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Who Is This?

When a seller says it found a match, did it find the same person, a device or a home? This paper asks how buyers can tell, what the seller counted, and which choices follow the ID when it changes hands.

Evgeny Popov · No Fluff Advisory

RESEARCH CUTOFF 11 NOVEMBER 2026 · ONLY INFORMATION AVAILABLE BY THAT DATE IS USED

442	436	24
sources in the register	claims in the ledger	products scored

1085
corrections logged

ABSTRACT

A match to what?

Deep Sync says it linked 73.0% of the transactions in one US grocer's monthly file to an inferred buyer ◆. It says what went in, what it found and how it made the link ◆. The case gives no separate test of who paid for each purchase ◆. A buyer needs both the rate and a way to check the links.

> IN SHORT
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> Ask what the firm matched. Then ask who could use the match and who checked it. The Identity Quotient scores the public proof for a named US buying task ◆. It gives a band only when the row and its set of peers meet the rules ◆.

Start with the thing that changes hands

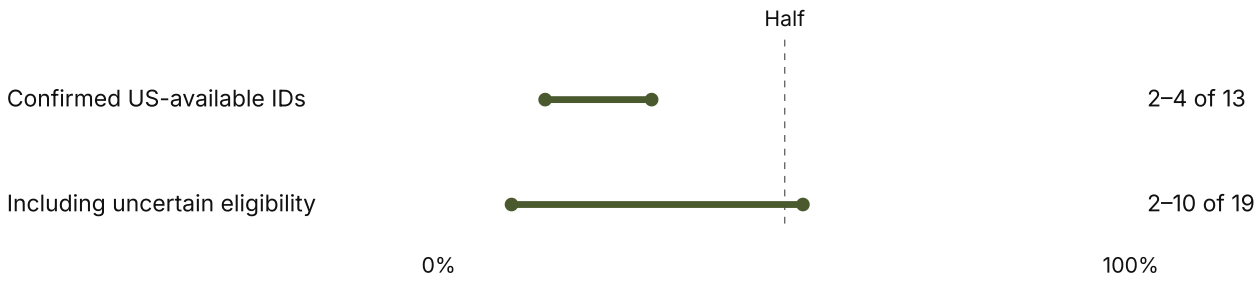
Do you get a code in a bid, a file of linked rows, a set of ad slots or a key for a home? Those are the four kinds of purchase in this study ◆. Start where the output leaves the firm. Who takes it? What can they do with it?

In LiveRamp's ATS guide, a site can pass a sealed ID to a supply platform, which opens it and sends a code made for that bidder ◆. Yahoo's US terms permit a site to send a sealed ConnectID on bids to Yahoo and limit who else may get it ◆. Before you pay for reach, trace the code to the seat you plan to use.

What the tests found

The grocer's case breaks the claim that no scored firm had given the base, the matched group and the method for a US match rate ◆. The search left the test of link accuracy open ◆. It could not settle whether an independent test had checked a named graph's US links to people or homes against a known truth set ◆. Ask to see both the count and the truth test.

What happens when someone opts out? Among the IDs known to be sold in the US, too few showed how a choice reached the next party and changed what it could do in at least one market where the ID was offered ◆. Even if each open case in that group passed, the share would still fall short of half ◆. If all the IDs whose place in the group is unclear were added, the range would run across half ◆.



> **Adding uncertain products changes the consent result** Each range runs from documented paths to the most that could qualify if every unknown case succeeded. The vertical line marks half.
>
> Units: products and share of frame · Scope: US-available IDs through November 11, 2026; a qualifying path in any applicable jurisdiction · Sources [13] [14]
>
> The intervals are logical bounds, not confidence intervals. A documented path does not establish compliance in live traffic.

Only Blockgraph met the US buying test for a CTV household graph ◆. Its guides tell buyers how far back they can look up a past IP address, but give no age limit for the live link ◆ ◆. H5 was contradicted for that one service (0 of 1) ◆. Eligibility remained open for 8 other services, so the study could not settle what most US sellers disclose ◆.

The test of agent buying found code that can use an ID in a check of who is in an audience ◆ ◆. That breaks the claim that the work had gone no further than the fields in a spec ◆. The record did not show that this check drove a live sale ◆.

The study could not settle whether most of the web ID guides moved back to cookie sync, whether an order led to a verified change in a named identity service, or how often a new offer kept links from an older graph ◆ ◆ ◆.

How to read the score

Of 27 US products that met the buying test, 24 had enough proof to enter the IQ ◆. The register holds 57 records in all ◆. The score uses records found by 8:37 a.m. EST on 2026-11-11 ◆. Read a band within the group for the task you plan to buy ◆. A buyer who needs to know how often a link is right should ask for a test of that link.

How the paper was made

OpenAI models ran all seven stages, from the first rules to the final source check ◆. Other model runs checked the sources and scores within the same process ◆. No independent human peer review is documented ◆.

Interests

I have worked at Samba TV since May 2025 ◆. Samba sells TV measurement and ACR data and has a household graph ◆. I left it out of scoring ◆. I have worked at Lotame, Verve Group and Hearts & Science ◆. The register marks my ties to Lotame Panorama ID and Verve Moments.AI ◆. I co-lead the Signals & Measurement working group at AgenticAdvertising.org ◆. My views on match rates and graph reuse helped set the questions ◆. The answers use the rules set before the search ◆.

CHAPTER 1

Defining what the buyer buys

Start with what comes back. Does a brand get a link it can add to its own list? Does a publisher get a code it can pass to a bidder? Does the buyer get the right to serve an ad to a group? Put the answer in the brief. Let it shape the test and the price a buyer can defend. It will also shape what the buyer can claim when the work is done.

> IN SHORT
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> Group the services by the job they do. One job passes an ID from firm to firm. One links a brand's own list to a graph. One sells a group as a way to replace an ID-based buy. One links TV sets or ad views to homes. Who gets the result? What does each row stand for? What can the firm that gets it do with it?

Read the return file first

Take a brand that wants to sign up new members for its club. It wants to skip the people who have joined. It has each member's name, email and date of joining. Start at the far end of the job. Must the brand know which rows matched so it can fix the rest? Or would it be enough for the seat to skip a group while the ads run? Write the brief both ways. The first asks for a file and a way to work on it. The second asks for an action at a named destination. A firm could meet one brief and leave the other job undone.

Draw a line from a row to the thing the team will act on. Give each end a plain name. If the firm links an email to a device, who gets the key for that device? If it links the member to a home, should the seat skip an ad for each person there? If it builds a group in a seat, can the brand take it to a new seat? Set the test for the job the brand needs. Then choose which firms to hear from.

A useful clause would say, "For each input customer key, return an accepted link at person level or a reason the row was left out." Another would say, "Make the group available to exclude in the named seat for the agreed dates." Ask the bidder to mark the clause it can deliver. For a file, show the fields and one filled example. For a segment, show where the trader can see its name, select its use and check that the campaign applied it. Keep those two forms of proof with their respective clauses.

Name the thing at each end of the link

Call a row from a source a *record*. Call a code used to refer to a thing an *identifier*, or ID. That thing might be a browser, a phone, a home, a person or an account. A *link* claims that two rows refer to the same thing, or that they have some stated tie. Call the set of links and

the things they join a *graph*. These terms let the buyer name the claim it needs the seller to make.

Take a shared inbox. In this example, two adults have separate store accounts and use the same email address. A test for the same email would find the same text on both rows. Who placed the order? That would take more proof. Now change the task. If the retailer wants to send just one email to the inbox, the common address may be all it needs. Ask the team to state which decision would change if the two adults were merged. The cost of an error follows from that decision.

Call the system in which a key has its meaning a *namespace*. Suppose a store and a streaming service both assign the string “A17” to an account. In that case, keep the keys apart until you know what joins them. Ask for a source label for each end of a link. How will the team know when a new key has replaced an old one? Try this on the sample. Strip the source from a person key and put it next to the store’s own club ID. Could a new member of the team tell which was which?

A common ID that other firms can use

For cohort A, look for an ad ID that can pass from firm to firm. Who can issue it, send it or make sense of it? Follow one ID across the boundary. LiveRamp says the sell-side platform can open its ATS envelope and pass a RampID for a specific buy-side platform in a bid request ◆. Who gets the envelope? Who can open it? Which buyer will know what the code at the end means? Put a firm’s name next to each handoff.

UID2’s guide names The Trade Desk as core administrator and a public operator ◆. Public or private operators make the raw IDs and encrypt them for use in tokens ◆. Its guide sets out who can do what ◆. A publisher can ask for a token, a mapper can submit an email, phone number or its hash, and a bidder can open a token ◆. Which role is the buyer taking? Want keys to join the agency’s own list? Read the terms for the mapper. Want to send a token that a bidder can use? Read the terms of the route at both ends.

The Trade Desk describes a CRM route that lets a client target ads in its own seat without receiving the IDs or the map from client rows to IDs ◆. UID2 says a firm under contract can use a public operator at no charge ◆. A private operator has to host and run the service itself ◆. What right did the brand gain? What work must it do to make use of that right? What comes back? On the budget, give the cost of that work its own line. List the ad spend and any fee for the service on their own lines too.

A code that comes back can mean more than one thing. LiveRamp says its API can issue a maintained RampID from a graph match or a derived RampID when it finds no match ◆. Its ATS security guide also describes a hash producing a derived RampID when that input has no representation in the offline graph ◆. How can a buyer tell the two cases apart? A test for a filled cell might pass in both. If the brand needs a link that was in the graph when the job began, write a test for that.

A service that resolves the buyer's records

For cohort B, start with the rows a brand wants to link. Which graph will do the work? What kind of link will the brand get? How will it get it? Experian offers its US Digital Graph as a full dataset or as links appended to the buyer's own records ◆. If the team buys the full set, which fields can it keep? How will it spot the latest set and replace its old links? If it buys an append, how does it join the new fields to its rows? How does a failed row look? What if the team sends the same row twice?

Experian describes clustering digital IDs into individual or household links using signals that include timing, IP addresses and browser or device IDs ◆. Its Offline Graph is a separate offer for names, addresses and emails, and a joint offer pairs the Digital Graph with Marketing Attributes ◆. Put the name of the product on the order. If the brand wants a street address or a new fact about a shopper, which part of the order gives it that field? The list of things a firm sells is a good place to start. Get the name of the one that gives the brand the field it wants.

LiveRamp describes an API that takes personal information and returns AbiliTec Links, and a cloud route that returns Known IDs ◆. The AbiliTec API accepts single or batch calls and returns identifiers and match details for matched records ◆. Microsoft documents a US-only preview that requires active LiveRamp and AbiliTec subscriptions and uses mapped profile fields to retrieve person-level IDs ◆. Keep the preview label on the Microsoft feature. For an API buy, ask who can use it and what link comes back. If a firm adds to a list held in a second system, where will the new field show up? Who can read it there?

Two apps can sit side by side and do quite distinct jobs. Zeta's US-only app guide describes Customer Growth Intelligence taking first-party data through a Snowflake share and exposing enriched views ◆. The same guide describes Customer Matcher pairing records in two client tables and scoring those pairs ◆. For the first job, which new fields come back? How may the brand use them? For the next, what does a pair score mean? What if one row has two strong links? Keep the sample next to the name of the app that made it.

One more distinction belongs on the order. Define *observation* as a piece of input, such as a time-stamped use of a device. Reserve *assignment* for the decision to tie that device to a person or home. Imagine a customer first signing in at a shop and then signing in again from home. A buyer could ask for the details of both observations, a single person link, or a new address appended to the customer file. Specify which came from the buyer and which the seller added. If the address came from the buyer, counting its return as new coverage would give the append service credit for work it never had to do.

Set a rule for ambiguity as well. Suppose a phone number appears on both a business account and a personal account. The buyer might prefer two possible links, each with its own flag, over a single link chosen by the service. Or it might want the service to leave the row open for review. Put that choice next to the field definition. A person identifier, a candidate identifier and a reason for declining the match should each be recognizable in the sample without a call to the sales team.

An audience the buyer can trade

For cohort C, ask what group the brand can buy in place of an ID-based buy. Take a brand that wants to reach new runners on sports sites. It may have no need to link each one to a store list. What would its trader choose in the seat? Who would set the terms for ad space to count? What would tell the buyer that the deal ran? A list of pages tagged for running would meet a more limited brief. For this group, look for a seller that makes the replacement offer and spells out what the brand can buy.

Permutive says its publisher groups can be used in deals ◆. Google says TelevisaUnivision sent Permutive's groups to Ad Manager ◆. On its US ad space, the publisher saw a mean of 1.24 audience categories per impression ◆. OpenX separately announced a US route for buying Permutive audiences without third-party cookies or device IDs ◆. Keep the partner's name with its case. Use the first to ask how the seller put a group up for sale. Use the next to ask which seat can buy the OpenX route.

Audigent describes SmartPMP as a curated media route using TransUnion audiences, while Hadron ID has its own documented identity module ◆. What right does the deal give the brand? It might want to buy ad space. It might need the ID too. If that calls for a new set of terms, put both sets in the brief. Ask to see the item the trader will pick. Which terms can change the group while ads run? Where will the brand see when it changed?

Name the place too. Ogury described an airline campaign that targeted travelers arriving in Japan and included visitors from the United States ◆. Want to show ads in the US? Ask for a case or an offer where that is where the ads ran or will run. What does "US" mean in a brief? It could name the source, the buyer, the people, the ad space or the place the ads ran. In this case, check the place where the trip ends.

A TV purchase with the household as its unit

For cohort D, look for a service that links TV sets or ad views to homes for a TV buy or a test of that buy. The home can be the right place to end the link. Which homes went to a site once an ad had run on TV? A join at the home could serve that brief. Who watched the ad and then bought the goods? Get proof of the extra link to make that claim. Give the two claims their own lines.

Spectrum Reach describes a working arrangement in which it provides household TV exposure, Innovid provides household website visits and Blockgraph matches them ◆. Spectrum's account describes counting visits within seven days of a TV exposure ◆. Put that span next to the visit measure. Blockgraph separately describes historical IP lookups that can use a lookback of 30, 60 or 90 days when the provider maintains household signal history ◆. Give each clock a job. How far back can the search go? How old can a link be and still count? How much time can pass from the ad to a site visit?

TransUnion described TV audience activation through its marketplace and the use of its graph to build segments for campaigns on Comcast ◆. If the team wants to buy a TV graph, which item on the order will it get? If it picks a group, ask who owns the group and where it can run. If it gets a link from a TV event to a home key, who can check it or join it? How will

a new link replace one that has gone stale? The teams may have asked for things that come back in quite different forms.

Decide what the buyer can keep

Settle who holds the result when a campaign ends. Imagine a brand that parts ways with its agency after a TV flight. If the brand holds a dated file of accepted household links, the handover could include that file and the rules for using it. If the result lives in an agency seat, handover might instead require that a segment be shared or rebuilt. If the only output is a report, specify which cuts of the results the brand needs before access ends. Ask the parties to agree on this point before the flight starts.

Apply the same test to tools used alongside identity services. AWS describes a Clean Rooms query as access to configured tables for analysis within a collaboration ◆. OneTrust describes its consent management platform as capturing and signaling purpose-based consent ◆. Microsoft documents a Curate workflow in which a curator adds its assets to seller inventory ◆. If the brand needs a link to a person or a home, who will supply it? Put the query result, the choice signal and the media deal on their own lines.

Return to the membership campaign. Let the membership team own the rule for entrance and exit. Ask the graph firm what each link means. Have the trader name the seat that used the group. Did it use the group to reach those members or to skip them? Agree on what to do with a shared inbox, an expired member and a row the provider cannot place. If a member changes their address, identify the list or link that should change and who is able to check it. The signed brief can then say what the team bought in terms that survive the first change of data, staff or seat.

CHAPTER 2

Standards and specs

Read the source note next to the code. It can help a buyer ask who put it there and how the match was made. OpenRTB 2.6 has fields for who inserted an ID, whose technology supplied the match method, and which method was used ◆. Want proof about one ad? Ask for a trace from the path it took. Keep the build, the settings and the fields the bidder saw.

> IN SHORT
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> Read the spec to learn what the field means. Read the guide to learn how the code uses it. Keep a copy of the settings in use. From Prebid.js 11.14, ID modules skip retrieval if a configured TCF or GPP consent-platform lookup fails ◆. If time runs out, they run with the consent data at hand ◆. Write both cases into a release test.

Read a bid from the outside in

Take a site that wants to sell ads with an ID. Which spec does the seller use? Ask that before you look at the ID. Which release does it use? In which field will it put the ID? Where does it put the source? Which fields can the bidder see? Start with a copy made for a test. If the test asks where the ID goes, take the ID itself out. Keep the parts around it in place. Have both firms say what each part means.

OpenRTB has an extended identifier object, or EID, for a group of IDs from one source [1]. Its `uids` field holds a list of UID objects from that source [1]. The `source` field names the canonical domain of the ID [1]. In UID2's own example, the encrypted token appears in an EID entry with `uidapi.com` as the source ◆. Prebid's guide names `criteo.com` as the EID source for the Criteo ID for Exchanges module ◆. Check each name against the guide for that ID. What is the source field meant to name in that guide?

What can a count of these fields tell you? Make a test with two source groups. Give the first one two UIDs. Did the right sources show up? Count the groups. Did the adapter build the right list for its source? Count the UIDs in that group. How many people did the buy reach? First show what links the IDs to people and how the team checked those links. Store a copy of the test in the shape it had when it ran. Each count should still trace back to the right part of the test.

Who inserted the value and who matched it?

IAB Tech Lab added provenance fields to OpenRTB 2.6 to describe who inserted or bridged an ID and the match method ◆. In the EID object, `inserter` names the party that caused the entry to be added [1]. The `matcher` field names the technology that supplied the match method, and `mm` holds a code for that method [1]. Ask one thing of each field. Who owns

the namespace? Who put the ID in the request? Whose tool did the work? How did it match?

An empty field deserves a close read. The OpenRTB text says to assume that a blank `matcher` equals the source, and it permits omission for certain match-method values [1]. Keep what came in from the sender. Add a field for what the spec says it means. Which source did the sender name? Read the first field. What should the buyer use when a name is blank? Read the next field. A team that puts both in one place might take a name it filled in by default as one that came from the sender.

Take an exchange that adds a key from a namespace a different firm owns. Ask the exchange why it put the key there. Ask the firm that built the match how it made the link. If the two firms differ on what the method means, ask for its terms and a test of the link it claims. The match code gives the team a place to start. To find out how many links are wrong, get a set of cases with known answers. How were those cases picked? How did each link fare?

Find the part that issues a usable ID

Use the name of the module to find its guide. Prebid says SharedID stores an ID in the site's first-party domain and lets adapters use it ◆. Prebid says Parrable's ID works across browsers and webviews on one device ◆. Its guide says the Parrable cookie holds the ID and the user's opt-out state ◆. Does the claim cover one device, site or source? Ask the seller. Set up a test based on its answer. Which things should stay the same when a user comes back?

Read the guides at both ends of the route. UID2's permission matrix says a publisher can request a token and a bidder can decrypt one ◆. LiveRamp's ATS route gives the supply-side platform an envelope to decrypt before it passes a bidder-specific RampID ◆. At each step, give the code a name. Which firm has the right to open it or change it to a key the next firm can use? If the handoff is meant to change the key, a test for the same text at both ends could flag a fault where there was none. Check that the next firm got the key meant for its role.

Say the team gets two fault reports. One says, "The publisher created the ID, but the bidder could not use it." The other says, "The publisher created no ID for this request." Keep a log at each end. For the first report, trace the handoff. Which kind of ID did the bidder expect? For the next report, start with the sender's settings and inputs. Make up a test key that can join the logs. That way the ID itself can stay out of the report. Give both firms the time and the test key so each can check its step.

Turn the default into a test case

Prebid documents a publisher option to require TCF Purpose 4 consent before passing user IDs and EIDs, and the option defaults to false [2]. Ask how the site set that switch. Run a case with it off. Turn it on and run one with the choice due to be there. Leave it on and run one where that choice is missing. Give each case a row. Keep the exact build and settings for each row so the team can go back to a case that failed.

Prebid.js distinguishes a failed consent lookup from a timeout when a TCF or GPP consent management module is configured ◆. From version 11.14, its ID submodules skip retrieval and add no IDs to the bid request when the lookup fails ◆. On a timeout they run with the consent data available then ◆. For a test of the first case, make the test system report an error. For the next case, let the clock run out. Save what the code had when time ran out. Did it still have a choice from a prior check? Test with that choice in place and again with no old choice to read.

Keep the release note with the code it covers. ID5's Prebid Server Java guide describes forwarding available privacy signals to the ID5 API during ID generation ◆. A browser-side Prebid.js result and a Java server module description belong to different test paths ◆ ◆. If the site runs both, give each path a known input. Which code read the choice? Which code asked for the ID? Which code put the ID in the bid request? If one team runs the site code and one runs the server, each can show the step it took.

For the acceptance test, decide what the system should count when it skips a lookup. A publisher could report a request with no ID as one failed match. Under the failure branch just described, the module never asked for an ID in the first place ◆. Give that case a place in the report. How many checks could start? How many sent back an ID? How many IDs did the wrapper put in a request? Ask for counts at each step in the same test. If the first count drops, the team should have a clear place to look. If just the last count drops, send the case to the team that adds the ID to the bid.

