



In a World Without Third-Party Cookies, What Happens to Advertising on the Open Internet?

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I. Executive Summary

The advertising landscape on the open internet is changing rapidly. The demise of third-party cookies is focusing the minds of leaders across the marketing and publishing industries. This Quantcast Perspective will address several major trends and identify solutions for the future.

There are already fewer cookies than you might think

The internet is becoming increasingly devoid of third-party cookies, as Safari, Firefox, and others have already deprecated them. Google announced that it will phase them out from Chrome by 2022, thus solidifying the death of third-party cookies.

Data privacy legislation will get more complex before it gets simpler

After General Data Protection Regulation (GDPR), top US state legislators are [advocating for data privacy legislation](#). According to PwC, [44% of CEOs rank data privacy](#) as one of the top three policies that will impact their businesses. There is a lot of ambiguity in how these regulations will manifest themselves.

The ecosystem is ripe for consolidation

Today, there is a mind-boggling variety of companies involved in delivering online advertising: Demand Side Platforms (DSPs), Data Management Platforms (DMPs), Supply Side Platforms (SSPs), and so on. Third-party cookies have been the thread that stitched this complex system together. Without them, the fabric begins to unravel. We will see consolidation—not just fewer companies in each category, but also fewer categories.

Measurement and attribution are key

Relevance is intertwined with measurement (are my ads working?) and attribution (which of my ads are working?). Third-party cookies have been central to how audience planning, campaign activation, measurement, and attribution work. Alternative ways to measure success will be essential to preventing our online world from getting cluttered with even more irrelevant messages and, worse, more publishers dying off through lack of funding.

There is no single right answer

The most successful online advertising campaigns in 2022 will run on a mix of emerging alternatives to third-party cookies, including first-party data, consent, contextual approaches, cohorts, identifiers, and more. The challenge for brands, agencies, and publishers is to find a partner with the AI and machine learning technology capable of ingesting, understanding, and acting on this complexity in real time.

Our approach is grounded in industry standards, interoperability, and innovation. By leveraging our unique AI and machine learning technology to harness multiple audience signals, we're pursuing our mission of championing a free and open internet. Read on to find out more about our perspective on the way forward.

II. Introduction: A Changing Landscape

The open internet is a force for good

The open internet is the most powerful mechanism for free expression our world has ever seen. Anyone with access can share their point of view, their content, and their creativity. Today, billions of people around the world have widespread, free access to information, entertainment, news, education, and so much more—all due to a free and open internet.

Advertising funds the open internet

Of course, great content is far from free to produce and distribute. Advertising underpins the viability and vibrancy of this free and open internet, and advertising technology facilitates advertisers to help fund the vital work internet publishers do in producing content that engages, entertains, and satisfies the curiosity of audiences worldwide.

The open internet is at a crossroads

The advertising landscape on the open internet is changing rapidly and has reached a critical juncture. The demise of the third-party cookie is inevitable; consumer privacy regulations are in full force globally, with GDPR and California Consumer Privacy Act (CCPA) prominent among them; tech companies with a vested interest in their own walled gardens—such as [Google Search](#), [YouTube](#) and [Apple App Store](#)—are gaining relative advantage and are instituting changes that make buying advertising on the open internet harder.

III. Elements of This Evolution

Third-party cookies are dying

The relevancy of cookies has been shrinking for years: initially due to ad-blockers, then due to content being consumed outside of browsers, and more recently due to changes in how browsers operate (Safari and Firefox have been blocking third-party cookies by default for some time). In January 2020, Google announced that it will phase out third-party cookies from its Chrome browser by 2022. While not a surprise, this solidifies the death of third-party cookies as Chrome browsers represent the vast majority of non-Safari browsers. Today, as a result of all these changes, the internet is increasingly devoid of third-party cookies.

Regulatory pressure around consumer privacy is increasing

Another element of this changing landscape is the growing pressure on governments around the world to create and enforce privacy regulations. As a result, consumer privacy regulations have been instituted, including GDPR in Europe and CCPA in California, with other countries and states (e.g., PDPA in Singapore and CDPA in Virginia) set to enact their own regulations soon. Most industry observers and participants are expecting (and many, including Quantcast, are advocating for) federal privacy legislation in the US. At the moment, there is some ambiguity associated with these various regulations, but one thing is loud and clear: demonstrable consumer privacy and consent practices will be a central consideration in the industry going forward.

