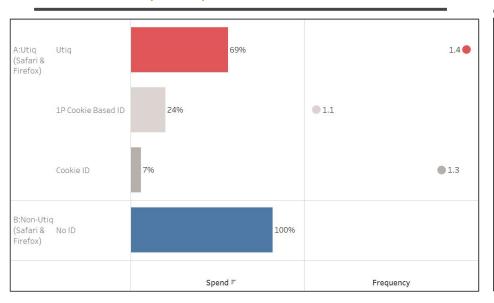
- PwC determined that the difference between Line Item A and Line Item C was a movement from 8% to 31%, a 3.75 times increase.
- PwC calculated the percentage increase: ((0.30716158 - 0.082396403) / 0.082396403) * 100 = 274.99%
- Leveraging 1P ID solutions such as Utiq in cookieless environments resulted in an increase in unique impressions, enabling advertisers to effectively reach their target audiences.

Utiq demonstrates approximately 25% improved frequency management by effectively targeting and reaching the same user more frequently (1.4 times) than other 1P ID sources (1.1)

METHODOLOGY

- The methodology involved comparing line item A (with Utiq) and line item B (without Utiq) with the same frequency goal of 3 impressions per user (Phase 2) in cookieless browsers.
- Testing was conducted on selected domains.
- Both line items had a budget of €1,000 each in phase 2, which they both spent in full.

PHASE 2 (A AND B): FREQUENCY BY ID SOURCE



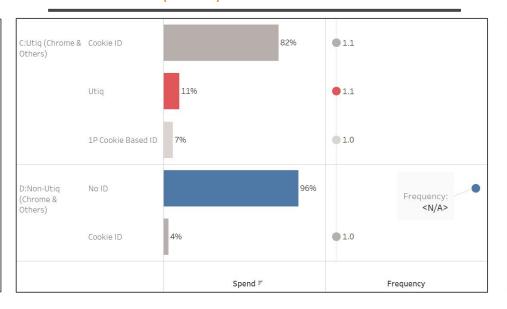
- In the Safari scenario A, Utiq IDs accounted for 69% of impressions, while 1P IDs represented 24%, and 3P cookies made up the remaining 7%.
- The Utiq ID achieved the highest frequency of 1.44, which was 25% higher than other 1P ID sources in line item A.
- This result demonstrates Utiq's effectiveness in targeting and reaching the same users more frequently.

Targeting the same user more than once was harder in 3P cookie supporting browsers compared to cookieless browsers, regardless of the ID source

METHODOLOGY

- The methodology involved comparing line item C (with Utiq) and line item D (without Utiq) with the same frequency goal of 3 impressions per user (Phase 2) in browsers that support 3P cookies, such as Chrome and others.
- Testing was conducted on selected domains.
- Both line items had a budget of €666 each in phase 2, which they both spent in full.

PHASE 2 (C AND D): FREQUENCY BY ID SOURCE



- No significant difference was observed among different ID types in terms of achieving their frequency goal suggesting that it was more difficult to identify the same user in browsers that support 3P cookies compared to cookieless browsers, regardless of the ID source used.
- However, a longer campaign duration and higher budget would have a greater potential impact on achieving frequency goals.

1P ID sources proved to be fraud-free, while unidentified traffic is within tolerable limits

METHODOLOGY

- Fraudulent impressions were analyzed to understand the fraud levels of the various 1P ID sources.
 Fraud indicated as Adform measured, both pre and post bid.
- Data for the first day (-666.75€) is not included in the analysis due to the data source's limitation of storing raw data for only 30 days. Since the data was pulled on May 31st, the absence of the first day's data can be attributed to this limitation.

SELECTED DOMAINS: AD FRAUD BY ID SOURCE

Fraud	First-Party ID Source	Impressions	% of Impressions
Fraud-free	Utiq	242,507	100.00%
	1P Cookie Based ID	241,984	100.00%
	No ID	941,672	99.98%
Fraudolent	No ID	149	0.02%

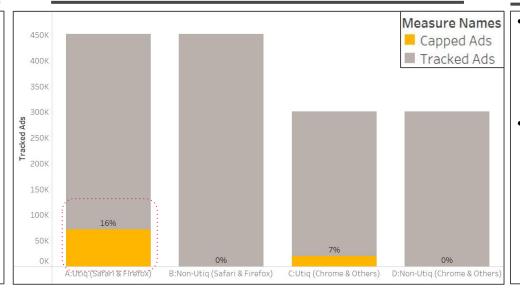
- 100% of the traffic with an ID, including Utiq, is fraud-free.
- 0.02% of the traffic without ID is deemed fraudulent.
- The total number of impressions analyzed was: 1,426,312
- While ad fraud levels are nil for 1P IDs, it is important to consider the test was limited.

16% of total impressions in Safari and Firefox (A) were not bid on as a result of effective frequency capping with 1P IDs

METHODOLOGY

- The analysis focuses on the number of capped impressions across the test line items.
- Capped impressions represent the impressions that were not purchased by the platform due to frequency capping, indicating hypothetical budget savings.

SELECTED DOMAINS: PERCENTAGE OF CAPPED IMPRESSIONS



- In line item A with Utiq, 16% of the total impressions delivered in cookieless environments were capped through effective frequency capping.
- The result demonstrates the ability to avoid media wastage in cookieless browsers by not bidding on additional impressions when the frequency goal has already been attained.

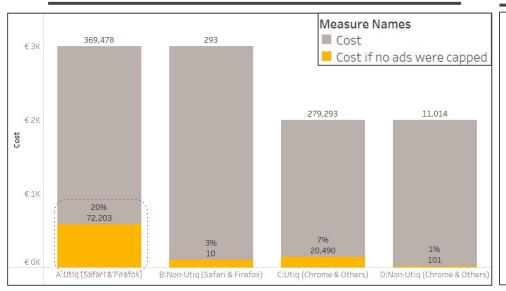
Approximately 20% of hypothetical media spend wastage in cookieless environments (A) was prevented thanks to frequency capping

METHODOLOGY

The analysis focuses on the number of capped impressions and the associated cost savings due to effective frequency capping.

- Cost per user is calculated by dividing line item spend by the number of unique IDs.
- Multiplying the cost per user by the number of capped impressions provides the hypothetical spend if no impressions had been capped.

SELECTED DOMAINS: PERCENTAGE OF CAPPED SPEND



- By implementing impression caps, line item A effectively prevented the waste of 586€ (20% of spend), highlighting the value of frequency capping in optimizing budgets within cookieless environments.
- The calculation assumes a linear relationship between spend and the number of unique users, and the calculation of spend with no impression caps is an estimate based on the assumption that the cost per user remains constant.

Thank you

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