Give each choice signal its own meaning

IAB Tech Lab describes the Global Privacy Protocol, or GPP, as a way to carry privacy and choice signals from sites and apps to ad technology providers across supported jurisdictions ◆. Which signal was on the path? Where did it come from? Where did the sender put it? Who could read it? Make a test where one part is blank. Run a case where the string cannot be read and one where a user has made a clear choice. Ask both firms what they expect in each case before they see the result.

IAB Europe says newly created TC strings that lack the disclosed-vendor segment are invalid from March 1, 2026 ◆. Under the transition it describes, earlier strings can remain valid until the user renews or changes the choice ◆. To test the change, give the date the string was made. Has the user made a new choice since then? Check what this part of the string says. Want to know if the choice covers a set use? Ask for a check on that use too. Give the check on which firms were named its own name and result.

The W3C document dated September 24, 2026 is a Working Draft of Global Privacy Control, or GPC [3]. It describes a signal exposed through HTTP and the browser's document object model that requests sites and services refrain from selling or sharing personal information ◆. Keep the word "draft" with the date. If a firm says it supports GPC, ask what its code reads. What does the site do once it sees the signal? If the firm also supports GPP, ask how it deals with both inputs for this use. Check each answer against the spec the firm named.

Trace a change of state

A choice made after an ID was issued calls for a new test. UID2 says a user can opt out for a supplied email address or phone number, publishers learn the result on token generation or refresh, and an operator sends DSPs a separate webhook ◆. Its DSP guide instructs the bidder to stop using an opted-out UID2 for bidding and allows another ID or a decision to skip the bid ◆. Set the test for the ID it covers. If an ad comes back, which ID did the bidder use for that event? Did it need one at all? The ad alone would leave that open.

Look for a change the site team can see. LiveRamp says its ATS JavaScript removes the stored RampID envelope when consent is rejected under the US GPP National or fallback CCPA check ◆. Yahoo documents a domain-specific opt-out flag in local storage that stops the ConnectID JavaScript module generating new IDs on that domain ◆. In a site test, save what the site held just before the choice. What did the module do next? To find out about a copy held by a firm at the far end, ask that firm for a receipt. Use the terms that apply to its copy.

Set the clock for the test. Say the buyer refreshed its copy just before the user changed a choice. The site checked just after the change. Those are two points in time. Mark when the choice came in. When did the issuer next check it? When did it send a note? When did the firm at the far end act on it? Mark each step the teams can show and leave a space where the proof ends. The site team can show what its own code did. The buyer can then test the part that took place in its seat.

Keep names and versions with the evidence

A change of name can leave a reader unsure which document a buyer used. IAB Tech Lab says Seller Defined Audiences was renamed Curated Audiences in December 2024 ◆. If a brief cites the spec, keep both names with its date. Who gets to set the group? Which deal can the buyer pick? If the seller cites an ID too, ask how to get it and on what terms. A buyer can look up the old name and find the new one. If a firm says its own service has stayed the same through the change, what proof does it have for that claim?

A version change can alter the data a buyer needs to keep. In July 2025 UID2 announced v3 mapping for advertisers and data providers, replacing v2 salt-bucket monitoring with per-ID refresh timestamps and making the prior raw ID available for 90 days after rotation ◆. To test the move, take one map built with the old code and one built with the new. Read the guide for each. How long can the team use an old map? Which field tells it when to check next? What if the team misses a check?

UID2 also distinguishes the raw ID from a generated advertising token and says each generated token differs even when participants mapping the same email at the same time receive the same raw ID ◆. Put the name of the thing next to how long it should last. To test the guide, have the team make the map again and ask for two tokens. Say up front which should match and which should differ. What would make the team take a closer look? Agree on that first. A change the guide predicts could look like a failed test if no one wrote down what to expect.

Hand over a case that someone else can run

Build a small test pack. Start with the dated spec and the fields due to show up on the path. Add the sender's build, the module that was on and its settings. Who was meant to get the request? Add a test with the group in place. Add one where it should be missing. If the team takes out a code to protect the person in the test, mark that spot. Leave enough in place for the next reader to tell a code that was cut from a field the sender left out.

Send the receiving team a matching copy of the test case. Ask it to return the source it read, the version of its decoder and the action it took when a field was missing. Include one deliberate mismatch between the expected source label and the example value. Ask the engineer whether the buyer would accept the entry, ignore it or set it aside for review. Agree on what this build should do. Run the same test when the build next changes. Give the bidder a place to say it could read the field yet lacked the rights or keys to use it.

Mark where each sample came from. Was it in the guide? Did a test make it? Did someone see it in the buy? Have the person who gave it to the team mark the box and date it. A sales deck could show a request straight from the guide. A trace with the settings could tie one to the site build that made it. Which question does the buyer want to ask of each?

Then state the question in a form the packet can answer. Did this build put this source group in a request for the chosen recipient? Did a timeout produce the documented branch under the settings supplied? After a choice changed, did the local site stop producing a new value? Each question has an actor, an input and an observable result. Give a second reviewer the packet and ask them to identify the step that would fail if just one setting changed. Keep the reviewer's answer with the original result so the next release can be tested on the same terms.

CHAPTER 3

Match rates and accuracy

Deep Sync describes a US grocer's monthly sales file ◆. Deep Sync says it linked 73.0% of the file in three steps ◆. The last step used the home and the area a store serves to infer who bought the goods ◆. You can see how the share grew ◆. The case gives no check against known buyers for that last step ◆. Start with what went in, what came back and how the seller made the link. Then ask who checked that it was right.

> IN SHORT
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> TransUnion says it linked 99.5% of a US insurer's records to a person in its offline graph ◆. Its report lists fields for a second, smaller figure ◆. Experian puts a 70% rate on a link from MiQ's IP addresses to cookieless IDs ◆. Its case gives no US-only rate or full rule for accepting a link ◆. A seller can show how much of a file it linked. To learn how often it got the right person, give the links a test with known answers.

Start with the file

A brand gives you a list. What share can you reach? First choose what you want to count. Make a row for the whole file. Then count the rows that have the right fields. Count each distinct key. Count the keys the brand has asked you to send. Count the ones that linked and the ones the seat can use. Keep each count and its unit on its own row. A row could give you one device or ten. Ask which line the seller will divide by which. Settle that before the job runs.

Consider LiveRamp's standard rate for activation at a destination ◆. Start with unique records that can be identified and are in scope for the send ◆. Count those that link to at least one online device at that destination ◆. The base leaves out records the client is not sending, and Facebook has a separate rule ◆. What if your brief asks about the share of the whole file that the seat can use? Keep your own base as well. Give both rates to the planner. Use the first to see how the send went. The other would tell her what share of the list she can plan to reach.

LiveRamp gives a simple example with one person and four devices ◆. It finds one of those devices, so its rate for the devices is 25% ◆. The person's email can match at the destination, giving a rate of 100% for that one person ◆. These are made-up figures to show how the rule works ◆. Now put those units in your own plan. If you want to show one ad per person, which devices share the cap? If you want no ads to that person, what happens on the three devices that did not match? Write the answer in the same units as the goal.

Where the grocer gained the most

The first pass in Deep Sync's US grocery case used the loyalty signal to link 22.8% of the month's till records ◆. A pass that added links from cards took the share to 30.6% ◆. In its last pass the seller used the store's catchment and a household to infer further links ◆. It put the share at 73.0% by the end of that pass ◆. All three shares use the monthly till file as their base ◆. Do not add them. A sale found on the first pass is still in the count at the end ◆.

The seller's headline total is about 32 million matches ◆. The rounded counts of new matches on each pass add up to about 31 million ◆. Its summary gives a range of roughly 64% to 73% of monthly sales volume and does not name the month ◆. Keep 73.0% as the stated end of the three-pass run ◆. If you need exact counts for a bill, ask the seller for them. Get new links on each pass, plus all rows left when the last pass ends. Check that they add back to the full file. Keep rows sent twice apart from sales made twice.

Think about what the final pass may be worth to a store. It might help choose homes to send a broad offer. Would you use it to claim that a named person bought a box of tea? The case gives no test against known buyers for that last pass ◆. Ask for a flag that shows which pass first found each sale. Plan one buy with the loyalty rows alone. Add the card rows in a second plan. Add the last group in a third. Find out what each new group does to your cost per home. You could agree to buy one group and run a test on the next.

A second US case from Deep Sync deals with an outdoor retailer's customer file ◆. It says its Profile Hygiene & Enrichment service resolved 83.5% of that file, with all 19 rules on ◆. The case gives about 885,000 records and does not define the 19 rules one by one ◆. A count of rules could tell the team that it ran the right job. How many rules gave one clear match? How did the team break ties? Which rule could turn one buyer into more than one home? Ask for the first rule that worked for each row. The grocery case cannot fill those gaps for this file ◆ ◆.

Read the next line in the case

TransUnion's report for a US insurer says 99.5% of its records found a person in the firm's offline graph ◆. It gives another figure of 97.4% for matches on first name, last name and at least one more item of personal data ◆. The source gives no full match rule for the 99.5%, count of rows sent or dates for the test ◆. Keep both lines in the brief. Ask which rule applied to each part of the 99.5%. Ask which service a client could buy to run that same match. If a client needs a home, find out whether the person match can yield a home as an agreed output.

Experian says it linked 70% of the IP addresses MiQ gave it to cookieless IDs ◆. The case gives no US-only group, row counts or rule for deciding an IP had a link ◆. Experian says MiQ licensed hashed emails, UID2s and partner cookies for its own Identity Spine ◆. Ask when an IP counts as one input. Once in the whole file? Once on each day? Each time it shows up in a bid? Ask whether one IP can count as a success if it points to a long list of IDs. To plan a US buy, get the US cut first.

Cadent put its average rate above 90% for segments using its Aperture Viewer Graph in March 2022 ◆. Its release says little about which rows counted in each group or how it

weighted the groups ◆. Try a small example. Take one list of ten rows and one of a thousand. All ten rows match on the first list. Half the rows match on the next. Give the lists equal weight and the mean rate is 75%. Pool the rows and 510 of 1,010 match. Which figure would you use to buy each list? Ask for both views and the rate on the group that matters most to the brief.

A claim about growth needs a base too. Kantar said its rates with TV partners grew more than tenfold after it took up Blockgraph's IDoS ◆. It gave no rate for the start or end, or count of the rows in scope ◆. A TransUnion-funded Forrester study used interviews to model a household rate rising from 60% to 80% for a composite firm ◆. That gain of 20 points is a model input ◆. Ask for a starting count, an end count and the same set of homes on each side before you put a cash value on a gain.

Ask who did the work

Deep Sync compared a US mass retailer's file before and after adding new data ◆. In the row for UID2, it reports 73.2 million matched records before the work and 94.4 million after ◆. The case labels those two results 51% and 66% ◆. Against the stated 141.7 million input records the figures would be about 51.7% and 66.6% ◆. The source does not explain how it rounded or which exact base the seat used ◆. Credit the firm that changed the file. Ask for a new test before using the change as a rate for UID2 itself.

Draw two circles for your own file. Put the row keys the seat could use on the first run in the first circle. Put the keys it could use on the next run in the second circle. Which keys are in both? Which are new? Which have dropped out? The size of the two circles alone cannot tell you all three counts. Ask for the overlap if the seat can only share totals. Your team might pay for the new part. It might also lose a group that did well in past buys. Look at both sides before renewing the order.

Read API examples as guides to the count. ID5's Match Preview shows how many distinct hashed emails in a file match at least once for each type of output ID ◆. Its sample table gives no rate from a live US bidstream test ◆. LiveRamp says a hash can get a derived RampID even when the hash has no match in its offline graph ◆. What should the buyer do with each kind of reply? Ask the team to mark a prior link, a new code and a failed lookup in separate ways. Check what the buyer can infer when a field simply comes back filled.

The last line on a media plan may count quite a different thing. The Trade Desk says HP reached 8% of an estimated 12.5 million target homes in its US Disney+ and Hulu campaign ◆. Google reported an estimated 81% revenue gain on restricted-cookie browsers in a New York Times Advertising case that used both UID2 and RampID ◆. Keep the first figure with HP's target and the next with publisher revenue. Neither case gives the count of wrongly linked homes ◆ ◆. Use the reach and revenue figures for their stated purposes. Give it a row of its own in the plan.

Set one last trap for the rate in your own test. Take the same permitted file and split it by the field that first made a link possible. Use one batch with emails alone, one with emails and phones, and one with no usable contact field. Keep the same buyer, seat and dates. Run those groups together as well as apart. Can the seat explain its total from the counts in the three groups? If it keeps only one copy of a key seen in two groups, ask which group gets

the credit. That rule can change the share shown for a group even when the seat has found the same people.

Which links did the graph get right?

Use *precision* for the share of accepted links that are right. Use *recall* for the share of true links in scope that the graph found. CIMM's April 2026 buyer guide asks buyers to set up a truth set and to check those two measures ◆. Try a test with a hundred known links. A graph claims 80 links. Of the 80 claimed links, 60 are known to be true and 20 are known to be false. Its precision is 60 out of 80. Its recall is 60 out of 100. Keep the 20 wrong links as well as the 40 true ones missed. An email that passed a format check would tell you little about who used a phone.

Pick a source of known answers that does not come from the graph itself. Say a login helped the graph learn a link. Would its own login rule be a fair way to mark that link right? To test homes, say who lived there at the date you care about. To test people, find out who used the device. Keep a group for cases with no known answer. Ask who picked the pairs and who could see the answers. Did the seller get a chance to drop hard cases? Agree on how to treat them before the test starts. Ask for the error counts as well as a range for the result.

Truthset ran a US study for CIMM and Go Addressable covering December 2024 to February 2025 ◆. Its model put the mean accuracy of IP-to-postal links at 13% across six unnamed providers ◆. It put IP-to-email links at 16% on a different base ◆. The postal figure is a mean of the firms' scores, even though the firms supplied 938 million distinct IP-to-postal pairs in all ◆. Ask for each type of link in a separate test. You cannot give any one provider the study's mean as its own score ◆ ◆.

There is one more way for a match to change a result. In a CIMM TV study the matched group skewed older, had higher incomes and watched more TV ◆. The authors had no independent data to check the truth of each link ◆. Say every link in a future file is right. You could still keep more heavy viewers than light ones. Ask for the traits of the homes that stayed and of the homes that dropped out. Use fields held for both groups. If that is out of reach, say which group you can describe when you report the result.

What would an old test prove today?

LiveRamp credits comScore with a graph precision range of 95% to 98.9% and names a pool of about 12 million verified devices and people ◆. The pool gives no count of accepted links behind each rate ◆. A PDF with a 2017 copyright and a help page last changed in 2020 repeat the same result ◆. They do not date the test ◆. The papers leave the US group, the funding and the link to current US ATS in doubt ◆. Keep one entry for the test. Ask for the old version, its links and what part of that version the buyer would get today.

Tapad said its Device Graph had twice the precision of the next best graph in a 2016 Hotels.com test ◆. That case gives no absolute rate, base of known US links or version of today's Experian Digital Graph ◆. A fund that held a stake in Tapad said in a separate account that Tapad hired Nielsen to test the graph ◆. Keep the tests apart. A sponsor for the

second test cannot settle who paid for the first. A buyer can still use the old report to find the right questions to put to a seller.

When a seller brings back a study, ask for the smallest claim the test would bear. It might read, “For these homes, during this month, this version linked these two kinds of device with this rate of error.” Try replacing “homes” with “people.” Would the same answer still hold? Try replacing the month with the date of your planned buy. What could have changed by then? Keep each of those changes in a note to the team that will sell the results to the client. That team needs to know when a sound, narrow claim would turn into a much larger one.

The grocery case overturns the claim that no admitted product gives a US rate, a clear base, the matched group and the method ◆. The paper could not settle whether a public, independent test verified an admitted graph’s US person or household links against known truth ◆. That leaves a buyer two distinct jobs. Sign off on the yield when you can trace it to the file and rule. Sign off on a claim about who matched only when a test can show who got linked in error. Keep the case, test and decision together so the next buyer can repeat the check.

Reported match rates and reach

Each figure belongs to a named source, product, unit, population and period. Read the denominator and exclusions before using a rate. Check whether a separate test established that the link was correct.

Machine-readable copy: data/estimates.csv.

SOURCE OF THE ESTIMATE	ESTIMATE VINTAGE	METRIC AS PUBLISHED	VALUE	YEAR	GEOGRAPHY	WHAT THE ESTIMATE INCLUDES	EXCLUSIONS	CAN THESE VALUES BE COMBINED?	SRC
Activation match rate definition	Guide revised 2026-08-06	Activation match (definition)	No observed percentage	Guide revised 2026-08-06	Not specified	Unique identifiable records intended for distribution → At least one device at named destination	Distinct from recognition and true-match accuracy.	No. Read the named base and case.	[15]
Worked illustration	Guide revised 2025-07-10	Device recognition and person activation (worked example)	25% recognition and 100% activation	Guide revised 2025-07-10	Hypothetical	Four devices versus one submitted person/email → One recognized device versus one person with a destination device	A worked example rather than an observed counterexample.	No. Read the named base and case.	[16]
US insurer assessment	Case PDF copyright 2025; assessment period not reported	Assessment file records resolved to a person	99.5%	Case PDF copyright 2025; assessment period not reported	US	Records in the unnamed US insurer's assessment file; absolute count, exclusions and deduplication unspecified → A person in the TransUnion offline identity graph	TransUnion reports a file-to-person result from its assessment. The diagnostic assessment and commercial resolution/enrichment service have separate catalog entries. The remaining acceptance paths and direct scored-service attribution are not shown.	No. Read the named base and case.	[17] [18] [19]
Experian / MiQ Digital Graph	Case materials read 2026-11-11	Submitted IPs matched to cookieless identifiers	70%	Case materials read 2026-11-11	Unspecified	IP addresses provided by MiQ; counts and filters unavailable → Cookieless identifiers	Global operations do not identify the US test stratum.	No. Read the named base and case.	[20] [21]
IRI transaction data / CORE ID	Article 2022-09-09	Transaction data linked to CORE IDs	95%	Article 2022-09-09	US publisher page; data scope unknown	IRI transaction data; record unit and eligible population unstated → CORE IDs	Missing denominator unit and sample scope.	No. Read the named base and case.	[22]
Intent Messaging, known email subscribers	Undated as of 2026-11-11	Match for messaging among known email subscribers	77%	Undated as of 2026-11-11	US publisher page; case scope unknown	Known email subscribers; count and exclusions unstated → Unspecified match for messaging	CORE ID is described for the distinct unauthenticated-reach outcome.	No. Read the named base and case.	[23]
Cadent audience segments	Release 2022-03-30	Mean reported segment match	Above 90% average	Release 2022-03-30	US release; segment scope unspecified	Audience segments; denominator within segment and averaging basis not disclosed → Graph link on match keys	No file counts, uncertainty or segment weights.	No. Read the named base and case.	[24]

SOURCE OF THE ESTIMATE	ESTIMATE VINTAGE	METRIC AS PUBLISHED	VALUE	YEAR	GEOGRAPHY	WHAT THE ESTIMATE INCLUDES	EXCLUSIONS	CAN THESE VALUES BE COMBINED?	SRC
Viant/Acxiom direct match	Release 2019-09-11	Count of matched unique IDs	More than 275 million unique IDs	Release 2019-09-11	US	Eligible input base not reported → Matched identifiers	Count only; no percent and no licensed-SKU mapping.	No. Read the named base and case.	[25]
Forrester composite identity match gain	Study July 2026	Modeled change in enterprise identity-match rate	20 percentage points	Study July 2026	Four US-headquartered customers: three North America-focused, one US-focused. Composite has no file-level US stratum.	Modeled organisation; no submitted file → Enterprise identity-match rate	Modeled change, not a product-level observed percentage.	No. Read the named base and case.	[26]
US RV retailer CRM file	Calendar test period unknown; case linked on 2026-09-01	Full CRM records resolved	83.5% resolved	Calendar test period unknown; case linked on 2026-09-01	US retailer	Full file, around 884,000–885,000 CRM records as stated in different places → Records resolved against graph with appended identifiers	Case also displays a 700K incoming audience; no raw counts to derive exact global matched numerator.	No. Read the named base and case.	[27] [28]
US grocery chain monthly POS	One undisclosed month; case linked on 2026-09-01	Cumulative monthly POS match after three passes	73.0% cumulative, after pass 3	One undisclosed month; case linked on 2026-09-01	United States	Full monthly POS file in the methods section → Buyer linked using loyalty, payment and household signals	Vendor also reports about 70% of anonymous transactions and 64–73% of monthly volume. Approximate pass counts total 31.0m, against a 32m headline. The final pass infers buyers from geography and households; no labeled accuracy.	No. Read the named base and case.	[12]
Kantar / Blockgraph panel overlap with TV partners	Announcement 2022-11-01	Relative increase in panel-to-partner matching	Above 10× before/after	Announcement 2022-11-01	North America report; individual test geography unstated	Eligible panel and TV partner file counts not given → Partner-specific matching, unreleased baseline	Relative change, no absolute levels.	No. Read the named base and case.	[29]
Yahoo DataX sample response	Docs as read 2026-11-11	Partner-ID match in a sample upload response	80 of 100 (80%)	Docs as read 2026-11-11	Example unlocated	Illustrative partner upload job → Example partner-ID match	No measured result or automatic transfer to ConnectID.	No. Read the named base and case.	[30]
Mass retailer, UID2 activation	Undated measurement; directly linked in 2026-09-01 article	Matched CRM records at UID2 before and after enrichment	73.2M / 51% before; 94.4M / 66% after	Undated measurement; directly linked in 2026-09-01 article	United States	Retailer CRM, nominally 141.7M; comparison of original versus enriched file → Records matched at UID2, as labeled by Deep Sync	Deep Sync's labeled UID2 row gives 51% and 66%. Dividing by the 141.7m nominal CRM size gives about 51.7% and 66.6%; rounding or destination eligibility is unspecified. Meta's upper estimate exceeds 100%.	No. Read the named base and case.	[31]
ID5 onboarding preview	Unknown where not stated by the publishing party.	Distinct input hashed emails with at least one match, by output ID type (definition)	Definition only	Unknown where not stated by the publishing party.	Unspecified	Distinct input hashed email addresses → Input with at least one match, by output ID type	Preview gives a definition; a US measured numerical case for this particular metric is absent from the inspected evidence.	No. Read the named base and case.	[32]
Merkury Data Enhancement / DataSource to Data Cloud	2024 presentation; underlying cases unstated	DataSource matches to Data Cloud profiles	At least 95%	2024 presentation; underlying cases unstated	US footprint on other slide; cases not separately US	Prior clients; exact eligible base unspecified → DataSource consumer data matches to Data Cloud profiles	Published by Merkle; no defined US client file or rule.	No. Read the named base and case.	[33]