IV. Consequences of These Changes

The ad tech landscape will see consolidation

In the decade or so that programmatic advertising has existed, many companies, including Quantcast, have innovated and iterated to facilitate the effective connection between marketers and publishers. This has created entire categories of products: DSP, DMP, SSP, and so on. The third-party cookies and associated “match tables,” which map from one “cookie space” to another, have enabled these systems to interoperate.

For example, a third-party data provider can curate audiences as a list of third-party cookies, pass these identifiers to a DMP for further analysis, then to a DSP to buy impressions, which in turn requires cookie matches with exchanges and publishers.

Third-party cookies and “match tables” are the glue that have held the ad tech ecosystem together. Without third-party cookies, this complex landscape of product categories will have a hard time interoperating. As a result, we will likely see consolidation—not only within a category, but also across categories.

Audience planning, campaign activation, measurement, and attribution will be challenging

As third-party cookies have been used for associating otherwise disparate events across sites (e.g., multiple ad impressions delivered within a campaign), they have provided useful, albeit limited, insight into past consumer behavior and habits. As a result, third-party cookies and “match tables” are the primary mechanisms by which relevance is determined and achieved. This manifests in tactics such as using third-party data to plan and reach desired audiences and remarketing to shopping cart abandoners.

Since marketers have always strived to answer the questions, “Is my marketing working?” and “What is the ROI on my marketing?,” measurement and attribution have been important challenges to solve. While reducing the complex cause and effect of influencing audiences at scale to a single metric may still be a distant dream, it is doubtless that digital marketing is more measurable than traditional marketing. One of the primary methods of measuring performance and attributing value to an impression has been third-party cookies. This has allowed marketers to answer questions such as: “How many people saw an ad before they bought my product?”

Since third-party cookies have been central to how audience planning, campaign activation, measurement, and attribution work in programmatic advertising today, their deprecation will certainly impact how these capabilities work in the future.

V. Industry-Proposed Solutions

Today, several industry consortiums and companies have proposed new solutions to solve for a world without third-party cookies. These solutions include new identifiers, contextual approaches, and audience cohorts.

New identifiers

To replace the third-party cookie, more than [80 identity partners](#) are emerging. One of those is The Trade Desk's second iteration of its Unified ID, a sign-on solution for the open internet that the digital industry can participate in. Quantcast and others, including Nielsen, Criteo, Magnite, Prebid, and Index Exchange, will integrate with the solution. Other identity technologies are also being developed by companies such as LiveRamp, Tapad, Neustar, Zeotap, and Signal. Many of these players are hedging their bets by partnering with each other, as it is unclear what the future holds.

Contextual approaches

Contextual advertising is a digital targeting strategy where advertisers buy ad space based on page content, usually aligned with their brand category or audience's interests. Almost twenty years old, this targeting technology may regain importance, as it is not dependent on third-party cookies and personal data, and therefore will be a good alternative when considering regulations such as GDPR and CCPA.

Contextual signals are rich in information and, when obtained and leveraged effectively, can be used to infer audience behavior and intent. However, the existing contextual signals often take the form of content tags that follow predefined taxonomies and can be of low quality. Often, these content tags are miscategorized and hence may not always be an accurate representation of what is actually on a given page. This can adversely impact the accuracy and scale of contextual segments, ultimately impacting performance. The most effective contextual approach is one that directly observes the content on each page and infers the nature of content using advanced machine learning approaches.

It is also important to note that while contextual signals can help with understanding audience behavior—especially when combined with other signals—they cannot solve for everything, e.g., frequency management (managing how frequently the audience is served an ad).

Cohorts

This solution refers to grouping consumers by similar behaviors and interests into groups or “cohorts” to enable behavioral targeting without using cookies.