SOURCE OF THE ESTIMATE	ESTIMATE VINTAGE	METRIC AS PUBLISHED	VALUE	YEAR	GEOGRAPHY	WHAT THE ESTIMATE INCLUDES	EXCLUSIONS	CAN THESE VALUES BE COMBINED?	SRC
Joint onboarding and Lexicon	2024-11-19 announcement; measurement period unstated	Average onboarding match, joint Lexicon claim	90% average	2024-11-19 announcement; measurement period unstated	US dateline, sample geography not given	Eligible bidstream or file base not disclosed → Onboarded first-party records linked to online identifiers	Joint production claim; no denominator or averaging weights.	No. Read the named base and case.	[34]
US QSR exposure/control campaign	Study period not disclosed	Household match of exposure and holdout records	66.1%	Study period not disclosed	United States	About 1.7m exposure plus 300k holdout, hashed primary IPs → Household graph match against both groups	Reported by Kochava for a measurement engagement; original screened unit is not a separately verified licensed US graph.	No. Read the named base and case.	[35]
US insurer field-agreement slice	2025 case copyright; sample period unstated	Agreement on names and at least one other personal field	97.4%	2025 case copyright; sample period unstated	United States	Unnamed insurer assessment file; exact denominator of subset not stated separately → First and last names and at least one other personal field agree	The 97.4% is a field-agreement slice. The 99.5% is a wider file-to-person assessment result. Exact slice denominator and attribution to a licensed TruAudience service are unverified.	No. Read the named base and case.	[17] [18] [19]
Unnamed DSP cookie-sync case	Within weeks; dates unspecified	IDs synced by a DSP	84% synced	Within weeks; dates unspecified	No verified US-only sample	Unspecified eligible IDs; raw counts/valid input exclusions undisclosed → IDs the DSP synced in the first weeks	Secondary issuer report on Digital Graph with a different input and output from MiQ.	No. Read the named base and case.	[36] [37]
Spectrum own MVPD service	Unknown where not stated by the publishing party.	Addressable match for Spectrum's own service	95% addressable match rate	Unknown where not stated by the publishing party.	US Spectrum TV service; sample geography not separately stated	Unknown incident base for Spectrum service → Addressable result for the MVPD	Adjacent Spectrum service. No attribution to a Blockgraph match rate.	No. Read the named base and case.	[38]
33Across publisher traffic resolved to DSP ID	Undated	Issuer-reported traffic-to-DSP-ID match	Nearly 90%	Undated	Unstated; UK hosting is not a case location	Publisher traffic; eligible counting unit unstated → Traffic linked to the participating DSP's own ID	No identified US sample, exact eligible traffic unit or assignment rule. Distinct from the MediaWallah joint offering.	No; no comparable units or test population.	[39]

How a study checks an identity match

Read the unit, truth set, denominator and study period together. Check how the test labels errors and who paid for the work. A study of one product version and sample supports claims within that setting.

Full records with limitations and source passages are in data/study-evidence.csv.

STUDY	YEAR	DESIGN	SAMPLE AND DENOMINATOR	STUDY SETTING	MEDIA FORMAT OR ENVIRONMENT	MEASURE TESTED	REPORTED RESULT	UNCERTAINTY REPORTED	SPONSOR	WHERE THE RESULT APPLIES	SRC
Truthset IP linkage benchmark	2025	Vendor-submitted IPv4 linkage pairs scored by models trained and tested on sampled ISP/vMVPD subscriber records and lease-time data	938 million distinct vendor IP-to-postal pairs; six masked provider scores, based on reference operators. The provider mean does not use all 938m as its denominator.	US subscriber reference samples from two ISPs and one vMVPD; six link suppliers masked	IP-to-postal	Mean provider accuracy under proprietary Truthscores	13%	Product results, weighting and pairwise uncertainty unresolved	Jointly commissioned by CIMM and Go Addressable; Truthset provided proprietary Truthscores. Participants are masked.	No named graph inference	[40] [41]
TV match rate and match bias	2023	Pre-match versus post-match TV household profiles	Five identity providers; two TV datasets	US national TV input	Household viewing sample	Composition and match yield	Matched viewers skewed older, wealthier and heavier viewers	No independent truth dataset	Commissioned by CIMM. Data contributors and identity firms participated.	Bias estimate is specific to these input files	[42]
comScore assessment summarized by LiveRamp	2017 copyright; PDF created 2018-10-05; online help last modified 2020-08-19	Seller reports external panel comparison	Panel of about 12 million devices and individuals; tested-link counts unspecified	Unreported region and version	Device/person links	Precision as described by LiveRamp	95%–98.9% reported by vendor	Unreported in note	Product seller reports a comScore result. Who commissioned the test and how the panel was drawn are unstated here.	Original study, sponsor and per-sample denominator needed	[43] [44]
Hotels.com cross-screen comparison as described by Tapad	2016	Customer partner selection reported by seller	Three graph offerings; comparison denominator undisclosed	Sample geography unresolved	Cross-screen device links	Relative precision	Twice next provider, as stated by Tapad	No absolute counts or uncertainty disclosed in announcement	Vendor published a customer evaluation during partner selection. Study funding not disclosed.	Historical Tapad test; not transferable to Experian graph	[45] [46]
USENIX participant-device matching experiment	2017	Authors matched mobile and desktop devices using IP and history	126 participants; 107 complete mobile/desktop pairs, split into 63 training and 44 test pairs	Participant cohort	Mobile–desktop device pair	F1	0.91 for authors' matcher	Convenience recruitment and 44 held-out pairs; Table 4 supplies point estimates without confidence intervals	Comcast Research Grant for the user study; Jebara acknowledges DARPA and NSF. Sponsor commissioning terms unreported.	Research matcher only; interested grant disclosed	[47]

STUDY	YEAR	DESIGN	SAMPLE AND DENOMINATOR	STUDY SETTING	MEDIA FORMAT OR ENVIRONMENT	MEASURE TESTED	REPORTED RESULT	UNCERTAINTY REPORTED	SPONSOR	WHERE THE RESULT APPLIES	SRC
Reasons Dynamic Addresses Change	2016	Longitudinal observation of probes and public IP reassignment	3,038 probes across 929 autonomous systems	156 countries	Probe / customer equipment	Network events associated with observed address changes	Reassignments coincided with some outages	Geography and ISP policy differ	NSF grants acknowledged. Authors affiliated with research institutions and RIPE NCC. No advertising graph under test.	No person/household ground truth	[48]
Economic consequences of online tracking restrictions	2023	Author manuscript; longitudinal auction and cookie records with censoring treatment	54,127 unique exchange cookies, sampled among active cookies on April 29, 2015	European ad exchange	Exchange cookie	Estimated mean cookie lifetime	Censoring-adjusted mean 279 days; observed mean 216 days	Exchange-specific selection and historical observation window	NET Institute, Hi!PARIS Center and European Research Council grant 833714. Data supplied by a commercial exchange.	No transfer to current US cookies	[49]
comScore Cookie Deletion Analysis	2007	Metered home-PC data vs. cookies at a selected site and ad server	400,000 home PCs in panel study	US homes	First-party cookie / home computer	Monthly clearing of cookies for studied site	31% of panel home computers had at least one first-party cookie reset at the selected site; login cookies excluded	Vendor-defined panel and selected site	Market measurement vendor presenting its own panel analysis. Funding beyond publisher undetermined.	Historical home-PC context only	[50]
Forrester / TransUnion Total Economic Impact	2026	Interviews used to model a composite enterprise	4 interviewees	Decision-makers from four US-headquartered customers, recruited from names supplied by TransUnion	Interview and financial model	Modeled identity match-rate change	20 percentage points	No observed file-level estimate from this model	TransUnion	Composite illustrative enterprise; no standalone product-level estimate	[26]
Forrester / Neustar identity resolution survey	2019	Online survey	175 respondents	US, UK, Germany pooled	Organizational survey	Self-reported practices and priorities	No link-error test	Selection and self-report limitations	Neustar	Professionals responding in three countries during April–May 2019	[51]
Truthset IP linkage benchmark — email	2025	Vendor-submitted IPv4 linkage pairs scored by models trained and tested on sampled ISP/vMVPD subscriber records and lease-time data	5.6 billion IP-email pairs; separate linkage population. Reported value is mean of six provider scores.	US subscriber reference samples from two ISPs and one vMVPD; six link suppliers masked	IP-to-email	Mean provider accuracy under proprietary Truthscores	16%	Product results, weighting and pairwise uncertainty unresolved	Jointly commissioned by CIMM and Go Addressable; Truthset provided proprietary Truthscores. Participants are masked.	No named graph inference	[40] [41]

STUDY	YEAR	DESIGN	SAMPLE AND DENOMINATOR	STUDY SETTING	MEDIA FORMAT OR ENVIRONMENT	MEASURE TESTED	REPORTED RESULT	UNCERTAINTY REPORTED	SPONSOR	WHERE THE RESULT APPLIES	SRC
Nielsen historical Tapad verification	2015 evaluation; 2017 program overview	Sponsor's investor says Tapad commissioned Nielsen; independent construction of labels and per-unit denominator not published in the reviewed sources.	Accepted-link denominator and raw counts undisclosed.	Historical Tapad links; geographic test population unverified.	Cross-device identity	Reported cross-device accuracy; later program distinguished precision, recall and match rate.	An investor reported 91% accuracy for Tapad. The original test protocol and current product mapping were unavailable.	Not stated.	Tapad commissioned the evaluation.	Known interested commission; not an independent test, regardless of whether the test population was US.	[52] [53] [54]
Intent IQ BidPulse release (October 2026)	2026	Competing seller scores location consistency across identifiers and fixed-line IP geography. External implementation used Intent IQ data.	Person- or household-labelled panel size unreported.	Intent IQ benchmark and fixed-line IP location data.	Programmatic identity signals	Geographic agreement between signals.	The competitor reports geographic consistency. The release does not give an independent person- or household-link error rate.	Not stated.	Intent IQ competes with ID providers.	Geographic agreement does not supply an independently known person/household association.	[55] [56] [57] [58]
Google/New York Times Advertising Secure Signals	2025 publisher results	Google Ad Manager impact estimates after integration of more than one ID at NYTA.	US-only sample and single-ID control undisclosed.	New York Times Advertising on restricted-cookie browsers.	Publisher revenue with Secure Signals	Ad Manager estimate of revenue change.	Google reports an 81% gain with RampID and UID2 both in use. The contribution of either ID alone is unknown.	Not stated.	Google publishes its customer case.	Outcome is publisher yield; distinct from person-level or household-link accuracy.	[59]
ORG/Cracked Labs technical review: LiveRamp	2023 review; published 2024	Review of vendor software documentation with a European focus (research September 2023).	Documentation review; no test panel.	European RampID processing documentation.	Identity service documentation	Technical and governance analysis.	ORG reported complaints to the UK ICO and French CNIL. The review supplies no independently labelled link accuracy or regulatory finding.	Not stated.	Open Rights Group commissioned the authors.	No US labelled panel or correctness benchmark.	[60] [61]
Deep Sync grocery and RV retailer studies	Cases linked September 2026	Seller counts resolved file records and transactions, including a probabilistic final pass.	Separate bases: full monthly POS file and full retailer CRM file.	Two separate unnamed US retailers.	Retail POS and CRM identity enrichment	Cumulative transaction match and CRM record resolution.	Seller reports 73.0% of monthly grocery POS after three passes and 83.5% of a separate RV retailer's CRM file.	Not stated.	Deep Sync markets both services.	Addressability and device expansion provide neither independent truth nor verified correctly linked buyers.	[27] [28] [12]

STUDY	YEAR	DESIGN	SAMPLE AND DENOMINATOR	STUDY SETTING	MEDIA FORMAT OR ENVIRONMENT	MEASURE TESTED	REPORTED RESULT	UNCERTAINTY REPORTED	SPONSOR	WHERE THE RESULT APPLIES	SRC
Conversant/comScore cross-device announcement, April 2016 as reposted in May	2016	comScore validated a subset of historic cross-device links; four of six performance tiers are reported.	Subset of cross-device links; accepted-link test denominator unavailable.	Conversant cross-device validation; US sample unestablished.	Cross-device identity	Accuracy across performance tiers.	The issuer describes a range for the top four of six tiers. The source does not connect these results to current Epsilon CORE ID.	Not stated.	Interested Conversant communication describes it as comScore's client; payment and evaluator independence unestablished.	Original protocol, US identifiers, test denominator and transfer to the present CORE ID service are unresolved. A client study is a lead, not an independent replication.	[62]

CHAPTER 4

Consent and the bidstream

A site can stop making new UID2s after a local opt-out ◆. An exchange can pass on a choice ◆. A bidder can act on a withdrawal ◆. The evidence question is whether the published record joins those steps for the same ID, use and place ◆. A buyer who knows where the chain ends can ask the right party for the missing receipt.

> IN SHORT
>
> The test covered 13 IDs available for use across firms ◆. The record traced a choice through to the buyer for 2 of them ◆. It fell short for 9, and 2 cases were still in doubt ◆. UID2 and ID5 met the test in different ways ◆. Each has a rule for the buyer ◆. The study did not watch live bids to test those rules ◆. A wider test that admits all the firms still in doubt could put the share above half ◆.

Name the use that should stop

Take one ad buy. If a reader withdraws a choice on a publisher's site this morning, could a buyer still use yesterday's ID to select an ad this afternoon? Name the product, the place and the use. Suppose the publisher can show that it has stopped making new IDs. The buyer still needs to know what becomes of a value it received yesterday. Suppose instead the buyer can show that it has dropped a value. The publisher still needs to know whether the action covered only its site or the same reader's broader use of the service.

What did the reader ask the site to do? Stop storing data on this device? Stop using an email for ads? Take an address off a list? Delete a record? Give each of those requests its own test. A buyer could stop using a key for one campaign yet keep it for a use the reader still allows. A site could clear a key from a browser and have no way to tell who last got it. Ask the firm that makes the promise to name what it will do and which copy of the data it can reach.

On Yahoo's server route, the site sends a hashed email and its publisher ID ◆. An opted-out lookup returns an empty object ◆. The supplied email and the user's state therefore serve different roles in that route ◆. If an advertiser's test starts with a signed-in reader, ask for the choice the reader made as well as the event that proved control of an account. A valid email could explain how the site got the ID. What right would the buyer have to use it?

Ask what value the buyer should see. Does the site leave out the ID, send a code for a refusal, or send the ID with a separate rule on its use? Ask the buyer what it should do in each case. What part of that result could the site see? For a trial, use a made-up key and a choice the teams know in advance. Save the result at the buyer. The teams can rehearse this flow without a real reader's email. For a live test, agree who can run it and what it covers.

Read the signal at the right boundary

The Global Privacy Platform can pass a user's choice from a site or app to firms that serve ads ◆. A second signal asks sites and services to refrain from sale or sharing ◆. The September 2026 W3C draft calls it Global Privacy Control and sets out how to send it by HTTP and read it in the browser ◆. Ask which signal the US site sent. Who read it? Which use did it cover? Use the draft to plan a test. Ask the firm that got the signal for the result.

IAB Europe set a March 1, 2026 rule for new Transparency and Consent strings ◆. A new string that lacks the disclosed-vendor segment is invalid from that date ◆. An older string can stay valid until the user renews or changes a choice ◆. One test would save the time at which the choice was logged with the time at which the buyer evaluated it. Under that rule, the same missing field could mean two different things ◆. A log with just the time of the bid would leave the cause in doubt.

From Prebid.js 11.14, lookup failures can change which IDs its modules add to a bid request ◆. If a lookup of a configured TCF or GPP consent platform fails, the user-ID modules skip retrieval and add no IDs to the bid ◆. If the lookup times out, the modules run with the consent data at hand ◆. A site can also require Purpose 4 consent before it sends IDs or extended IDs ◆. Name the version and the site setting. Save each test result. One line that says "consent missing" could hide the cause.

OpenRTB 2.6 has fields that can name who added or bridged an extended ID and how it was matched ◆. If the values are there, the buyer can use them to trace the bid back to the firm that put the ID on it ◆. Log the reader's choice and the buyer's reply as well. Two firms might send IDs with the same source name. Did each get the same choice from the site? Did each pass it on? Use the name on the bid to find the firm that can show the next step.

When a separate message follows the ID

A UID2 user can ask to opt out through a portal ◆. The user sends each email or phone number as its own request ◆. A site learns the result when it next asks the operator to make or renew a token ◆. The operator tells DSPs through a separate channel ◆. Look at the timing from each side. A check of the site's page could miss a notice the buyer had already received. It could also miss a delay before the buyer got that notice.

The UID2 notice to a DSP comes by webhook ◆. The notice carries the raw ID and the opt-out time, and UID2 says it typically sends it within a few minutes ◆. The bidder must stop using that UID2 for real-time bids ◆. It may still use another ID or make no bid ◆. The DSP guide tells the bidder to check opt-out status after it decrypts the token ◆. Under the study rule, the choice may reach the buyer on a second path if it refers to the same ID and says what use must stop ◆.

For a test, first get a token the bidder can use. Ask to opt out for the input that made it. Note when the buyer gets the notice. Now send the earlier token to that buyer. Does it use the key? If the buyer bids, save the key that backed the bid. It may have used a different ID, which the UID2 guide allows ◆. If the buyer makes no bid, ask why. A test with no bid at all could hide a budget cap. The buyer's log should tell those cases apart.

The US terms and the bidder guide set duties ◆. The sample bid and the guides do not show who enforced TCF or GPP on a given impression ◆. Keep the claim made here at the level the record supports. The DSP guide ties the raw UID2 to a withdrawal notice and a rule for bidding ◆. An observer would still have to test a bidder to show that it enforced withdrawal for a given impression. A site-level opt-out stays with that participant and is not sent to the wider UID2 system ◆.

Think of a reader who uses one email for a site and a different email for a store. For a test of an address-based opt-out, use two made-up addresses in place of those accounts. Submit the request for the first one. Leave the second one alone. Ask the issuer to say which key it expects the buyer to block and why. Now run both keys through the same bid path. If the buyer blocks both, the test team should ask how it joined them. If it blocks just one, check the scope of the promise made to the reader. The right result depends on the promise and the input the service accepted.

When the ID field remains present

ID5's Prebid guide gives the restricted value an exact form ◆. When consent is absent or the user opts out, the guide says the id5-sync.com EID should stay in the bid with its ID set to the string "0" ◆. For a usable ID, the SSP sends the field in OpenRTB ◆. The DSP gets its keys and merge instructions through a separate route ◆. ID5 says only firms with rights under the user's and site's choices can decrypt the ID ◆. Ask to see the value. A count of fields alone would miss the zero ◆.

For US traffic, ID5 asks the site to include it in the flow for a choice against sale or sharing ◆. Its US examples include GPP and GPC ◆. For the EEA and UK, its guide gives TCF or prior opt-in instructions ◆. Its Java module for Prebid Server sends the privacy signals it has to the ID5 API when it requests an ID ◆. Ask the site which route it uses. Write the country on the test sheet. A team that tests the wrong branch could get a sound result for the wrong rule.

ID5 met the public record test ◆. Its record links the choice at the site, the value sent in the bid and the rules for access to that value ◆. The study did not see a buyer deal with the zero on a live bid ◆. In a pilot, ask to see two bids. One should carry the zero. The other should carry an ID the buyer can use. Use the same keys and site settings. If the buyer lacks a key for both bids, a drop in use would tell the team little about the reader's choice.

ID5 says it posts opt-out updates every 30 minutes and routine deletion updates once an hour ◆. It runs a separate best-effort feed for on-demand deletions ◆. A partner is meant to load the lists ◆. The records did not show when each firm did so ◆. Start two clocks at the user's request. Stop the first when the issuer puts the change on the list. Stop the next when the firm that got the list acts on it. If the file went out on time, the second clock might still be running.

Local controls and downstream gaps

In the US, LiveRamp's ATS JavaScript checks the national GPP string first ◆. It can fall back to the older CCPA string ◆. If the user rejects consent, it clears the stored envelope ◆.

LiveRamp tells a site that runs its own opt-out to delete the local envelope and leave a flag in place until the reader opts back in [◆]. On the bid path, an SSP reads the envelope and sends a DSP-specific RampID to the buyer [◆]. The site's act is clear. The public record leaves open what the buyer does with an older copy [◆].

LiveRamp makes opt-out and deletion requests available to destinations that might receive the consumer's data [◆]. For first-party advertiser audiences and third-party marketplace segments, its guide names a route to The Trade Desk [◆]. LiveRamp expects destinations to respect the requests and leaves processing to their discretion [◆]. Ask how the buyer first got the key. Did it come in a bid or in a file? If both sent it, ask for a receipt for each route. A file sent to the right firm could still leave a question about the copy that arrived with a bid.

A site that looks up an opted-out email can get an empty object from Yahoo's server [◆]. Yahoo has a form that asks for an email to confirm the opt-out [◆]. A site can also set a flag that stops the JavaScript module from making new ConnectIDs on its own domain [◆]. Google lists ConnectID as a web secure signal [◆]. Yahoo names its App & Display and Video bidders in its guide for sites [◆]. Those names tell the site whom to ask. The study could not trace the user's choice to a decision on that bid [◆].

Lotame says its browser opt-out stops its use of Panorama ID [◆]. A stored ID can take up to seven days to expire [◆]. Lotame's case names the firms involved in a Michigan media buy [◆]. It describes a publisher using its PubMatic seat to target an audience and lists Xandr and Adelphic for delivery [◆]. The case does not show how a bidder dealt with an opt-out for a given Panorama ID [◆]. Ask who can find a copy sent before the user's choice. Which key would the buyer need to show that it had stopped using that copy?

LiveIntent says its module gets a US privacy string and honors opt-outs [◆]. Its lookup endpoint also accepts a GPP string and the sections that apply [◆]. TripleLift lists the LiveIntent provider for US bridging [◆]. In a 2020 California FAQ, TripleLift said it sent consent status with the bid and left targeting to the DSP [◆]. These records show where the ID can go [◆] [◆]. They leave open what the bidder must do with a nonID after the reader says no [◆] [◆]. A buyer could ask that one question without making a claim about a breach.

Which copy of the ID is at stake?

SharedID stores a key on the site's own domain and makes it available to bid adapters [◆]. TripleLift lists SharedID for US passthrough [◆]. For a test, draw a line around the site that supplied the value. If a reader acts there, which copy can the site reach? Draw a second line around the firm that got the bid. If that firm kept a copy, how could it find it next week? Let each side answer for its own copy. Then ask what would link the two replies to the same user request.

For a shared device, start with the person who made the choice. Suppose one reader signed in, shut the browser and gave the device to a second reader. Which reader now asks the site to stop? Which key should the site clear? A choice tied to an account could reach beyond the browser used to send it. A choice on a device could carry over to the next user there. Agree on the expected outcome before the test. Without that step, the team might see the right change in the next session and credit it to the wrong request.

Test this with made-up keys. Ask for no one's web history. Keep one test publisher key active on a test site and withdraw a second. Keep the same buyer, site, place and version. Have the receiver report its action for both values, then repeat after the next scheduled update. If the report ends at the site, ask the firm that next got the bid. If it shows a receiver decision without the input that produced it, ask the sender to supply the missing test reference. That brief exchange would yield a more precise public statement about whose choice affected whose action.

How the result changes with scope

The paper set a strict majority test ◆. Would more than half of the IDs in scope show a full choice path in at least one place where the service was sold ◆? The test kept IDs that lacked enough evidence to enter the scored field ◆. Now give each case still in doubt the benefit of the doubt. At most 4 of 13 would pass ◆. That falls short of the stated bar ◆. The test counts paths in the public record ◆. It did not count live bids on which a buyer acted on the choice ◆.

In the US, 2 of 13 had a full path ◆. The search fell short for 10, and 1 remained in doubt ◆. In the EU, 1 of 3 had a path, 2 fell short and 0 were open ◆. In the UK, 1 of 3 had a path, 2 fell short and 0 were open ◆. Each group leaves out a service if the named place was out of scope or its sale there could not be shown ◆. Use the US line for a test on a US site.

The wider test adds 6 names whose place in the study was still in doubt ◆. That would bring the group to 19 ◆. Give each new case a full path and allow each open case to pass. The upper end becomes 10, more than half the wider group ◆. To narrow that range, ask first whether the firm sells the named ID for use on a US bid. Then ask what the firm that gets the ID must do when the reader says no. Ask the firm to show where its policy covers that exact route.

For a buying review, give the site and the buyer the same test event. Ask each to write just what it saw. What did the reader choose? Which value left the site? What reached the buyer? Could it use that key, and which rule told it what to do? If it used a different key, note that too. Join both accounts by test ID and time. Leave a step open if neither party saw it. The gap will show the site what to fix, whom to ask for a log, or which promise to narrow when it next speaks to a reader.

CHAPTER 5

After Chrome kept cookies

On April 22, 2025, Google kept the way Chrome lets users choose what to do about third-party cookies ◆. It dropped the plan for a new prompt ◆. Did most US web ID products give cookie sync a bigger role in their guides after that choice ◆? The test of public guides leaves that open ◆. Ask the site a plain question. Which part of our deal would change if this browser stopped sending the cookie?

> IN SHORT
>
> Google later chose to retire some Privacy Sandbox tools and keep CHIPS and FedCM ◆. Notes on a release, a change in the code and a small trial mark different steps ◆ ◆ ◆. ID5 kept the same cap on syncs in three guides for its SDK ◆. UID2 told sites to move some calls to a server on the paths hit by a change from Apple ◆. Neither case shows a rise in third-party-cookie sync on Chrome in the US ◆.

A choice in settings

The April post said users could still make their choice in Chrome's privacy and security settings [4]. It said Incognito already blocked third-party cookies by default [4]. The post gave no share of users who let those cookies through and no count of the times a site sent one ◆. What could a buyer of US Chrome ads that week learn from the post? It could date the change to the plan for the prompt ◆. To put a size on its own buy, it would need a count from the sites and the firms that took the bids.

Take a site that wants to set the price of a test. Say two visits load the same page on the same build of Chrome. On one visit the cookie the test needs gets through. On the next the browser blocks it. Keep both in the page-view count if the aim is to price all the ads on that page. For a test of the sync itself, keep a count of the visits that could take part. Now say a request did go out but had no match. Give that event its own line. One loss might call for work on the match. The other could be the choice the user made.

The date on a sales plan matters too. In April 2021, Mediavine said it had links to LiveRamp ATS, UID2 and ID5 in use ◆. A launch note from that time can show there was work in place years before the Chrome choice ◆ ◆. Ask which route the site ran in the week before the April 2025 news. Which did it run in the week after? To link a shift in sales to a change at the site, ask when the site changed its code. Ask when the sales team began its test. Put each date next to the change it marks.

When a feature leaves Chrome

On October 17, 2025, Google named the technologies it planned to retire ◆. Each would go through the steps needed for its platform ◆. The list included Topics and Protected

Audience ◆ ◆. Google said it would keep supporting CHIPS and FedCM ◆. It had once proposed FLoC, run trials, then named Topics as its replacement ◆. If an old media plan refers to a trial, find out which trial it meant. Ask which feature the team built for and which version the publisher put on its site.

Chrome 144 said it planned to remove the Private Aggregation API ◆. Chrome 152 said it had removed that API ◆. Use the first note to date when a team could plan the switch. Use the next note when writing a test for what that build should do. Then ask when the site saw a change. Which builds did it serve? Did its own code use the feature? If a buyer's charts went blank, get the last report with data and the first one with a gap. On which build did the last good event run? Which part of that claim can be checked from a release note alone?

A July 2026 Chromium change says the Topics interfaces that sites could call had already become stubs ◆. In September 2026 the team said a trial to take out the stubs had reached 1% on milestone 153 and later in the Stable channel ◆. The 1% was the rollout on those Stable builds ◆. The team gave no device count or US share ◆. A US buyer can keep the figure if it keeps the trial and the builds with it. To price the effect on a buy, ask how many of its bids had used Topics. Did the same set of sites send bids after the change? How many of them sent a field the desk could use?

A call can survive a change in its job

On July 14, 2026, Chromium changed its Protected Audience renderer calls, including `runAdAuction` ◆. The change made them return rejected promises or default values ◆. Chrome 153 still listed deprecation and removal as planned ◆. On October 30, 2026, Chromium removed the last web bindings for Protected Audience from its source tree [5]. When testing one build, ask what the page got when it made the call. Did the test just find a method of that name? Did it get back a result that the buying code could use? If the buyer wants to apply the test to the whole deal, get the share of live bids that came from that build in the week at issue.

A July 14, 2026 change to Attribution Reporting kept the setter used with `XMLHttpRequest` but made it do nothing ◆. A test could find the setter even if no report was made ◆. Check the piece the buyer needs. If that is a report, start with a test event that should count. Write down which report it should make and check what the party at the far end got. Ask where the team could have lost the event even if the browser had done its part.

On October 8, 2026, the Attribution Reporting team said its fix for `window.open` had reached Chrome 155 Stable ◆. It planned to roll out the rest of the change in steps, with full removal on Stable set for after October 24 ◆. The update did not say that last step was done ◆. If a buy ends that month, get the note for the fix. For the wider change, look for a later note or ask for a test of the build the site used. What did the buyer need the build to do on the day its ads ran?

Where the browser makes a difference

In March 2020, WebKit said Safari 13.1 on macOS and the iOS and iPadOS 13.4 updates blocked cross-site cookies by default ◆. Firefox gives each site its own store for cookies,

according to Mozilla ◆. Say a page reads a stored value when a user comes back. What does that show about use of the value on a second site? Test both visits in the same browser. Where was the value saved? Who could read it on each visit? What did the bidder see? A count of users who came back to the first site would answer just one part of the brief.

In October 2026, WebKit described a new block on third-party domains used to link a user across sites ◆. It covered WebKit on iOS, iPadOS, macOS and visionOS 27 ◆. UID2 named a domain that the new rule blocked ◆. All browsers on iOS 27 or later, and Safari on macOS 27 or later, would block client calls to `uidapi.com`, its guide said ◆. UID2 told publishers on those paths to use a server to make and refresh the tokens ◆. Where the client route still worked, three editions of its guide told the publisher to look for the token in local storage ◆. Ask which calls were moved. Try a first visit and a visit with an old value still in place.

In an app, start with what the user did. Apple's rule for the 14.5 releases of iOS, iPadOS and tvOS took effect on April 26, 2021 ◆. An app had to ask for leave to track or gain access to the ad ID ◆. On Android, Google Play services says a request for a deleted ad ID gets zeros back ◆. Google dates the deprecation of the Android Privacy Sandbox to October 17, 2025 ◆. Its API guide marks the Topics classes deprecated at level 37 and says calls will be rejected in the future ◆. Ask for separate app and web test results. Test for zeros in the app. On the web, check whether the request went out and what the server sent back.

How to test a return to cookie sync

Did most of the scored US web products give third-party-cookie sync a bigger role in their guides after the April decision ◆? For each product, the test compares the same job on both sides of the date ◆. Start with the latest dated guide in the year before Google's decision ◆. Find the latest guide for the same route after that day and through the cutoff ◆. Hold the role of the firm and the place of the buy fixed ◆. Where more than one path exists, use the one the seller calls its main US route ◆. What did it tell a publisher on that path to do?

Say an old guide lets a site choose whether to sync. A new guide for the same job says the site must sync. That would be a change the test could count. Now take a guide that says the site can work when the browser blocks third-party cookies. What should the site do when the browser lets them through? The seller might still tell it to sync. Or it might skip sync for all bids. Both paths fit the words on the page. Leave the result open until the guide tells you which path the site should take. Keep the date with the text. For an old guide that still loads, record when its words last changed as well as when someone read them.

For the products known to be in scope, the test left the majority in doubt ◆. Both sides of the threshold were still possible when the uncertain products were included ◆. There was a second test for the Sandbox changes ◆. For each relevant API, could the study pair the date of its announced or effective removal with a change in sync advice for the same main US route ◆? It found no such pair ◆. Keep the gap with the product name. One copy of a dated guide might close a gap about advice. To answer how much traffic changed, ask for a count. To say the policy caused that change, ask what the publisher would have done had the policy stayed as it was.

ID5 left a number in the guide

ID5 has a route that syncs with other ad-tech firms where third-party cookies are available ◆. Its SDK guide has three dated versions, on April 18 and October 15, 2025, and November 6, 2026 ◆. Across all three versions, when sync is needed, `maxCascades` caps the syncs at eight by default ◆. Set it to minus one and the guide says sync is off ◆. A cap does not tell the buyer how many calls a site made ◆. The guide also leaves open whether this was the main US Chrome route ◆.

Take a site with that default in place. Say its test page needs no sync on the first visit. On the next, it tries a sync but gets no value it can use. How many visits should be in a count of pages with the setting turned on? How many in a count of calls made? How many in a count of joins that worked? If the tester just writes down “eight,” the desk lacks an answer to all three. Keep the cap with the copy of the code that ran. Put the count of calls with the traffic that caused them. Ask the firm at the far end what it got for those same test visits.

ID5’s Prebid example gives 90 days for local storage and two hours for refresh ◆. Its Prebid guide calls for the string zero in the ID field if consent is missing or the user opts out ◆. So check what is in the field as well as whether it is there. Count an expected zero on its own. What would the team expect for a signed-in user? What about a visit with no first-party value, or a visit from a user who opted out? Agree which group a visit goes in before the firms compare their logs. A correct result could look like a loss to a desk that just counts codes.

LiveRamp puts the pixel in a particular job

LiveRamp says ATS can serve signed-in users without third-party cookies ◆. It also lists an optional ATS endpoint that uses a third-party cookie ◆. On one ATS route the supply partner decrypts an envelope and puts a RampID for that DSP in the bid ◆. For a file that maps cookies to RampIDs, LiveRamp tells the buyer to turn on cookie sync with a pixel ◆. If an engineer cites that rule in an ATS review, look at the order. Does the buyer expect a file with pairs of values? Or should its bidder get one value with an ad request?

Trusted Media Brands told readers about a LiveRamp code that it might keep in its own cookie ◆. It gave no share of visits on which the code was issued ◆. LiveRamp gives ATS envelopes a life of 15 days in California and 30 days elsewhere ◆. Its guide tells sites to update the stored expiry when they refresh an envelope ◆. If a bidder got no useful value, check the age on the envelope. Ask when the site last refreshed it. Ask the bidder which field it got and whether its key could read the value. An old envelope, a cookie the browser blocked and a bid that never reached the desk would need three different tests.

The public guides did not date a switch to or from cookie sync on these LiveRamp routes ◆. To close that gap for one site, ask for a copy of the old guide for the same job. Ask for the settings in use now. If the seller added a path the site could choose, when did the site turn it on? If the old how-to page just describes a map in a file, keep it with that file buy. The team may have changed what it bought. That alone could give it very different steps to follow.

A working ID can have a much older history

Prebid's April 2025 guide says Yahoo ConnectID can work without third-party cookies ◆. Yahoo gives sites more than one way to use it ◆. Both date checks found the same April 4 guide ◆. The later state of the main US sync path stayed open ◆. An older code change is easier to date. Prebid 7.51.0 took either an email hash or a site's own user ID ◆. Release 7.52.0 on June 1, 2023, dropped the need to supply either one ◆. Test that change by leaving both inputs out in each build. A test of sync would need to check the sync path itself.

In June 2021, Prebid.js 5.0.0 merged the PubCommon and SharedID modules ◆. Prebid's guide shows the earlier third-party sync and the first-party path that followed ◆. On the header-bidding path reviewed, the site stores the ID on its own domain ◆. The software change dates to years before Chrome's April decision ◆ ◆. When a site shows the new setup, keep the old release too. It tells the buyer when the code changed. Ask the publisher which week it put the new code on its own pages.

Prebid's guide to Lotame Panorama describes an ID for a device that a publisher can use to enrich data or activate an audience ◆. Both date checks led back to the same January 2025 guide ◆. Suppose a seller also gives a buyer a pixel for a different product. That pixel would leave the gap in Panorama's own guide open ◆. Save each guide with the name of the product, the route and the release. A new member of the trading team should be able to see which page applies to the deal without having to piece together its full history.

Read a revenue claim at the end of the path

Google put an 81% gain in revenue on record for New York Times Advertising on browsers with cookie limits in its 2025 results ◆. The site sent both RampID and UID2 through Secure Signals ◆. The figure was Google's estimate for that joint setup, with no test of one ID by itself or US-only group ◆. It did not check who the ID belonged to ◆. A site may want to know what happened to its sales when the signals could reach more bids. For a new buy, ask which sites, bids and prices went into each arm of the test. Keep the browser settings with the counts.

Sovrn and ID5 ran a test with US audiences on sites that took part ◆. They compared a control with two paths for a linked email hash ◆. In one it went into the auction, and in the other it was held back ◆. The case gives CPM differences for the combined treatments ◆. It gives no count of right-person links and no stated way to assign the groups at random ◆. If the aim is yield, set the price or sales measure first. If the aim is to test the ID, agree on a way to tell a right link from a wrong one. If the aim is to test a shift back to cookie sync, count that step on the same path before and after the change. Get the site's test and ask the bidder which results it could use.

CHAPTER 6

Platforms and walled gardens

Who gets the match? Google says a match on an email or phone adds the linked Google Account to a Customer Match segment ◆. Meta's list terms say the brand does not learn which people make up its matched group ◆. A brand can buy ads for that group. What can it take back to its own store? Settle that point before it pays for the match.

> IN SHORT
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> Trace the direction of travel. A brand can send a list in, a publisher can pass a signal through, and a store can send a group out to a media seat ◆ ◆ ◆. Google's guide describes sending a publisher's registered signals to approved bidders ◆. Kroger has described making its purchase-based audiences available through existing seats on The Trade Desk ◆. Write down what to test for each path.

Begin with the account that can act

Take a store that wants its old shoppers back. Its club has a list of those who have stopped buying. The ad team wants to reach them. The sales team wants to count new trips. Give each team the name of the place where it will see its result. For the ad buy, can the seat use the group? For the sales check, which trips will count and for how long? To add to its own list, the store would need a key it could join back to that list. It would also need the right to use what came back.

Sketch the path with ordinary verbs. Who sends the list? Who links it to an account? Who sees a group or gets a count? Who picks which ads can run? Ask to see the screen where the list went in. Then ask to see the group on the screen where the trader works. Get a copy of the report that will go to the brand. A list can go in as planned and still fail to reach the seat. The sales team can use those screens to trace each count back to its source.

Say what each row means before the buy. Take a home that shares one club card. That card might be just the right unit for a store keen to win back a lost club member. To send one gift to each person, the store would need more. It might still want the ads even if it can see only a group count. What could it say about the people in that group? Agree on the answer now.

Google Customer Match links to a Google Account

For email and phone inputs it can match, Google Ads says it adds the corresponding Google Account to the Customer Match segment ◆. Google defines its match rate as the share of an upload it can connect to logged-in Google users ◆. Put that unit in the brief. Who was meant to be on the list? Did the brand drop rows that were there twice? Which rate did the screen show when the job was done? Keep the terms used to build the list next to that rate.

Google says a match rate is displayed for an API upload with at least 100 matched unique users ◆. Try two test runs. Both get a receipt. One shows a match rate and one shows a blank. What does the blank mean in this case? Find out before the team logs a failed job or puts a zero in a chart. Keep the receipt, the terms for showing the rate and what the screen showed. When the trader tries to use the group, log its state then. The help desk can use each of those facts.

Google says most advertisers see rates between 29% and 62%, without supplying the period, geography or advertiser sample for that range ◆. Ask how the brand's list compares with those behind that range. If the answer is unknown, use past runs of the brand's own list as a check. Keep a note of what went in each time and which rows were in scope. If the rate moves, first find out which of those things changed. A claim that the links got better would need its own test.

Which tool sent the list, and when? Google directed most new Customer Match integrations to its Data Manager API from April 1, 2026, while eligible existing integrations could continue to use the Google Ads API ◆. If the team moves the job, name the old and new tools. Keep the source fields and the list names from both runs. Check that the same rows went in before you look at what came back. What if both the tool and the list have changed? Check them one by one. The first test of the new tool is whether the list got there.