Google’s proposed solution—Federated Learning of Cohorts (FLoC)—would collect information about consumer browsing history and habits, infer behavioral interests, and then use that information to assign the user to a cohort with its own ID number. Each consumer’s browser will share that ID with websites and advertisers they visit.

However, FLoC raises privacy concerns that are already being called out by several people in the industry, and these concerns will need to be addressed.

Consumers will be dynamically and instantaneously assigned (by algorithm) to different FLoCs based on their profiles and ad content. And as consumers are placed in more and more FLoCs, they rapidly generate a list of FLoCs that uniquely describes one individual.

- Ken Glueck, Executive Vice President, Oracle
[Google's Privacy Sandbox-We're all FLoCed](#)

Google has promised that the vast majority of FLoC cohorts will comprise thousands of users each, so a cohort ID alone shouldn't distinguish you from a few thousand other people like you. However, that still gives fingerprinters a massive head start. If a tracker starts with your FLoC cohort, it only has to distinguish your browser from a few thousand others (rather than a few hundred million).

- Bennett Cyphers, Staff Technologist, Electronic Frontier Foundation
[Google's FLoC Is a Terrible Idea](#)

For countries in Europe, we will not be turning on origin trial [of FLoC] for users in EEA [European Economic Area] countries.

- Michael Kleber, Engineer, Google
[Google isn't testing FLoCs in Europe yet](#)

Additionally, FLoC is not being tested in Europe (at least for now), due to GDPR and ePrivacy Directive compliance concerns. As referenced at a recent meeting of the Improving Web Advertising Business Group (IWABG) at the World Wide Web Consortium (W3C), [AdExchanger reported](#) that Michael Kleber, a Google engineer, acknowledged that FLoCs might not be compatible with European privacy law.

Moreover, other ad tech companies have not yet been able to replicate the results stated by Google using the FLoC methodology, and many of the major browsers have declined to use it, [according to Verge](#).

VI. Quantcast Approach

Quantcast's approach to the demise of third-party cookies is grounded in three pillars: industry standards, interoperability, and innovation—all in service of a free and open internet.

Industry standards

The advertising technology community needs to come together with publishers, brands, and agencies to define the industry standards and framework for viable long-term solutions. Such unity also gives the industry a way to validate and hold ourselves accountable. With that in mind, Quantcast has been working with IAB Tech Lab's Project Rearc, Prebid, and the W3C, and will continue collaborating with others from across our industry.

Interoperability

The Quantcast Platform was built to intake and make sense of a complex set of signals. AI and machine learning are integral to the platform and make it well equipped to deal with the many solutions that will emerge over the coming year, including UID 2.0, LiveRamp, FLoC, and others. The platform can parse and ingest all these as signals, and our AI and machine learning engine Ara™ can process them with all the other signals it currently looks at. Quantcast will partner with all emerging approaches and make any necessary adaptations as they evolve.

Innovation

Our approach has been and will continue to be grounded in innovation on multiple fronts: natural language processing, consent, a system to combine identifier signals coherently, and machine learning technology that can take in multiple signals, combine them with statistical methods, and ultimately provide brands, agencies, and publishers with planning, activation, and measurement capabilities. The following section talks about the Quantcast technology in further detail.