A signal can pass through Google to another bidder

Google says a publisher can tell Ad Manager to send an obfuscated signal to a third-party bidder it has approved ◆. The signal must be registered, and bidders select the signals they want to receive ◆. Name the publisher, the signal and the bidder due to get it. Ask the bidder to show that the signal reached its end for the test ads. A buyer that wants to match to a Google Account would ask for a different path ◆ ◆.

Send each question to the team that holds the switch. Suppose a signal went missing in a test. What did the publisher turn on for this bidder? What did the bidder choose to get at the time of the test? Ask the seller to check that the test took the right path. Even if the match worked at the start, the handoff might have failed. Mark the first place where what the team saw broke from the plan.

Roku announced on March 23, 2026 that it was a launch partner for Google's Confidential Publisher Match, describing a route for DV360 advertisers to match first-party data to Roku Media inventory ◆. Roku also documents a separate route using UID2 to activate against Roku first-party data through The Trade Desk and Roku Exchange ◆. Name the seat, match path, ad space and flight dates in the brief. Ask for proof from that path. News of a launch in one seat can be hard to act on from a desk set up for a different one.

Amazon distinguishes an audience from an analyst's answer

In its terms dated November 20, 2024, Amazon sets out a way for a buyer to send hashed data to match to Amazon IDs ◆. Under those terms the brand also sends IDs for its segments ◆. Amazon Ads tells the brand or its agency to prepare and hash the list, then choose the group to use for ads ◆. Give three things their own names in the brief. What key

does the brand use in its books? Which field goes in for the match? What name does the group have in the seat? The group name should tell the buyer what it chose. To check who a single member is, ask what proof the brand could see.

Take a brand with two groups. One has members due to renew. The other has those who just paid. The buyer wants to reach the first and skip the second. For each list, state who goes in, the date that takes effect and the name that shows up in the seat. Which list wins if a late sale puts someone on both? A trader could choose the right group and still send the wrong offer if last night's list was stale. Log this as a fault with the source list when the check shows that is where it went wrong.

Amazon Marketing Cloud describes anonymous, aggregated results for analysts and a separate route that sends custom audiences to ad activation ◆. Which output did the brand buy? To check a count, the team needs its dates and a clear sense of what each row counts. To run ads, the trader needs a group it can choose in the seat. It also needs a way to check which ads used it. If a brief calls for "clean-room results," ask who gets what for each use.

A brief could ask for a count by month of sale. It might also ask for ads to reach the group from just one month. How should the count treat a return? What if the same shopper placed two orders? What if a member left the group while the team was running the query? Give each count a date. Put the same date on the list if it has the same cutoff. If the two dates differ, keep both. They may help the trader explain why the two sums do not match.

What a Meta customer list can tell its owner

Meta lists email and phone as inputs to its Marketing API for Custom Audiences ◆. Its customer list terms say it does not tell the brand which people make up the group ◆. Use that clause when the team writes the brief. Does the brand want a list of its own shoppers who have a Meta account? Ask how it could get that list and what else would have to be bought. Does the brand want ads to run for a group? Say which ads it wants to run and which facts it needs once the buy is done.

Say a club member disputes a bill. Was she in the group used on the day she called? The brand could go back to its source list and check if she met the terms for that day's group. It could look up the receipt for the list and the name of the group used for the ad buy. Those checks could show what the brand sent and meant to use. Did the site match this one person? The team needs a source for that next step. Find out what the help desk can show before it makes a promise to her.

Now take a buy that spans two sites. Both show a count for the same brand list. All the people in the smaller group could be in the larger one. Very few could be in both. The two sums leave both answers open. Can the brand count how many are in both? Has it got the right to make that check, and is it counting people or accounts? If a planner makes a guess, keep the guess beside the plan. Show how the reach figure would move if more of the group were shared. Give a count based on a test its own field.

Consider what happens if the same agency takes over a second brand's seat. In this example, both brands use the label "recent buyer." One wants to exclude anyone who bought in a store. The other wants to include anyone who bought from its website. A table of

audience names would make the rows look alike. Put the account owner, source list, qualifying action, date range and intended campaign use beside the names. Have the trader verify the seat before selecting either group. If a seat changes hands, hand over those definitions as well as the settings. Those terms will help the next team build the right group if its source changes.

When a retailer sends an audience out

What if the store sends the group out? In November 2023, Kroger Precision Marketing said its customers could activate Kroger purchase-based audiences through their existing seats on The Trade Desk ◆. Walmart Connect announced an offsite path for Walmart audiences that named Yahoo DSP, VIZIO inventory and Magnite ◆. Roundel says its managed Google search ads can use Target groups, such as people who bought on Target.com ◆. Name whose purchases define the audience and where the brand can use it. Use those terms to write the order, even if the brand has no list of its own to send.

For a Kroger buy, name the type of sale that should put a shopper in the group. How far back should the store look for one? Which seat will use the group? Can the trader find it in that seat now? Ask who can change the terms while the ads run. For the Walmart buy, name the ad space and the firms in the path offered. If the plan calls for a new seat or a new source of ads, check that path too. Who can confirm that the group and the controls will work there?

For the Roundel search offer, start with the retailer's own audience and the managed buying service ◆. If a brand also wants to send its customer list to the retailer, add that as a separate request. Who will take the list and on what terms? Which search ads will use it? Ask to see the way the team set up the buy. A generic request for access to "retail data" could be met by a sell-side audience, a buyer's list upload or a report on sales. Write down who sends what to whom. Put that verb in the order.

Give sales their own line in the brief. If the retailer reports purchases after the buy, ask whether it counts units, orders, shopper accounts or households, and which channels it covers. If a shopper returns an item, agree whether the count will change. If a product goes on sale midflight, retain the dates and terms of the sale with the media report. Knowing who was meant to see the ads leaves a sales question open. How many sales were due to the ads? Agree on a way to test that claim.

A clean room can direct its result back to the retailer

Instacart said in January 2026 that selected agencies and consumer goods firms had piloted its Data Hub clean-room service for joining marketer and grocery data ◆. Its setup guide illustrates an analysis that intersects hashed emails from two companies while keeping the full datasets hidden ◆. For activation queries, Instacart directs results to its own account and says partners cannot see the specific matched identifiers ◆. Read each for the step it covers. One names the pilot, one shows a join and one says where the group goes ◆ ◆ ◆. Check that the brand can use the route before it books the ads.

Take a food brand keen to reach past buyers of its soup who now buy soup again. Who will send the old list for the brand? Who will show the new sales for soup as a whole? How far back should each side look? Does a row mean an email, a club account or a sale? If the query gives the brand a count, say what the count is of. If it sends a group to the store, write down which account gets it. Show where the trader can use it to run the ads.

Give the join and the ad buy their own tests. A buyer could ask whether both tables contained the same hashed email in the agreed period. It could also ask whether a group built from that intersection saw an ad, then bought the product. For the join, get the inputs and the match terms. For the ad buy, the team also needs the ad logs, which sales count and what to compare them with. Ask what the brand can check and what the store can share only as a sum.

Close the loop in the media order

Write the promised return next to the destination. Disney’s 2023 LiveRamp destination terms define a custom segment through overlap between advertiser data and Disney data, and require the submitting party to warrant rights and consents for its data [◆] [◆]. Choose a firm that can give that warranty to send the list. Give the trader the name of the group and where it will go. Tell the sales team which sums it will get and which dates they cover. If a third firm holds the seat, who can get the proof once the ads stop?

Go back to the store that wants its old shoppers back. Keep a dated note of who made the list and on what terms. Keep the name of the group, its state in the seat and the terms for the sales report. Ask the store to log when the list changed. Which ads first used the new list? Have the agency name the flight. Ask the sales team what a new trip means and which trips it will count. Which comparison could show how much the ads helped? If the site can share only group sums, settle the buy on those terms. Let the club team retain the questions still open about its own members.

CHAPTER 7

CTV and households

What can a TV report tell a brand about site visits from homes that saw its ads? Spectrum Reach says it supplies the TV ad exposures for each home ◆. Innovid supplies the web visits, and Blockgraph matches the two ◆. The join leaves open who watched and who went to the site ◆. For a buy aimed at homes, ask how the set came to belong to that home. When would the firm stop using the link?

> IN SHORT
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> Blockgraph asks for a household record ID and a postal address ◆. A firm can add an IP or set-top-box ID ◆. The guide sets a time span for a search of past IP links ◆. Only Blockgraph met the US buying test ◆. Its guides gave no age limit for the live link ◆. LtvAdx does give an age rule for a device link ◆. It sells ads aimed at US homes, but the terms do not show a right to buy the join on its own ◆. The study could not settle the market-wide result ◆.

Start with the home someone paid to match

What can a firm buy? In 2020, Blockgraph's general manager described a fee to join its network ◆. Its 2021 notice named the US as the market for the TV match service ◆. In February 2022, TVSquared told NBCUniversal it used Blockgraph's Identity Operating System to link data across kinds of TV ◆. They show a route to buy the service, a market and a firm that said it used the match ◆ ◆ ◆. TVSquared named other firms too ◆. It used hashed IP as a fallback but did not tie that step to Blockgraph ◆.

Viant says its DSP uses data from the bid to find a household profile ◆. The Household ID itself does not travel in the bid ◆. Cadent names its IP-to-home Viewer Graph in a guide to contextual targeting and in its US CTV media offer ◆ ◆. FreeWheel describes a built-in network with identity signals from Comcast and IDs from its publisher partners ◆. Buyers can connect their own data too ◆. Ask what the deal gives the brand. Can its team take home the links? Can the team reach a group only in the seller's seat? Will the brand get a report once the ads run? Write a test for the job on the order.

The name on an old press release can be a poor guide to a new buy. In January 2020, Skydeo announced a deal to map mobile data to the Tru Optik Household Graph in the US ◆. In 2021, TransUnion described its identity service across channels and named the former Tru Optik market for streaming data as a separate offer ◆. TransUnion and Epsilon later named the TruAudience Data Marketplace as the way to buy Epsilon groups for connected TV ◆. One account dates a deal to map data ◆. Another names the route a buyer can use to reach homes ◆. The terms the study found still leave open how to buy the TV household links on their own ◆. List the rows the buyer wants and ask who has the right to take them away.

Which observation belongs to which home?

Blockgraph says a home is tied to its postal address ◆. In version 2.29, a firm needs a record ID and a postal address for the home ◆. It can add an IP address or an ID for a set-top box ◆. Start with the firm that sent the row. Did the street and unit number come from an account it runs? Which fields came with the TV event to be joined? For a test, try two flats on the same street and at the same number. Use a new record for a customer who moves from one flat to the other. What would the firm do if both rows claimed the same set? Ask to see the result for each row and the rule that picked the home.

In August 2026, Blockgraph added a preset for SHA-256 hashed email ◆. A firm could use it in an upload or for a batch match ◆. The release did not give a count of new homes or a test of wrong links ◆. To check the effect, give both builds the same test homes. Keep each result with the inputs the firm used to make the match. Did an address and the firm's own record of a set both point to the same home? Could the match also be made from a shared IP alone? If more rows went through in the new build, which input made the difference for those rows?

CIMM describes return-path data from set-top boxes and automatic content recognition, or ACR, from smart TVs [6]. Its example of ACR checks that the ad was shown on a set that was on [6]. First ask what played. Get the time, the ad and the source that saw it. Then ask which home should get the ad view. Which rule puts the set in that home at that time? If the claim names a person, ask who can place that person in front of the set. Suppose two people share the account. Either one might have watched the ad. The home's row could look the same in both cases.

Time can qualify a link or end it

Viant says it checks the type of internet provider, the device count and the time of day when it screens a home IP ◆. It uses a location-enabled device's coordinates to match to a home address on file ◆. Its US patent gives an example in which an IP assignment must be more than 45 days old to go to the next step ◆. That is a test for entry ◆. The 45-day example gives no expiry date for a link after its last sighting ◆. Its use in Viant's live product remains unconfirmed ◆. Ask which rule is in use, who set it and where the buyer can see it work.

Try both clocks on the same case. Say an address must have been assigned for more than 45 days to pass a test. At 46 days, it might pass. Now take a rule that drops a device 30 days after the last time the firm saw it. If that was 46 days ago, the link would fail the test. A count in days needs a start event and an action at the end. What can set the count back to zero? Could a phone on the same IP keep a TV set's link alive? Ask when the firm that uses the link would first see the change. To check an ad that ran last week, ask which clock is in force at the date of the ad.

LtvAdx describes a shared-IP fallback to find a home and says it drops a device link 30 days after the device was last seen ◆. Its Identity API can return a known HouseholdID or make a new one ◆. On the VAST ad route, IP fallback is off by default ◆. It needs exactly one known home at that IP ◆. For a test of the ad route, try a case with two known homes at one IP. For a test of the device link, keep the home fixed and vary the last-seen date. Ask what

each test should return. The record has the firm's account and no independent test of how the firm applied the rule ◆.

Rebuild, look back, count forward

On Blockgraph, a firm can keep a history of the signals for each home ◆. It can then look up an IP from the past with a time on each row ◆. The span to search can be 30, 60 or 90 days ◆. Suppose an IP comes in today with the date of an ad that ran last month. How far back can the team search? The span in the guide answers that question ◆. It leaves the age for a link in current use open ◆. Try a test with a move in the middle. When the ad aired, the address belonged to the first home. Which home is returned if the same IP is looked up today with the date of the ad?

Blockgraph's version 2.29 guide says a full manual refresh replaces the identity layer at that node with a new file ◆. Rows left out of the new file drop out of that layer ◆. The client can start the change when it wants, with no stated age limit for each link ◆. The guide also lets the client delete a record or opt it out ◆. Old groups and matches stay available after a delete ◆. An opt-out marks them stale, and they must be refreshed before further use ◆. For an agreed test row, ask to see the old match, its new state and the step a team must take to use the group again.

Ask when a file arrives and what gives each row its date. LiveRamp's guide to IP-based CTV events recommends new data each day or week once the programmer is set up ◆. It can look back up to six months for past events ◆. Factori says it links encrypted mobile ad IDs and IP addresses and sends a feed each day ◆. Its AWS listing offers a contract for the data and describes global scope with no US breakout ◆. If a file is due each morning, a buyer can check the time it lands. To check how old a link is, ask when the device last gave the firm cause to put it in that home. A row could stay in each new file for a week, with no new sighting through the week.

A visit in the week after a TV spot

Spectrum supplies the TV ad exposures for each home, Innovid supplies home visits to a site and Blockgraph does the match ◆. Spectrum's showcase counts a visit within seven days of a TV ad view ◆. The clock starts from the TV ad exposure and sets a time for the visit to count ◆. It gives no term for the life of the match to the home ◆. Criteo describes a shared-home fallback when it cannot get an exact match ◆. Its TV guide gives a sale up to 30 days to count after an ad view ◆. Suppose a trader gets more visits in a revised report. First check whether the team let later visits count. The report could change without a change to a single home link.

Ask what happens if two ads ran in one home before a web visit. Will both ads get credit? Does the report count site visits, homes with a visit or all the homes the spot reached too? Try a test family with two spots, followed by two site visits from two people. Write down what you expect in each column. To see how many visits the ads caused, set up a fair test of what would have happened with no ad. Spectrum's report puts the TV view and site visit in the same home ◆. It does not say who watched or what caused a visit ◆. It does not test whether the link to the home was right ◆.

Spectrum says its own data across screens comes from more than 30 million homes ◆. It claims a 95% addressable match rate for its own pay-TV distribution service ◆. A CIMM report from April 2025 says Blockgraph's system works across more than 130 million homes ◆. It gives no region, time span, rule for repeat homes or base to which that count applies ◆. How many US homes could one brand reach? None of the figures gives that count for a specific buy ◆ ◆ ◆. Start with the homes served by the named TV firm. Which qualify for this deal? How many could the ad reach in its planned run? Which figure would change if the brand chose a different TV firm?

More matches can change who is in the sample

Kantar and Blockgraph say Kantar's match rates with TV partners rose to more than ten times their old level after the firms linked their systems ◆. The firms gave neither rate, the counts that fed it nor a test of false links ◆. Blockgraph's CEO discussed what a match rate means but did not say what Kantar counted in the case ◆. Both accounts cover the same work ◆. Did each firm send the same set of rows both times? Did the base count rows, homes or members of a panel that qualified for the test? To test the added links, take a sample of those that failed the first time and passed the next. Ask for a second source that can check them.

CIMM and Go Addressable hired Truthset to study US links from December 2024 through February 2025 ◆ ◆. For links from IP to postal address, the mean modeled accuracy across six unnamed firms was 13% ◆. For IP to email, the mean for the six was 16% ◆. Each type of link had its own base ◆ ◆. For postal links, there was a large pool of pairs from the firms and a smaller set of checks from operators ◆. Keep those groups apart when using the figures. The study does not give the score for a named graph on a media plan ◆ ◆. A seller that cites a better rate for its own graph should show which links it tested and how it knew which ones were right.

In another CIMM study, five masked firms matched two sources of TV data ◆. The mix after the match skewed toward older people, higher incomes and heavier TV viewing ◆. The study did not have an independent set of labels to check each link ◆. Suppose that every link a firm kept was right. Say homes that watch less TV still make it through the match less often. A plan based on the matched homes could give too much weight to heavy viewers. List the mix of homes that went in and the mix that came out. Test the links on a separate set with known homes. Ask the planner to show how the proposed buy would change if it kept the viewing mix of the full input.

What the disclosure test can bear

H5 asked whether most US CTV household-graph services disclose how IP helps assign a device to a home and when to refresh or expire that same link ◆. Only Blockgraph met the US buying test ◆. Its manual lists IP as an optional signal, and its lookup windows apply to past IPs ◆ ◆. The guides reviewed gave no time rule for the live link ◆. The registered majority claim was contradicted in the confirmed group (0 of 1) ◆. When all 8 other candidates of uncertain scope are included, the share can range from 0 of 9 to 8 of 9 ◆. That range leaves the US market result open ◆.

LtvAdx could change the count. It sells US ads aimed at homes and charges for the ads served ◆. It gives both a shared-IP fallback and a time rule for the device link ◆. The offer did not show a separate right to buy the home match, so this case stayed out of the confirmed group ◆. If only this case were added, the share that met both tests would be exactly half ◆. The claim calls for more than half ◆. A contract giving the buyer a right to the home match would close the gap on scope. Another price per ad would leave it open. A time rule from a firm already in the group could change the answer even if the set of firms stayed the same.

For a deal on the table, ask for a trace from one known TV ad view to the row the buyer gets. Blockgraph's Universe Match guide lists partners that gave leave to match ◆. It describes a file that holds one column of Blockgraph IDs ◆. If the buyer needs proof of why one of those IDs was chosen, ask for that with the file. Which firm can show the home address and the device signal under the terms of the deal? How long ago did the firm get the evidence it used? Who can change the link when a customer moves? Which old reports could be fixed? Put the answers with the name of the firm that can act. A brand buying reach and a team asked to stand by a sales report might need to see very different things.

CHAPTER 8

Market and ownership

Publicis closed its purchase of LiveRamp on November 2, 2026 ◆. The buyer described a new offer that uses both RampID and Epsilon identity ◆. Publicis markets both in that offer ◆. It still needs to know which service it will get, who can use the output and what the fee covers.

> IN SHORT
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> ID5 offers free encrypted IDs to publishers that register ◆. A platform needs a licence for commercial use of those IDs ◆. A buyer can target its own CRM list in a Trade Desk account ◆. That route gives it no UID2s or map to take home ◆. With Experian, the buyer can license the whole US Digital Graph or have links added to its own file ◆. Count what the buyer gets. A budget for reaching people and a budget for a set of links that a buyer can reuse may pay for quite different things.

Follow the deal to the party that signs

On May 16, 2026, LiveRamp signed a deal with MMS USA Holdings ◆. The deal closed on November 2 ◆. MMS, which Publicis owns in full, bought LiveRamp Holdings ◆. Trading in the shares stopped before the New York Stock Exchange opened that day ◆. The filing set a cash price of $38.50 for each share that met its terms ◆. Read the filing for the shares it leaves out ◆. Treat the figure as a price per share. To price a match on a client file, a media buyer needs a quote for the work.

Check the name on the US terms. The group's terms name LiveRamp, Inc., a Delaware firm with its main place of business in San Francisco ◆. The merger filing names the parent, LiveRamp Holdings, Inc., as the acquired firm ◆ ◆. Start with the name beside the signature on the deal you signed. Use the merger record to trace the owner. Then check who undertook to run the service. If the party to the deal has changed, who still owes the buyer support? Who must deliver files already due? Who will act on a request sent to the old firm before the deal closed?

Three purchases and one new offer

The seller filed July 1, 2019 as the date it sold Epsilon to Publicis ◆. Publicis announced the close the next day ◆. In March 2025 the group announced a deal for Lotame ◆. Its accounts say it bought all of Lotame Solutions in April ◆. The November 2026 closing statement named RampID and Epsilon identity as inputs to a new client offer ◆. A buyer can now trace these names to one group ◆ ◆ ◆. To find out what a client can buy from that group, return to the terms of the offer.

Suppose an agency gets bids from two firms in that group. Does its risk policy set a cap on how much it can pay one owner? If so, put both bids in the same group for that check. For a test of what each bid buys, keep them apart. What goes in? What comes back? What rights go with it? If both firms bid to match the same client file, ask which rows each one could link. For the rows both firms linked, ask how they did it. Did they draw on the same source? Did they share a link? Did each make its own match? The client could then weigh the extra reach from the second bid against the risk of paying twice for the same links.

What LiveRamp booked

LiveRamp booked $812.9 million in group revenue for the year to March 31, 2026 ◆. It had one operating segment ◆. It split sales into Subscription and Marketplace and Other ◆ [7]. For the quarter to June 30 it booked $214.0 million ◆. Keep the year and the quarter apart. Both cover more than RampID ◆ ◆. On November 10, LiveRamp told the SEC that its September report was late ◆. It had to review its link to its auditor after the deal ◆. A reader looking for the missing quarter gets no set of results from that notice ◆.

To price ATS, turn to the terms for the publisher. LiveRamp limits use of its envelope to the parties enabled under a statement of work ◆. Its service terms put any fees in the order form ◆. In 2021 its CEO said the firm did not plan to charge publishers or media-platform partners for ATS ◆. It expected more use and sales of other services ◆. Ask for today's order form. Which step has a fee? Which party pays it? Can the buyer use the same envelope if it moves the buy to a new bidder? The answers would give the buyer a cost for the route it plans to use.

An operator can be free to use

Under the UID2 guide, a party with a contract can use a Public Operator at no charge ◆. Those who run a private operator supply their own hosting and engineers ◆. The guide names The Trade Desk as Core Administrator and a public operator ◆. The core supplies keys and salts ◆. The rights also vary by route ◆. The licence matrix lists approved API access and CRM onboarding ◆. With CRM onboarding, a buyer can target its list in the platform account ◆. It does not get the IDs or the map back ◆. Ask each bidder to price the right in the brief. Can the client take the map and use it with a second platform?

For its 2025 financial year, The Trade Desk booked $2,896,284,000 in worldwide group revenue ◆. It reported one ad tech segment ◆. Gross spend includes clients' ad inventory, data and value-added services, plus the platform fee ◆. The filing gives no UID2 sales figure ◆. Suppose a buyer pays one bill for a campaign. Suppose the platform fee is part of that bill. A spend survey should ask whether the buyer gave the full bill or the fee on its own. Add both and part of the bill gets counted twice. To assign all of it to an ID, the buyer would need to show why none of it paid for the ads.

Capital, control and licences at ID5

The UK register names ID5 Technology SAS of France as the firm that controls ID5 Technology Limited ◆. It holds at least 75% of the shares and voting rights ◆. In April 2024

ID5 named TransUnion and S4S Ventures as investors in a $20 million Series B ◆. Its UK firm had £702,598 in cash at bank and in hand at June 30, 2025 ◆. It left its profit and loss account out of the public unaudited filing ◆. Keep these records apart. The UK register shows who has control ◆. The funding release names two investors ◆. The cash figure applies to the UK firm on one date ◆. To work out how long the group could fund its work, ask for group cash and the rate at which it spends that cash.

ID5's guide offers publishers a way to get an encrypted ID at no charge ◆. Its terms for paid use include the right to decrypt an ID, link two IDs, or use ID5 data ◆. Ask which of those rights come with the quote. A site might want to send a token to a bidder. A data firm might want to read the ID and link it to a row in its own file. A team might log these as two new links. To count sales, ask who pays a fee and what they can do once they pay it. If the licence ends, can the firm still use the links it has on file?

What moved with the TrueData name

ID5 dated its statement on buying TrueData October 30, 2025 ◆. It posted the English text on November 4 and later said it had closed the deal ◆. The next deal brought in a new buyer ◆. On September 30, 2026, Cloud Technologies agreed terms with TrueData Solutions Inc. for a new US firm ◆. The terms set $1.1 million for its shares and a technology licence, subject to conditions ◆. On October 1, ID5 said the deal covered TrueData's third-party audience business and the TrueData brand ◆. Some client contracts had to move before the sale could close ◆. Cloud Technologies reported that it bought all the shares in the new firm on October 5 ◆.

For a client, the first question is which contract moved. Start with the SKU and the name on the last bill. Who now ships the audience? Who runs the graph that helped build it? Who can end the right to use it? Ask to see the scope of the licence if the new firm relies on code it does not own. A deal can move a brand, rights to use code and a set of client contracts at once. Here, the firms named an audience business, the brand and a licence ◆ ◆. Those terms do not assign the whole of ID5's graph business to the buyer ◆.

A full graph or a set of appends

Experian bought Audigent on December 4, 2024 ◆. Its annual report says it bought all the equity ◆. The group parent is based in Dublin and listed in London under EXPN ◆. For the year to March 31, 2026, it reported worldwide statutory revenue of US$8,445 million ◆. The US Digital Graph sheet gives its copyright to Experian Marketing Services, Inc., in its footer ◆. The US notice on marketing data names Experian Marketing Solutions, LLC ◆. Both names are worth keeping. Neither tells the buyer who will sign its graph licence ◆. Get the draft deal. Does the contract the buyer has on file cover this job too?

With the US offer, a buyer can take the whole graph or links added to its own file ◆. Experian also sells an Offline Graph ◆. A further offer pairs Digital Graph with Marketing Attributes ◆. Experian says MiQ licensed hashed emails, UID2s and partner cookies for use in its Identity Spine ◆. The case says MiQ traders and analysts use the data ◆. The case has no price for the deal ◆. To compare a new bid, ask how many rows the buyer can send. How

often can it get a new file? Can it keep the full graph or just the links added to its list? Price the form of delivery that the draft terms allow.

Two names with histories of their own

IPG bought Acxiom assets in October 2018 ◆. The deal left out LiveRamp ◆. Omnicom said it closed the Interpublic deal on November 26, 2025 ◆. It later named Acxiom RealID in its media plans ◆. Publicis closed the LiveRamp deal in November 2026 ◆. If an old client list is headed “Acxiom,” ask what year the list covers. Get the name of the product that served the client. For an old deal, check who could pass the rights to a new firm. An invoice can show that a buyer paid the then owner. Ask for the new order or the terms that moved it. Which firm now earns the fee?

TransUnion and Neustar said their $3.1 billion deal closed on December 1, 2021 ◆. It left out Neustar Security Services ◆. In January 2024 TransUnion said it combined data from both firms ◆. It grouped IDs by person and household and scored the links ◆. That later account gives a buyer a claim about how the graph was built ◆. Use it when asking about input sources and why the graph might accept a link. For a TV proposal, first check which part of the business made the offer. TransUnion and Epsilon named TruAudience Data Marketplace as a way to buy Epsilon audience data for connected TV ◆. Ask for an extract if the brief calls for a set of household links the client can use elsewhere.

The parent on the date you need

Apollo’s funds bought Yahoo on September 1, 2021 ◆. The close left Verizon with a 10% stake ◆. Verizon reported $4.1 billion in cash proceeds for Verizon Media, net of cash transferred ◆. In September 2025, Yahoo Ad Tech LLC named College Parent, L.P. as its corporate parent in court ◆. Its US ConnectID terms name Yahoo Ad Tech LLC as the contracting party, with its main office in New York ◆. Keep the 10% figure with the date of the close. The net cash figure covers Verizon Media ◆. To value ConnectID on its own, the buyer would need a breakdown the sale record does not provide ◆.

The US terms describe a value sent back under a key specific to the firm or the publisher ◆. It is encrypted, and the right to share it is tied to the supply deal ◆. Ask which deal the quote covers. Which other supply paths would need fresh terms? A buyer who wants to use the output with two partners should put both in the brief. Ask if the licence permits this use. Run a test. Can the other firm use what it gets? If the brand might move its spend to a new bidder next year, ask whether it could take its rights with it.

Shared ownership in television

In May 2020, Comcast, Charter and ViacomCBS said they had agreed to own equal shares of Blockgraph ◆. Their joint release dates the first FreeWheel project to 2017 ◆. Blockgraph later named Comcast NBCUniversal, Charter Communications and Paramount as its owners ◆. Comscore’s 2025 filing called Blockgraph private ◆. Keep each set of owner names with the date of its source. They leave current shares open ◆ ◆. In February 2020, Blockgraph’s general manager said firms could join the network with a software

subscription ◆. The price of a licence today is not in that record ◆. Ask for the term, fee and rights that apply to the next buy.

What does a buyer get when it joins the network? In its Universe Match guide, Blockgraph lists the partners that have granted access ◆. The guide describes a file with one column of Blockgraph IDs ◆. Spectrum Reach describes a different job ◆. It supplies TV ad exposure by household, Innovid supplies site visits by household, and Blockgraph makes the match ◆. A buyer might want to check its own homes against one partner's list. Or it might want a report on the homes that show up in both an ad file and a site file. Request the actual output and the name of the partner that can use it. To claim access to an owner's data, ask for terms that grant it.

What changes hands in a substitute buy

Seedtag offers groups as a way to reach an audience without third-party tracking ◆. It scores URLs against the brand's brief ◆. Its October 2026 US political offer gave a Michigan example ◆. That example paired Seedtag's context segments with voter audiences from Aristotle ◆. If the seller can split the quote, ask for two prices. What does it charge to select content for the brief? What is the extra charge for the voter audience? If only the package has a price, ask what the buyer could drop and how the bill would change. Do not assign the full price to both firms. In that example, the buyer would pay the package price once.

Ogury lets brands and agencies plan and buy persona groups on its platform or use its API ◆. NIQ names the US among the markets it serves with purchase insights for Ogury's persona engine ◆. Ask the planner for the name on the bill. Then ask for the names of firms whose data helped build the groups. Did each send the client a bill? Or did one firm charge the client for the whole buy? One list can show how a group was built. The other can show where the money went. Use the two lists to map the firms. When a source shows up on both, has a second sale taken place?

A buyer can test the scope of a quote with a small change in the brief. Keep the same input file, run date and set of IDs. In the first bid, ask for a single file back. In the next, ask for the right to use that file with two named firms. Ask for the same service term in both bids. Has the fee moved? If so, which right set off the change? If there is no change in the fee, does the draft still grant the right? Read the terms. Does the price include the right to send the file on? Keep the two quotes with their terms so the team can go back to the exact right it chose.

Put a boundary around the budget

Set a boundary for any estimate of market size. Start with the sum the buyer paid. Was it for software, a file, a set of links, or the media on which those links were used? More than one item can fall under the same fee. Ask how the buyer splits it. If it cannot split a bundle, keep the whole sum on one line of its own. Note the time span and currency. Check whether the same sum appears in a reseller's gross bill and in its supplier's sales. Are we trying to measure what brands spent? Or are we trying to measure fees that a vendor booked? State which question the estimate will answer.

Ask what would happen to the budget if the buyer dropped the ID. Comscore offered US political buyers a choice on The Trade Desk ◆. One option used an ID and the other was an ID-free predictive audience ◆. Which line in the plan would the new buy replace? If it takes the place of another media buy, compare the spend and the reach that each would get. If it takes the place of a file licence, compare that fee plus the cost to put the file to use. Leave a fee of unknown size open. The public filings give group totals and leave US sales of the named identity products open ◆ ◆ ◆. A buyer can still ask what it will pay for the right it needs.

CHAPTER 9

Regulatory and legal record

In France, Google changed a notice shown to people who open an account ◆. It also changed how ads looked in Gmail ◆. In September 2026 the French regulator closed its order on both points ◆. Could we trace such a change for the firms that sell US ad IDs? The records we reviewed did not link an order in force to a change that a separate source confirmed for the named product ◆.

IN SHORT

The French court upheld a sanction against Criteo ◆. The partner audits cited in the case had begun while the probe was still open ◆. Mobilewalla told investors it had applied a third-party location filter in its US business after an FTC order ◆ ◆. Its own account did not show that a named identity product had changed ◆. Read the order to see who must do what. To find out what the service does now, look for a test. The product-change claim, H6, stays open ◆.

Read the duty, then look for the change

Did a case cause a change in a named ID service? That is the test for H6 ◆. The search starts on January 1, 2022 and runs through November 11, 2026 ◆. It covers both current offers and past services that were active in the period ◆. Some have a listing but no score ◆. A team might know what the law requires. It may still lack proof of how two devices were linked. Keep the legal finding out of the product score. Read it for what the party named must do.

Find the part of the order that sets the duty. Who must act? Which data fall within its terms? Where do those terms apply? What starts the clock? Next look for a dated account of what changed after the order. Who saw the change? Which version did they test? Could they see what left the service? If the duty was to change a notice, a check of what the user saw could meet the test. If the claim is that a graph changed, seek a check of the link. Keep the product name next to the name of the firm. A case can tell a buyer a great deal about a screen or a device setting and still leave the graph in doubt.

Advertising identity in the legal record

Read each record by jurisdiction, named respondent, procedural stage and date. Orders and judgments may impose remedies. A complaint records an allegation. This record is outside the Identity Quotient.

Machine-readable copy: data/rules.csv.

JURISDICTION	OFFICIAL RECORD	REQUIREMENT, IF ANY	EFFECTIVE DATE, WHERE APPLICABLE	SCOPE OF THE RECORD	TYPE OF RECORD	SRC
France / EU	CNIL SAN-2023-009 and Conseil d'État 482872	Retargeting operator sanctioned. The appeals court upheld the €40 million sanction.	2023-06-15 decision; 2026-03-04 appeal dismissed	CNIL examined Criteo's partner-site cookies and retargeting. It recorded partner audits during the investigation. The decision and appeal do not establish a later change to ID for Exchanges.	Administrative sanction and appeal judgment	[63] [64] [65]
United Kingdom	Information Commissioner v Experian, [2024] UKUT 105 (AAC)	Substituted notice requires specified transparency for open-source data used in direct marketing, subject to exceptions.	2023-02-20 substituted notice; 2024-04-22 appeal dismissed	The UK ConsumerView direct-marketing database is named. Experian projected compliance by July 24, 2025. Separate verification of implementation and a change to the US Digital Graph remain open.	Substituted notice; appeal judgment	[66] [67] [68]
United States / Idaho	FTC v Kochava, 2:22-cv-00377-BLW	The stipulated order requires withdrawal controls for CDS's use or disclosure of precise device location.	2026-06-25 signed and filed order	The complaint describes household mapping. The order imposes duties on Collective Data Solutions for precise device location. The record does not show a separate household-graph change.	Amended complaint and stipulated injunction	[69] [70]
United States	FTC v Mobilewalla, docket C-4811	Limits secondary harvesting in auctions. Sensitive-location and other controls under distinct provisions.	2025-01-13 issued	Mobilewalla's SEC filings describe its own US data-screening program. The filings do not independently verify compliance or establish a change to a separately identified identity product.	Final consent order; subsequent issuer representation	[71] [72] [73]
United States / California	People v Disney DTC LLC and ABC Enterprises Inc., 26STCV04425	Effectuate logged-in opt-outs across associated streaming services; different instructions when not logged in.	2026-02-11 judge-dated; the order takes effect upon entry	Disney streaming services associated with a logged-in Disney account.	Stipulated judgment	[74] [75]
United States / Texas	Texas v Sony, original petition	State requested relief about smart-TV data controls. Figure 5 identifies the Samba Interactive TV opt-out screen.	2025-12-15 petition; no operative duty inferred	Texas named the Sony entities. The petition depicts a Samba Interactive TV screen. Texas reported the case ongoing on May 11, 2026. The filing establishes no change to the Samba household graph.	Complaint and requested relief	[76] [77]
United States / Texas	Texas v LG Electronics U.S.A., Inc., Bell County, 169th District Court, 25DCV358507	The agreed terms call for affirmative express consent for covered viewing-data practices beginning 180 days after judicial signature and entry.	2026-05-11 settlement announced. Judicial signature and entry date unverified.	Texas announced a settlement concerning LG viewing data. The posted agreed terms lack a verified judicial signature or entry date. Neither the trigger date nor a product rollout is established.	AG-announced settlement and published agreed judgment terms	[78] [77]
France	CNIL Google account and Gmail decision and closure	Article 82 limb concerns account-creation advertising-cookie notice; the regulator closed the injunction after review.	2025-09-01 injunction; 2026-09-23 closure	Google account creation in France and Gmail. Distinct from the Chrome API entries IDN-P035–037.	Operative injunction and verified regulatory closure	[79] [80]
Belgium / EU	IAB Europe TCF decision and Brussels Market Court ruling	The regulator records the procedural annulment of decision 21/2022, confirmation of its fine, and a limit concerning downstream OpenRTB operations.	2025-05-14 judicial outcome as reported	IAB Europe and the TCF; consent-framework boundary.	Appeal ruling reported by regulator	[81] [82]

JURISDICTION	OFFICIAL RECORD	REQUIREMENT, IF ANY	EFFECTIVE DATE, WHERE APPLICABLE	SCOPE OF THE RECORD	TYPE OF RECORD	SRC
France	Conseil d'État 494300, Yahoo EMEA Limited	The court rejected the company's appeal concerning the cookie-placement and withdrawal practices in the decision.	2025-10-07 judgment	Yahoo website practices; commercial IDN-P005 ConnectID was not identified as the subject in the passages screened.	Appeal judgment	[83]
United States	FTC X-Mode Social and Outlogic decision and order	Sensitive-location program due within 180 days of issuance.	2024-04-11 issued	X-Mode and successor Outlogic; sensitive location-data program.	Final consent order	[84]
United States	FTC InMarket Media decision and order	Prohibits sale or licensing of defined Location Data for valuable consideration.	2024-04-29 issued	InMarket Media, LLC. Separate provisions address targeting and categorisation.	Final consent order	[85]
United States	FTC Gravy Analytics and Venntel, C-4810	Sensitive-location program must be established within 90 days of the effective date and maintained thereafter.	2025-01-13 issued; time runs from effective date	Gravy Analytics, Inc., and Venntel, Inc.	Final consent order	[86]
United States / Federal Trade Commission	FTC, Publicis Groupe / LiveRamp, C-4841, file 261 0115	The issued Order to Maintain Assets requires continued access to LiveRamp standalone services and safeguards for confidential information. The separate proposed five-year remedy was subject to public comment at cutoff.	2026-10-19 interim order issued. A separate proposal was posted for comment through 2026-11-23.	Publicis and LiveRamp, competition and supply access. The interim order protects standalone services and confidential information. The record does not independently verify a completed RampID data-policy change.	Operative interim asset-maintenance order and separate proposed consent remedy	[87] [88] [89] [9]
United Kingdom	Open Rights Group complaint to UK Information Commissioner's Office concerning LiveRamp	The complainant reported a submission. No obligation imposed by the authority is established by that submission.	Complaint reported 2024-02-28. No operative outcome verified.	Open Rights Group reported the submission about European RampID processing after commissioning the Cracked Labs review. No linked regulator ruling or separately verified product change was found.	Reported complaint, no verified operative disposition	[60] [61]
France / EU	Open Rights Group complaint to French CNIL concerning LiveRamp	The complainant reported a submission. No obligation imposed by the authority is established by that submission.	Complaint reported 2024-02-28. No operative outcome verified.	Open Rights Group reported the submission about European RampID processing after commissioning the Cracked Labs review. No linked regulator ruling or separately verified product change was found.	Reported complaint, no verified operative disposition	[60] [61]
United States / Southern District of New York	Baker v. Yahoo Inc., 25-cv-2797, orders 103 and 104	The court sent five plaintiffs' claims to arbitration and stayed those claims. It separately directed consultation about limited discovery for the sixth plaintiff.	2026-08-26 orders issued	Private procedural case. The orders resolve no merits issue and establish no change to ConnectID. Outside the H6 public-enforcement population.	Private suit, arbitration and procedural orders	[90] [8]

France and the Criteo retargeting decision

In June 2023, France's CNIL ruled on requests to erase data used for ads on partner sites ◆. It found that the firm had stopped the tailored ads but had yet to meet the requests to erase data ◆. On March 4, 2026, France's Conseil d'État rejected Criteo's appeal against the €40 million sanction ◆. The court dated some of the firm's changes to the time before the sanction ◆. The case summary says its checks on partner sites began during the probe ◆.

The dates of those checks put them too early to show a change the firm made under the June 2023 ruling ◆ ◆.

How could a publisher check the result of an erasure request? Suppose the next page load shows an ad selected without retargeting. The test would show how the site chose that ad. What happened to the data held before the page load? The operator may have dropped a link or kept it and changed how it served the ad. For this test, trace the request to the keys it covers. Inspect the record held before the request and again once the request has taken effect. For a claim about an exchange ID used in the US, find the US route that uses those keys. The French case did not show a later change to that exchange product ◆.

Put the two dates on a line. When did the firm start the work? When did the duty take effect? Ask for a third date if the firm went back to the same tool after the ruling. It may have changed which sites it checked, what the check found or what it did with a failed site. A test from that later point could pick up a real change. A copy of the old test could show only that the tool was still in use. If the dates are clear but the scope of the change is not, leave that part of the case open. This keeps work done before an order in view without giving the order credit for it.