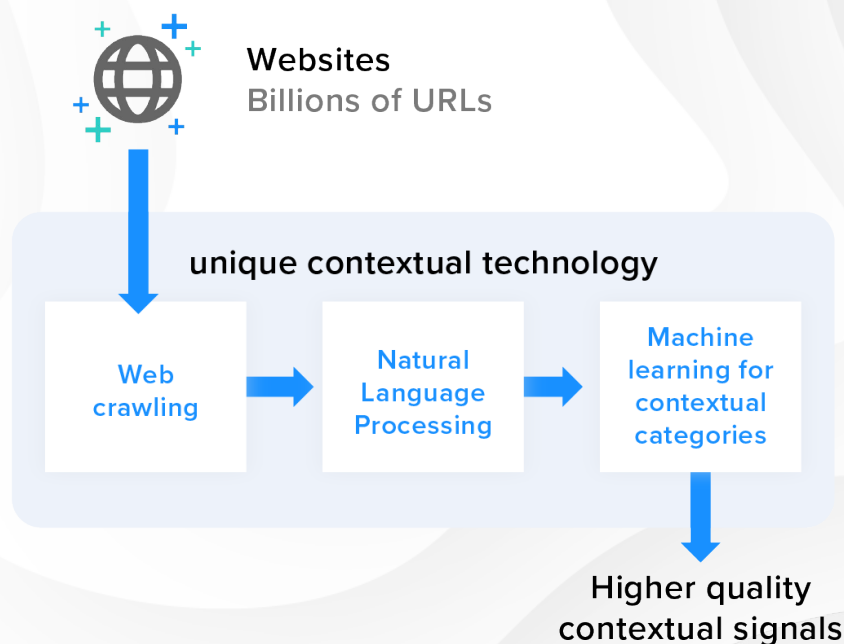
VII. Quantcast Technology

Multiple signals for scale and accuracy

There will not be a one-size-fits-all solution to post-third-party cookie challenges. Third-party cookie signals that were long available will deteriorate, contextual signals will continue to be available, and other signals will emerge as a result of the new ID and cohort solutions. The best and most comprehensive approach will need to combine all these signals effectively when making decisions regarding audience planning, activation, measurement, and attribution. At Quantcast, we have invested in building a platform that can take in and make use of multiple signals for scale and accuracy.

Contextual signals

To augment and enrich the information available in pre-defined contextual tags, the Quantcast Platform uses proprietary contextual technology that is part of Ara,TM our AI and machine learning engine. This technology gathers content from various websites and uses natural language processing to understand the content. It then deploys machine learning to analyze that content in a complex, high-dimensional space and ultimately identifies content categories. These contextual signals, which the platform uses, are of much higher fidelity than the predefined contextual tags and a truer representation of the actual content.



First-party signals

Quantcast has been working with top publishers, such as BuzzFeed, Bustle, Condé Nast, and Forbes, for over a decade, which affords us privileged access to first-party signals via Quantcast tags that publishers place on their websites. Today, these first-party tags are deployed across 100M+ web and mobile destinations. Additionally, we have built the platform to intake any first-party data that our customers (publishers, brands, and agencies) share with us. These first-party signals impart a wealth of information regarding user behavior, including, but not limited to, the content with which they engage.

Cohort-based signals

We have architected the Quantcast Platform to ingest cohort-based signals. Once these signals are widely available via bid requests, our technology will process them as one of the many inputs. We will use the various cohorts assigned to a given impression, along with all other signals, to infer audience behavior and intent.

Identifier signals

The Quantcast Platform will support emerging identifiers, including UID 2.0, LiveRamp, and others. We will parse these identifiers and combine them effectively and coherently to interoperate across various ID spaces. For the fraction of internet traffic that is authenticated with these identifiers, we will leverage the information from these identifier signals and combine it with information from all the other signals described here.

Consent signals

Consumer consent is and will continue to be an important consideration. The Quantcast Platform looks for consent attached with a bid request (implicit or explicit, based on regional requirements) before using and processing any of the information in the bid request. Quantcast pioneered innovation in the consent management space by partnering with IAB Europe to build the transparency and consent framework (TCF). Based on that framework, we created the first widely available consent management platform (CMP), Quantcast Choice. Today, it is a leading CMP deployed across 3M+ web destinations. With our expertise and experience in parsing and propagating consent, we are well-positioned to look at any newer consent signals as more regulations and frameworks are put in place around the world.

Additional signals

Information such as geolocation, device ID, time, and language will continue to be available. When combined with other available signals, this information helps enrich the understanding of online audience behavior.

How the Quantcast Platform Works for Audience Planning and Campaign Activation

COMPLY AND INPUT

Consent

Check for consent—explicit or implicit—based on regional requirements and also propagate consent.

Input

With consent, input the bid request / first-party tag into the system

PARSE

Identifiers

Parse and translate across ID spaces as needed

Cohorts

Parse cohort ID to take the signal into account

Other

Parse and pass through geolocation, language, time, device, etc.