The UK notice that actually bound Experian

Which notice bound Experian in the UK? The First-tier Tribunal changed much of the Information Commissioner's 2020 notice in 2023 ◆. Under the new notice, Experian had to tell some people that it used their data for direct marketing ◆. The duty had exceptions and applied to records from the open sources it named ◆. On April 22, 2024, the Upper Tribunal dismissed the Commissioner's appeal ◆. In June 2025, the firm told investors it thought it would meet the new terms by July 24 that year ◆. Did the firm meet that date? The records we read did not say ◆. Nor did they show a change to its US Digital Graph ◆.

For a check of the UK service, ask which rows require a notice. If the firm says a row is exempt, what grounds does it keep on file? Ask for a test dated after the rule took effect. Trace one covered row and one row to which the stated exception applies. That could show how the firm got word to a person in its UK file. For a check of a US graph, start with a US input. Obtain the link that came back. What rule changed, when did it change, and what ties that change to the UK notice? The litigation identifies the place and the direct marketing use at issue ◆ ◆. It leaves the US graph question open ◆.

A household use in a complaint

The FTC filed an amended complaint against Kochava in July 2024 ◆. It said the firm had pitched its feed on the claim that the data could help map a device to a home ◆. Use that claim as a lead. The complaint did not decide how well the feed linked a device to a home ◆. A US order in June 2026 bound Collective Data Solutions ◆. The firm had to give users a way to take back consent to use or share precise data on where a device had been ◆. The order lets the firm use a qualifying device or operating-system control for that purpose ◆. If the terms it sets are met, the order also reaches Kochava ◆. To check if Kochava IdentityLink changed, ask for a test. The order does not show what it did ◆.

Take the location feed first. Use a test device with consent. Change the setting, then check where the new state reached the firm. What was in the last feed before the change? What was in the first feed due after it? Keep the field name, the time and the name of the party that got the feed. Get leave to run the test. Use a row the team knows. Now ask what it would take to test a graph. Was the device linked to a home in the first place? Did the link last after the change? Could a fresh file or a new source have changed the link that day? Who holds the graph? The buyer may see the first feed and still need that firm to check the link.

What Mobilewalla said it changed

In January 2025 the FTC limited Mobilewalla's collection or retention of covered data from online ad auctions ◆. It could collect or keep the covered data to take part in that auction ◆. The order defines which data it covers ◆. In August 2026 Mobilewalla told investors it had applied a third party's sensitive-location filter in its US operations ◆. It said the filter checked signals on the way in and files on the way out after the order ◆. Was that filter tested? The record we saw has no independent test or FTC finding on it ◆. It also leaves open which named identity product changed ◆.

Ask what the filter sees. Which feed comes in? Which file does the client get? What happens to a row that fails? The firm might drop the row. It might drop just the location field or hold the row for review. Which of those paths fits the file the buyer got? Seek a test from the time the rule went live. Ask who could see the row and the outgoing file. If a third party ran part of the check, which part could it see and what did it report? A later filing might repeat the same account. That would show what the firm continued to tell investors. Who could see the file that reached the buyer? Get their log.

To test a filter with a buyer, choose two rows the test team has a right to use. Make one meet the stated rule for a block. Keep the other outside that rule. Hold the rest of the file fixed. Ask the firm to show what came in, when it ran the check and what it sent out. Ask the buyer what it got. If it saw no rows at all, the feed might have failed. A clean row that came through can help rule out that fault. If both rows came through, check the version and the scope of the rule before drawing a conclusion. Such a test could shed light on one feed, at one point in time. State whose feed it was.

Three other US location orders

The FTC issued an order to X-Mode and Outlogic in April 2024 ◆. It gave them 180 days from issuance to put a sensitive-location program in place ◆. An April 2024 order bars InMarket from selling or licensing defined location data for something of value ◆. The next clause deals with products that use sensitive location data to group or target people ◆. The FTC issued its order to Gravy Analytics and Venntel in January 2025 ◆. It gave them 90 days from the date it took effect for their sensitive-location program ◆. The public file also includes the prior complaint ◆. Which page sets out the claim? Which page sets the rule? Read the part that tells the firm what to do before you put a date in your file.

Say a firm uses location data to build a graph. What would the buyer get? Is it a coordinate, a class of visits, a matched list, or more than one of these? Which firm bought or held the input and under what terms? If a rule has a due date, what starts the clock? If it says a

change went live, seek the dated rule and a file shipped under it. To test a claim about a graph, trace an input into the graph and out to one of its clients. If all the buyer can see is an audience at the end, mark the point where the test stopped. A due date can tell the buyer when to look without proving what it will find.

California followed a streaming account

California's February 11, 2026 judgment names Disney DTC and ABC Enterprises ◆. When a person is logged in, those firms must honor an opt-out across the Disney streaming services linked to that account ◆. A different rule applies when the person is not logged in or has no account ◆. The state attorney general gave the terms of the deal the day the judge signed the order ◆. What the state said had gone wrong was its claim in the case ◆. Read the signed text to see the duties the two firms took on.

Start a test of the signed-in rule with one test account on two covered services. Change the choice on one. Then check what the other does for the same account. Run a separate test for a signed-out user. At a shared TV, more than one device might be linked to the home. The viewer on the TV might match none of the users signed into the test account. A change to the link between the TV and the home needs a check of its own. The California judgment uses the linked account to set the scope of its signed-in rule ◆. The case record does not show a change in an external firm's household graph under that order ◆ ◆.

Television settings in the Texas records

Texas filed a petition against Sony in December 2025 ◆. It named Samba Interactive TV in its account of how to opt out on BRAVIA sets ◆. The pleading was against Sony ◆. It made no finding against Samba TV and showed no change to a Samba household graph ◆. The author works at Samba TV ◆. The study keeps Samba out of its scores and includes it in this legal screen ◆ ◆. An opt-out screen can give a buyer a place to start a test. What left the TV once the user made that choice? Which firm got it?

Texas announced a settlement with LG Electronics U.S.A. on May 11, 2026 ◆. Under its terms LG must get affirmative express consent for the viewing-data use it covers ◆. The terms allow 180 days from judicial signature and entry ◆. The posted copy leaves the judge's signature and date blank ◆. It cannot tell a buyer when the clock started or when the consent flow went live ◆. Get the entered order to check the date. For a test of a TV set, get the model, the market and the software version. What happens when the viewer says yes? What happens with a no? To make a claim about a graph, trace what the TV sends and how the graph uses it.

A case with a completed follow-up

In September 2025 France ordered Google to explain the ad cookies used when a person in France opens a Google account ◆. Google changed the disclosure and the way ads appear in Gmail ◆. On September 23, 2026, the French regulator closed its injunction on both points ◆. This gives a reader two records with different jobs. The first says what the firm had to do

◆. The next one says what changed and what the CNIL had seen ◆. It closed just the two points it named ◆.

The two French records make a good test of scope ◆ ◆. The account-creation order required no change in Chrome's third-party-cookie default, Topics or Protected Audience ◆. To test the notice in France, compare what a user saw before and after the change. Check the new wording against what the regulator said it accepted ◆. For a claim about an API, check the records for that code. What field used to be in the message? Was it removed or changed? What did the party that got the message do with it? The CNIL confirmed the change to the Gmail ads it had named ◆.

A consent string and the parties that use it

In March 2024 the Court of Justice ruled on a question about the Transparency and Consent Framework ◆. A TC String can be personal data when a person can be identified by linking the string to an ID by reasonable means ◆. In May 2025 the Belgian data protection authority gave its account of the Market Court's ruling ◆. The court set aside the authority's decision on procedural grounds and upheld the fine ◆. The authority said the court rejected joint control for processing that takes place wholly within OpenRTB ◆. Name the source and keep that limit in view.

For a test of a string, ask what else the party that gets it holds. Can that party link the string to a person? At which step can it do so? A string sent with a request can show what the sender supplied. To find out what the bidder did with it, read the bidder's rule. Or observe its output in a test where one use is allowed and one is blocked. Check the case where the request has no string at all. Those cases did not test what a US bidder did with a named ad ID under each choice ◆ ◆.

A court can resolve a question of procedure

In October 2025 France's Conseil d'État rejected an appeal by Yahoo EMEA Limited against a CNIL ruling on cookie placement and withdrawal ◆. The ruling dealt with the use of cookies on the site and in mail ◆. It did not name a change to Yahoo ConnectID ◆. The US case did name ConnectID ◆. On August 26, 2026, a federal court in New York sent five plaintiffs' claims in a private suit to arbitration ◆. It stayed the court case on those claims ◆. A separate August 26 order asked the parties whether limited discovery was needed for the sixth plaintiff ◆ [8]. The ruling tells us where those claims would go ◆. It did not rule on the merits ◆.

In February 2024, Open Rights Group said it had filed complaints in the UK and France ◆. The group had commissioned a review of how European RampID documents said the system worked ◆. The group that filed the claims is the source for that account ◆. A later US case dealt with access to LiveRamp services ◆. The FTC's October 19, 2026 interim order required continued access to LiveRamp's standalone services ◆. The proposed five-year order was open for public comment through November 23, 2026 ◆ [9]. Did a live RampID service change how it acted on a consent flag or a request to erase data? These records leave that point open ◆ ◆.

A buyer can keep track of the gap with a short note on each item it sees. For a court file, mark the party, the claim and what the judge has ruled on so far. For a seller's account, mark who said it, which facts that person could see and the date of the test. For a file sent to a client, mark the key the client got and where that key came from. If one of the links is missing, say which one. That gives the next reader a place to look. What can the buyer check on its own? What does a second firm need to check?

What the open verdict means

The review found duties that had taken effect and some changes in practice ◆. It could not tie an order in force to a change confirmed by a second source for a named identity service in scope ◆. Some US state and EU national case searches by entity were incomplete ◆. Some records left open which product a duty covered ◆. The finding stays open ◆. We cannot use that gap to judge that a seller met or breached its duties. It also leaves open the effect of past cases on how firms link rows.

For a purchase, keep two items on file. On the order, mark the duty and the date or event that starts it. On the test, mark the product, version, market, date and result. Who saw the change? How far downstream could they see? If the seller relies on a second firm to act on a choice, did anyone check what that firm sent on? A new check could settle the claim. Did the same product change? A new allegation could give the buyer a lead. A second account from the firm that made the first claim would still leave the result to be checked.

CHAPTER 10

What an agent can do with an ID

A publisher can use the AdCP Go client to send a typed ID token to the Trusted Match router ◆. The reference code can check whether a token belongs to an audience and return IDs for packages that qualify ◆ ◆. A buyer who wants to know whether that path influenced a purchase must look beyond the code ◆.

IN SHORT

The paper asked if work on identity in agent protocols had stopped at a schema, a plan for the shape of a message ◆. AdCP has code that sends the token and code that can act on it ◆ ◆. That contradicts the claim ◆. The records still leave open whether a buyer and a seller with distinct systems have used that path to make a buy ◆. Evgeny Popov co-leads the Signals & Measurement working group at AgenticAdvertising.org ◆. The study applies the same rule to AdCP and the IAB protocols it screened ◆.

Start with the decision an ID could change

Suppose a buyer wants to reach people who have already bought from its brand. It asks an agent for one deal at a site they visit. The buyer adds a term. The deal must run on a set type of page. The site could send its whole list of deals. It could send a smaller set that met the terms. It could send no offer at all. If a short list comes back, ask what put each deal on it. Was it the choice of site, the type of page, or a check that someone belonged to the brand's group?

In that brief, a site name tells the buyer where an ad could run. A deal ID tells it which deal to book. For this test, an identity signal is an input used to recognize a unit or check a link that matters to an ad buy ◆. That unit could be the device that can show an ad. The link could say that someone belongs to a group the seller holds. Keep the claim at the level the facts support. The code for a deal could be the result of a match. It need not tell the buyer who matched.

Give each party a job. Ask the publisher to record which type of token its client sent. Ask the party running the matching service what question it asked of the audience data. Ask the buyer what it did with the answer. Those requests call for different pieces of evidence. A publisher could prove dispatch even if the buyer never received the message. A seller could show an eligible package even if the buyer declined the price. A buyer could show an invoice without showing why the package qualified.

If the claim is about time saved, ask for the plan and the time the team spent on it. If it is about access to a group, ask for the request that picked the group. Look at the reply. If the claim is about extra sales, first link the ad to the buy. Then ask how the seller found out what changed sales. Each claim calls for a different test. A bill might break out each line of the price paid and still leave out how the seller chose the people to reach.

A request with a deliberate limit

AdCP 3.2.8 defines a Trusted Match request as part of an experiment ◆. A publisher can send it through a router to buyer agents ◆. The request can carry one or more opaque ID tokens ◆. It must leave out page context ◆. The issuer also called clean-room activation experimental in its October account of the 3.2 release ◆. Keep the status and the version on the brief. A team can test the shape of the request before it decides whether a partner can use it on a live buy.

Think of two people in the same target group on two very different web pages. The buyer wants both the right group and a safe page. The Trusted Match request must leave out page context ◆. If the buyer learns that someone belongs to the group, what has it learned about the page? To check that part of the brief, the team needs a further source and the right to use it. It could also limit the stock in advance, drop the extra term or pass on the deal if it cannot check the page.

An opaque token leaves work for the service that gets it. Before agreeing a pilot, ask which part can read the token, who controls its credentials, and whether that use is in scope. Ask how the service identifies the token type when the request includes more than one. Ask what happens when the receiver recognizes the type but cannot read this value. A blank response might mean there was no audience match. It could equally mean the test never ran. Make those outcomes visible as different test results, even if the buyer receives the same empty offer in each case.

Test the router on its own. It could accept a request that went no further. Get a receipt from the buyer's service too. Give the test a name that both firms can look up. Keep the person's token out of that name and the shared report. If a request goes astray, the two teams can look for the same event on their own side. They can tell whether both saw it without copying a live user's key into a ticket. Ask them to show that much before a test calls for access to live data.

Follow the reference implementation

In the September 11 Go code, the client starts with a user token and its namespace type ◆. It builds the request and posts it to the Trusted Match route ◆. A handler at the other end can read the request and pass it to the service for a check ◆. It can then return IDs for packages that qualify ◆. The two sides of that code give a team a place to test a handoff ◆ ◆. A full test would still have to show which parts ran and record what came back.

The Go engine needs an audience service, IDs in the request and a list of target audiences before it runs the membership check ◆. With those in place, it can send the tokens and target group IDs for a batch lookup ◆. For a test, list what each part needs. State where the audience data came from. A short table of made-up members could show which branch the code takes. For a paid deal, the buyer would still need rights to the group it plans to use. A test table cannot grant those rights.

The same Go code has a UID2 decoder and an EUID decoder ◆. Each calls a client set up to decrypt an ad token ◆. Ask which one ran. Who issued the input token? Which keys worked? Keep the answer with the name of that service. If the buyer has rights to one

system, give it a test on that system. A sound result under a different name would leave its own buy in doubt. The code path shows what could run. A receipt would show which path did run.

The reply can carry IDs for the packages that qualify ◆. In a test, save the list and then save what the buyer chose. Suppose two packages fit the budget but only one fits a cap on how often to show the ad. The audience check could explain why both came back. The cap could explain which one sold. With just the final choice, the team that signed off the spend would have to guess. It needs both a record of the set and a record of the choice made from it.

For a negative test, change just who is in the audience. Keep the token type, set of deals, price and seller the same. Take the test member out of the group and try again. Did the set of deals change? If it stayed the same, ask first whether the buyer or seller called the membership service at all. If the set changed as planned, the teams can say how the code treated that known input. They still need a different test to tell how often a real brand's list links to the right people.

What the seller expects to match

IAB Tech Lab calls the AAMP 3.0 OpenProposal model a public-comment draft ◆. The draft lets the buyer supply segments and a suppression list ◆. The seller can give an expected match rate ◆. Who makes the forecast matters. Ask the seller which records it hopes to match, where it plans to find them and how long the offer runs. Ask what count sits below the rate. The field in the draft holds a forecast ◆. To check what happened, the buyer needs the results of the lookup.

Suppose the buyer sends a list of customers. It asks the seller to leave out people who made a sale last week. Two sellers could quote the same match rate on that brief. One could start with all the records on the list. The other could start with the smaller group it accepted for lookup. Ask each seller to put the base in words. Which records count? What must happen for one to match? Once each side can say what goes above and below the line, it can judge the number it plans to put in the bid.

Ask when the seller checks the list of people to leave out. Which key does it look up? Who can change the list? A buyer might take one test member off the target list after the deal was approved but before ads ran. Ask the seller to show the first result, the new result and the time of the change. The OpenProposal draft lets the buyer supply the list ◆. The test would answer a further question. At what point would the seller's system stop treating the test member as a match?

IAB Tech Lab describes a demo in which a buyer and seller use AAMP tools to agree on terms ◆. The confirmed deal then goes to Google Ad Manager ◆. OpenProposal's expected match rate is a field in a draft ◆. To test the role of identity in the demo, ask for the field the seller read and the term it changed. A deal might meet the price, format and supply terms without a check on a person or device. What was it about the input, if anything, that changed what the buyer could buy?

A vector can enter an auction

The OpenRTB Agentic Audiences extension uses type 1 for an identity embedding ◆. One segment entry can hold more than one signal type ◆. Prebid has a module that takes the type and vector from a stored entry and copies them into the user's segment data on an OpenRTB auction ◆. The project merged that work on April 14, 2026 ◆. Ask the seller for a test bid. Look for that type and vector at the spot the code would fill. Then ask which party can show that it read them.

To test this route, ask what kind of vector the seller sent. Do not infer its type from the presence of a segment. Record the declared type at the source and the type in the message. Next ask which party can explain how the vector was made and what an intended receiver can do with it. A copy step could preserve every value exactly while leaving the buyer unable to read the values. For a test, give the receiver an agreed input and one clear question to solve with it.

IAB Tech Lab gives Agentic Audiences a use in a normal programmatic auction as well as one in agentic advertising ◆. The August 2026 Agentic Audiences release is v1.1 ◆. The AAMP umbrella release in September 2026 is v3.0 ◆. Write down which version was used and which app made the choice. A bid log could show that an identity embedding crossed the wire. To show that an agent helped make the buy, get its request or decision and join it to that bid. Keep the two records together for the next team to check.

What agent buying protocols do with identity

Read each version on its own. A schema can name a signal. Separate entries cover a working connector, a test between systems, documented production use and a demonstrated transaction.

Machine-readable copy: data/agentic-map.csv.

PROTOCOL, PLATFORM OR OPERATOR	IDENTITY SIGNAL AND OPERATION	STATUS	DATE	INDEPENDENTLY OBSERVABLE?	SCOPE AND LIMITATIONS	SRC
AdCP Trusted Match	IdentityMatchRequest	UNCONFIRMED	October 29, 2026 (version record)	Experimental 3.2.8 schema: publisher via router to buyer agents; opaque tokens, page context excluded.	Schema evidence. The request definition supplies no live identity exchange.	[91]
AdCP Go reference client	Typed user-token dispatch	UNCONFIRMED	2026-09-11	Source code constructs a typed token request and posts it to the router's identity route.	Reference connector and publisher-client tests at the September 11 commit. External buyer receipt, production identity traffic and an identity-bearing trade remain unverified.	[92] [93] [94]
AdCP Go reference identity engine	Membership lookup	UNCONFIRMED	2026-09-11	Code submits request tokens and target IDs to a batch membership lookup.	Reference connector. The lookup needs a configured audience service, identities and target audiences. No independent two-party trace.	[95] [93]
AdCP Go UID2/EUID decoder	Advertising-token decryption	UNCONFIRMED	2026-09-11	UID2 and EUID decoder code calls the configured client to decrypt an advertising token.	Reference code for a provider-specific operation. Key access, counterpart receipt and paid use are unverified.	[96] [93]
AAMP OpenProposal	Expected match and buyer suppression fields	UNCONFIRMED	2026-09-22	Draft seller field for expected match rate and buyer fields for segments and suppression.	Draft object model. The expectation is supplied by the seller. No measured match or executed suppression is reported.	[97] [98]
AAMP buyer and seller SDKs	Media plan and GAM handoff	UNCONFIRMED	October 27, 2026 (overview revision)	IAB describes buyer–seller negotiation and a handoff to Google Ad Manager.	Issuer demonstration. The exact demo date and identity payload are unverified.	[99]
IAB Agentic Audiences	Embedding identity type	UNCONFIRMED	August 2026 (v1.1 release listing)	The OpenRTB community extension defines integer type 1 for an identity embedding.	Ordinary programmatic auctions can also use the extension. A type code does not identify a buyer agent or a transaction.	[100] [101] [102]
Prebid Agentic Audiences RTD	Pass through stored embedding fields	UNCONFIRMED	2026-04-14	Merged code copies a stored type and vector into user.data[].segment[].ext.aa.	Prebid handoff inside the auction system. A stored entry can represent identity; the code supplies no receipt by a buyer agent.	[103] [104] [105] [100] [101]
PubMatic Activate	Clubtails campaign	UNCONFIRMED	2025-12-15	PubMatic reports an AdCP-enabled CTV campaign for Clubtails.	Seller account of a campaign. No token, identity-bearing field or transaction trace links its delivery to the protocol's identity route.	[106]
Optable and PubMatic	First-party signal planning	UNCONFIRMED	2026-03-12	Optable reports publisher first-party audience planning via PubMatic.	Partner account describes access without transfer of underlying data. No identity field or recipient trace establishes an identity-bearing trade.	[107]
AdCP Go reference HTTP identity handler	HTTP identity request and eligible package response	UNCONFIRMED	September 11, 2026 (commit)	The handler decodes the request, calls its service and returns eligible package IDs.	Reference connector. This code supplies no two-party exchange record, named production use or identity-bearing trade.	[108] [93]

Read the campaign account at its stated scope

In December 2025, PubMatic said a Clubtails CTV campaign was running on Activate with AdCP ◆. Its account names a client and a buy ◆. It does not name an identity field that passed between the parties ◆. The Go code comes from a separate record dated September 11, 2026 ◆. A buyer needs a link between the field and the older buy before it could make that claim. Ask for the version in use on the campaign dates as well as the version an engineer can run now.