Website Signals

Parse for website URL; look for first-party cookie

ENRICH

First-Party

Check for match against first-party data and add that understanding

Contextual

Check URL against topic map to create and add high-quality contextual signals

COMBINE

Ara™

Combines these signals statistically to power insights for audience planning and one-one reach for campaign activation

AI and machine learning to help make sense of signals

While all of these signals contain a lot of information, there are some challenges:

- More often than not, signals have raw information that is complex and messy.
- They are signals, not static data segments, and so are ever-changing by nature.
- In isolation, each signal contains incomplete information.

Without third-party cookies, the primary mechanism used to interpret and connect cross-site signals is no longer available. Therefore, new approaches are required to interpret and combine signals to fully leverage the information available across all signals. This is where Ara comes in. Ara can process a multitude of signals; use advanced statistical techniques to combine them; analyze online audience behavior patterns; and find, categorize, evaluate, and reach the audiences best suited for a given campaign. Using a combination of signals, Ara can determine the relevance of an ad impression; evaluate, price, and bid on it optimally; and deliver return on investment, at scale.

While deterministic identifiers might gain traction, potentially resulting in 80% of the internet traffic logged in with identifiers associated with it, we need to be prepared for a future where that is not the case. The signals described here are not mutually exclusive; in fact, they can and do work well together. Every piece of information gathered via signals increases the accuracy of our understanding of online audiences, which allows for more precision. This multi-signal approach is not only robust, but also flexible. The Quantcast Platform can ingest a variety of signals, but is not completely dependent on any single signal.

The future of advertising without third-party cookies is still evolving, and new solutions will continue to be proposed. Quantcast will monitor, interoperate with viable solutions, and innovate to evolve our technology as the landscape develops.

Multiple signals deliver results

As an example, to reach people interested in buying ski goggles, all of the following signals will play a role:



Contextual signals

For example, checking snow conditions on weather.com or reading "6 Tips to Learn to Ski"

First-party signals

Curated audiences interested in skiing from our publisher partners with Quantcast tags on their site

Cohort-based signals

While the actual signals available are still unclear, for now, let's assume signals such as a snow sport cohort and outdoor cohort will be available

Identifier signals

UID 2.0 associated with the bid request

Consent signals

Consent associated with bid request

Additional website signals

- Geolocation indicating proximity to ski resorts
- Device type
- Time of day, week, or month
- Language

In isolation, many of these signals do not provide useful information for an ad campaign. However, when processed by machine learning algorithms and combined statistically, they can be a strong indicator of relevance for a particular ad campaign, like promoting ski goggles. Of course, the algorithm's level of confidence decreases when fewer signals are used, but machine learning can even take that into account when determining an impression's value.

VIII. Conundrum Conclusion

Multiple signals and machine learning systems for a free and open internet

Many of the changes to the current ad tech landscape, while centered around the idea of consumer privacy, are also self-serving to the companies making those changes—either to neutralize a competitor’s advantage or gain one for themselves. As a direct consequence, the effectiveness of advertising is under threat and adversely impacting brands, agencies, and publishers. More importantly, the ramifications for consumers are concerning: what may look like a privacy boon could soon turn into the bane of not having widespread, free access to quality information, entertainment, news, education, and so much more.

At Quantcast, we have built a platform that takes a multi-signal approach to look at the available information and applies advanced AI and machine learning techniques to make sense of those signals. We have been testing our thinking and technology in Safari and Firefox environments—a good indicator of what the future will look like—and have seen positive results with our alpha capabilities. This approach is not only robust, but also flexible and scalable if one of those signals becomes unavailable or a new type of signal is introduced.

Championing a free and open internet

Respecting consumer privacy, while delivering on the outcomes that brands, agencies, and publishers need, is key to keeping the internet free and open. While many solutions are circulating within the industry, there is great uncertainty around which will work. We believe that the role of technology is to help navigate complex situations like these and build robust solutions that can withstand future uncertainty. Quantcast believes in applying innovation and technology, working with emerging solutions and industry standards, and collaborating with our customers and partners to create solutions that work for all. We are confident that by building on our three pillars of innovation, industry standards, and interoperability, we will successfully champion a free and open internet in a privacy-first world.