In March 2026, Optable said its PubMatic link let buyers plan with a publisher's first-party audiences while the source data stayed in place ◆. The release did not show a message with an ID or a receipt that tied that ID to a sale ◆. A planner need not ask to see people's names to test the claim. Write down the group the buyer asked for. Record what the site agreed to share about that group. Which part of the plan changed as a result? For a claim about a buy, ask for the accepted terms and proof of delivery too.

Do the same for a campaign report that includes an invoice. Imagine a publisher bills a buyer for a completed deal that had been proposed through an agent. Ask the parties to name the deal from both sides. Then ask them to show how the matched audience narrowed the package list. Finally, ask for the acceptance event that joins the selected package to the billed deal. If they can substantiate the second step but cannot link it to the invoice, they have evidence of audience selection and evidence of a purchase. The causal link between those records remains a live question.

Two firms could have a clean pair of logs and still have no spend. The logs might show that each side read the same ID-bearing message in the same way. A product lead could use that result to decide whether to fund a live test. A media owner asked to move a client's budget would need the sale record as well. Give each team the record it needs for its own choice.

What would move the evidence forward

To test whether two systems work with each other, ask two teams to run a small test. Use made-up inputs. Name who runs each side, the version, the token type and the form the reply should take. Have the seller record the expected result first. Send a valid request and one with no match. If the service could not read a token, keep that error apart from a lookup that ran and found no match. Have each team save its result, the time and a shared test reference. The reference need not show the test member's data.

Ask one more thing about the price paid. If a deal uses a flat rate for a group of sites, a change in the package list might leave the rate the same. If the price is set per package, the same change might alter the cost. In a test, keep the offer open for the same length of time and save the terms for each package. Give the person who sets the budget both lists. They can then see which stock the ID made available, which stock they chose and how much of the cost arose from that choice. None of that calls for the buyer to see raw names or emails.

Let both sides set a time limit for the lookup. Suppose the buyer waits for an answer until its offer closes. A match that arrives a little later might still be correct for the test member. The

buyer could have had no chance to act on it. Capture the time at which the publisher sent the token, the time at which the seller returned the package and the time at which the buyer stopped waiting. The sales team can then check why the buy fell through. Was it the audience, the late offer or the price?

For a claim about live use, request the same facts from a live flow the parties have the right to share. Mask the parts that could reveal a person. Record the date, buyer, seller and stock. What did the ID do? A live log could show that the ID reached the buyer. On its own it could say little about the price. A bill could show that funds changed hands while leaving open how the audience was picked. Tell the parties which claim they need to test. That will help them find the smallest shareable record that answers it.

A team can now inspect a Trusted Match request, the code that takes it in, the membership check and the code that reads a provider's token ◆ ◆ ◆ ◆. What the study did not find was a public record that ties an identity-bearing message between two distinct systems to a completed buy ◆. A team that needs such a record can make a small request. Join one eligible package to one accepted deal. Then show what came back when the same request used a test ID that could not match.

CHAPTER 11

The Identity Quotient

How do you get an ID? Who can use it? How would you know if it links the right two records? Each row of the Identity Quotient follows the public record for one US buy ◆. Only the peer group for IDs that pass from firm to firm has enough rows with enough proof to show bands ◆.

IN SHORT

The matrix has 24 scored rows and 142 cells that count toward the IQ ◆. In the ID group, 7 rows have bands ◆. For 7 of them, the band can change when the test makes a high or low guess for cells with no score ◆. Find the row for the thing you plan to buy. Read the source for the cell that counts most in that deal.

Read a row from left to right

Say a news site has email links to its readers. It wants a bidder to know when one of them turns up on the site. The site has to get an ID, put it in an ad request and know how to stop sending it when the reader opts out. The team that buys the ad may have a more basic need. Can its DSP use that ID? On which ads? How will the desk check the match? A guide to the way IDs pass between firms may help with the first step. For the last step, ask for a test of the links.

The matrix puts a service in a peer group based on what a buyer can get from it ◆. Start with a name on an order. Is the firm selling a new ID, a graph of links or the right to buy a group in its DSP? A brand may use all three. Which one is at issue here? Read the row for that task. Check how many cells have scores. Open the cell that could change the deal. The source and the note tell you what the score rests on ◆. Use them when two firms use the same term for a different step.

The IQ groups the cells under Depth, Reach and Standing ◆. For Depth, ask how the service makes its output and when the output changes ◆. Which signals go in? Who has the right to use them? Where a match rate applies, Depth also checks the base for that rate ◆. Reach looks at the handoff, the systems that use it, the size of the US base and the proof of US access ◆. Standing covers tests of the output, the right to stop use and the trail of changes to the service ◆. Start with the group that bears on the risk in your own buy.

Work back from the field score

Give each scored cell the same weight as its peers in that group ◆. Depth gets 45 percent of the weight, Reach gets 25 percent and Standing gets 30 percent ◆. A group with no scored cells drops out, and the other weights scale up to make the sum one ◆. That gives the raw score ◆. A gap has no value in that sum ◆. Where a row has a score for a few strong cells

and gaps in the rest, those strong cells can still give it a high raw score ◆. Keep the count of scored cells in view.

Take the mean of the raw scores of all rows in the group, even the thin ones ◆. This is the field mean ◆. To get the IQ, give the raw score one vote per counted cell and the field mean 4 votes ◆. Take the mean of those votes and multiply by twenty ◆. For a check by hand, keep the full value as you go. The printed IQ rounds at the end ◆. The band uses the full score and its distance from the field mean ◆. Two rows can thus share a printed whole number and sit on either side of a line ◆.

The strength of that pull toward the field is an editorial choice ◆. Say two peers have the same raw score above the field. One has more scored cells, with the same means in its groups. Before rounding, its IQ will lie closer to its raw score. Give both a raw score below the field and the same rule will pull the thin row up more. What could you check to find out if a link was right? Find the cell for tests of the output. Seek the names of the units linked, a test with known answers and a way to count errors. None of those facts comes from the math alone.

Where a band is warranted

A row needs enough scored cells to enter the matrix ◆. A band needs at least 6 scored cells, with at least one in each group that applies ◆. Even then, its cohort needs 6 or more rows that pass that test ◆. A row can meet its own test and have too few peers for a band ◆. A thin row can have a score near one with a band ◆. Look for the group with no counted cells. If the gap concerns how to stop use or how to test the output, the buy may turn on precisely that gap.

The ID group has 11 rows and a rounded field IQ of 53 ◆. Its bands put 4 rows in Well documented, 2 in Partly documented and 1 in Least documented ◆. No row reaches Most documented at the base weights ◆. Yahoo ConnectID and SharedID both sit in Well documented, yet their gaps differ ◆. Think about a deal that has to work on the brand's chosen DSP. Is that DSP on a list? Can it use the ID? Has it done so? Start with the cell for systems that take and use the ID. Then see what the source can prove.

The graph and resolution group has 8 rows, of which 2 pass the row-level band test ◆. Its field IQ is 41, with no bands ◆. Group C has 4 ways to buy groups in place of ID-based ads, all with thin records ◆. Group D has 1 TV household service, so the field mean is Blockgraph's own raw score ◆. Groups C and D have no bands ◆. If a plan calls for both a graph and a TV household link, write a brief for each buy. A score from a different peer group gives no basis for choosing between the two ◆.

Of 148 cells with a number, 142 count toward the IQ [10]. The other 6 carry the label “unverified” and count as n/e [10].

Public evidence for advertising identity products

Each cell shows a registered documentation criterion for one product and task. Open it for the deciding source, scope, grade and recheck. A blank applicable criterion means insufficient evidence. Bands describe the record within a buying task.

5 documented in operational detail · 3 real but thin or narrow · 1 adjacent or incidental · 0 documented absence · n/e insufficient evidence · n/a outside the cohort's mask · unverified: shown, counted as n/e

β beta · ann announced · ? unconfirmed · ret retired · ± provisional band: it moves when missing evidence is filled

Product	IQ	Assignment	Inputs	Freshness	Use controls	Match rate	Interface	Destinations	US coverage	US use	Validation	Withdrawal	Changes	Counted
A · INTEROPERABLE IDS														
BANDED, BY IQ														
The Trade Desk UNIFIED ID 2.0 · INTEROPERABLE IDS · ACTIVE UID2 PUBLIC OPERATOR AND CORE ADMINISTRATOR AS READ ON 2026-11-11.	64± WELL DOCUMENTE	4	4	3	3	n/e	4	1	n/e	3	n/e	4	4	9/12
Prebid SHAREDID · INTEROPERABLE IDS · LIVE	61± WELL DOCUMENTE	3	3	4	3	n/e	3	n/e	n/e	3	n/e	3	4	8/12
Yahoo YAHOO CONNECTID · INTEROPERABLE IDS · LIVE US PUBLISHER AND YAHOO DSP ROUTE DOCUMENTED AS OF 2026-11-11.	61± WELL DOCUMENTE	4	4	3	3	n/e	3	1	2	3	n/e	3	4	10/12
LiveRamp LIVERAMP RAMPID · INTEROPERABLE IDS · OPERATING SUBSIDIARY UNDER PUBLICIS GROUPE; US ATS/RAMPID DOCUMENTED.	56± WELL DOCUMENTE	3	3	4	3	n/e	2	1	n/e	3	n/e	3	n/e	8/12
ID5 ID5 ID · INTEROPERABLE IDS · ACTIVE IN THE UK REGISTER AS OF 11 NOVEMBER 2026.	54± PARTLY DOCUMENTE	2	3	3	3	n/e	3	1	n/e	3	n/e	3	n/e	8/12
Lotame ◆ LOTAME PANORAMA ID · INTEROPERABLE IDS · LIVE	53± PARTLY DOCUMENTE	2	3	3	3	n/e	2	1	n/e	3	n/e	3	n/e	8/12
Epsilon EPSILON PUBLINK · INTEROPERABLE IDS · LIVE	42± LEAST DOCUMENTE	2	3	n/e	1	n/e	2	n/e	n/e	2	n/e	1	n/e	6/12
NOT BANDED, A TO Z														
33Across 33ACROSS LEXICON · INTEROPERABLE IDS · LIVE	55 THIN RECORD · NO STANDING	2	3	3	n/e	n/e	3	n/e	n/e	3	n/e	n/e	n/e	5/12

Product	IQ	Assignment	Inputs	Freshness	Use controls	Match rate	Interface	Destinations	US coverage	US use	Validation	Withdrawal	Changes	Counted
Flashtalking by Mediaocean FLASHTALKING FTRACK · INTEROPERABLE IDS · LIVE	45 THIN RECORD · NO STANDING	1	n/e	3	n/e	n/e	1	n/e	n/e	2	n/e	n/e	n/e	4/12
LiveIntent LIVEINTENT NONID · INTEROPERABLE IDS · LIVE	53 THIN RECORD · NO STANDING	2	3	n/e	3	n/e	3	n/e	n/e	2	n/e	n/e	n/e	5/12
Neustar NEUSTAR FABRICK ID · INTEROPERABLE IDS · LIVE	48 THIN RECORD · NO STANDING	1	3	n/e	2	n/e	3	n/e	n/e	2	n/e	n/e	n/e	5/12
B · IDENTITY GRAPHS AND RESOLUTION														
NO BANDS IN THIS COHORT, A TO Z														
Deep Sync DEEP SYNC PROFILE HYGIENE & ENRICHMENT · IDENTITY GRAPHS AND RESOLUTION · LIVE	45 THIN RECORD · NO STANDING	2	3	n/e	n/e	2	2	n/e	n/e	3	n/e	n/e	n/e	5/12
Deep Sync DEEP SYNC TRANSACTION MATCHING · IDENTITY GRAPHS AND RESOLUTION · LIVE	45 THIN RECORD · NO STANDING	3	3	n/e	n/e	2	1	n/e	n/e	3	n/e	n/e	n/e	5/12
Epsilon EPSILON CORE ID · IDENTITY GRAPHS AND RESOLUTION · LIVE	42 THIN RECORD · NO STANDING	2	2	n/e	1	n/e	2	n/e	n/e	3	1	n/e	n/e	4/12
Experian EXPERIAN DIGITAL GRAPH · IDENTITY GRAPHS AND RESOLUTION · LIVE US OFFER, AS READ ON NOVEMBER 11, 2026.	40 COHORT TOO SMALL	2	2	3	n/e	n/e	2	n/e	n/e	3	1	n/e	1	6/12
LiveRamp LIVERAMP KNOWN IDENTITY RESOLUTION (ABILITEC API) · IDENTITY GRAPHS AND RESOLUTION · LIVE	45 THIN RECORD · NO STANDING	3	2	2	n/e	n/e	2	n/e	n/e	3	n/e	n/e	n/e	5/12
Merkle MERKLE MERKURY · IDENTITY GRAPHS AND RESOLUTION · BETA	34 THIN RECORD · NO STANDING	1 β	2 β	n/e	n/e	n/e	1 β	n/e	n/e	1 β	n/e	n/e	1 β	4/12
TransUnion TRANSUNION TRUAUDIENCE IDENTITY RESOLUTION · IDENTITY GRAPHS AND RESOLUTION · LIVE	38 COHORT TOO SMALL	2	2	2	n/e	n/e	2	n/e	3	2	1	n/e	1	7/12

Product	IQ	Assignment	Inputs	Freshness	Use controls	Match rate	Interface	Destinations	US coverage	US use	Validation	Withdrawal	Changes	Counted
Zeta Global ZETA CUSTOMER GROWTH INTELLIGENCE · IDENTITY GRAPHS AND RESOLUTION · LIVE	41 THIN RECORD · NO STANDING	2	2	n/e	n/e	n/e	2	n/e	2	2	n/e	n/e	n/e	5/12
C · COOKIELESS TARGETING ALTERNATIVES														
NO BANDS IN THIS COHORT, A TO Z														
Ogury OGURY PERSONIFIED ADVERTISING · COOKIELESS TARGETING ALTERNATIVES · LIVE	45 THIN RECORD · NO STANDING	2	3	n/e	n/e	n/a	1	n/e	n/e	3	n/e	n/e	n/e	4/11
Permutive PERMUTIVE PUBLISHER COHORTS · COOKIELESS TARGETING ALTERNATIVES · LIVE	45 THIN RECORD · NO STANDING	2 β	3 β	n/e	n/e	n/a	2 β	n/e	n/e	2 β	n/e	n/e	n/e	4/11
Proximic by Comscore PROXIMIC BY COMSCORE PREDICTIVE AUDIENCES · COOKIELESS TARGETING ALTERNATIVES · LIVE	41 THIN RECORD	2	2	n/e	n/e	n/a	1	n/e	n/e	2	n/e	n/e	2	5/11
Seedtag SEEDTAG CONTEXTUAL AUDIENCES · COOKIELESS TARGETING ALTERNATIVES · LIVE	46 THIN RECORD · NO STANDING	2	3	1	n/e	n/a	n/e	n/e	n/e	3	1	n/e	n/e	4/11
D · CTV AND HOUSEHOLD IDENTITY														
NO BANDS IN THIS COHORT, A TO Z														
Blockgraph BLOCKGRAPH IDENTITY OPERATING SYSTEM · CTV AND HOUSEHOLD IDENTITY	53 COHORT TOO SMALL	3	2	3	2	n/e	2	n/e	n/e	3	n/e	3	3	8/12

How IQ is built. The IQ uses the kit's Depth, Reach and Standing weights and its documentation bands. Its field mean is the average raw score of admitted products within a buying task. Earlier Contextual and Native Quotients used a pooled group mean. Three groups: **Depth** (how the output is assigned, where input signals come from, refresh and expiry of the sold output, how an allowed use reaches the recipient, how a reported match rate is defined), **Reach** (recipient's delivery interface, receiving systems that use the output, us coverage with a stated base, us availability and use) and **Standing** (evidence testing the sold output, stopping or removing an output, version and correction history). Only verified or qualified cells count; an unverified cell counts as n/e, and n/a comes only from the cohort's applicability mask. Each group is the mean of the counted cells inside it, so an unscored dimension is not counted as a zero. Raw combines the groups at 45/25/30, renormalised over the groups present, and is shrunk toward the cohort's field mean, the mean Raw score of the cohort's admitted rows, thin rows included, with a prior strength of 4 against the row's own count of counted cells. A cohort is a set of products doing a comparable job; each has its own field mean and band lines, and rows are never ranked across cohorts. The weights and the prior strength are

author-defined heuristics. Bands come from the unrounded distance to the cohort's field score (Most documented at +12 or more, Well documented at +1 or more, Partly documented at −8 or more, Least documented below that); only the displayed score is rounded. A row gets a band only with at least six counted cells and at least one in every applicable group, and only in a cohort with at least 6 such rows; the others show a score without a band and are listed apart, A to Z, with any missing group named. The three bars under each score are Depth, Reach and Standing in that order. IQ summarises publicly documented capability within a cohort, not product performance, and is not calibrated to buyer outcomes.

Read the band, not the rank. A · Interoperable IDs (11 rows, field IQ 53.1). Band lines: Most documented 65.1, Well documented 54.1, Partly documented 45.1, Least documented below. Under four reweightings (equal thirds, depth-led, reach-led, standing-led), with Raw and the field mean recomputed, no product sits in the top band (Most documented) (The Trade Desk joins it under standing-led weights), while positions move by up to 2 places and by 0.3 on average. Of the 7 banded products, 4 keep their band under every weighting (Epsilon, Lotame, Prebid, Yahoo); ID5, LiveRamp, The Trade Desk cross a band line under at least one. With a prior strength of 0 (Raw, no shrinkage), 2 and 8 instead of 4, positions move by up to 0, 0 and 0 places. Deleting one counted cell at a time moves a score by up to 6 points up (Flashtalking by Mediaocean, how the output is assigned) or 5 down (Flashtalking by Mediaocean, refresh and expiry of the sold output); 4 deletions would drop a row below admission and 9 would cost a row its band eligibility. In the missing-evidence scenarios (every n/e cell of a banded row filled with 1, then with 4, with the field and every other row frozen), 7 of the 7 banded rows with n/e cells change band (Epsilon, ID5, LiveRamp, Lotame, Prebid, The Trade Desk, Yahoo; marked ±). **B · Identity graphs and resolution** (8 rows, field IQ 41.2). Only 2 rows are band-eligible, under the 6 a cohort needs, so its scores and coverage are shown without bands. Deleting one counted cell at a time moves a score by up to 5 points up (Experian, version and correction history) or 4 down (Deep Sync, us availability and use); 8 deletions would drop a row below admission and 7 would cost a row its band eligibility. **C · Cookieless targeting alternatives** (4 rows, field IQ 44.4). Only 0 rows are band-eligible, under the 6 a cohort needs, so its scores and coverage are shown without bands. Deleting one counted cell at a time moves a score by up to 3 points up (Ogury, recipient's delivery interface) or 3 down (Seedtag, us availability and use); 12 deletions would drop a row below admission and 0 would cost a row its band eligibility. **D · CTV and household identity** (1 row, field IQ 53.0). Only 1 row is band-eligible, under the 6 a cohort needs, so its scores and coverage are shown without bands. Deleting one counted cell at a time moves a score by up to 2 points up (Blockgraph, recipient's delivery interface) or 2 down (Blockgraph, us availability and use); 0 deletions would drop a row below admission and 0 would cost a row its band eligibility. **Missing evidence is not neutral:** every deletion case is in data/iq-missing-evidence.json, and every row's scenario scores, including a hypothetical 0-to-5 envelope reported separately and never used for the flag, are in data/iq.csv. These tests cover weights, prior strength and missing cells, not evidence grades, the scorer or the product sample. Every input is in the CSVs in the appendix, so the index can be recomputed on different weights.

Read each IQ with its cohort, coverage, missing groups and sensitivity. The method does not estimate whether a particular person's or household's identity is correct.

What a strong interface earns

The UID2 row has scores for how it makes the ID, the sources of its inputs and its handoff to a buyer ◆. The Trade Desk's guide names the core, the parties that make raw IDs and tokens, and the sites and bidders that can use the tokens ◆. Its rights table shows who can ask for a token, send an email or phone number for a match or read a token to bid ◆. This gives a team jobs to assign. Who calls the service? Who puts the result in an ad request? Who has the keys to read it? A deal can need all those steps before anyone sees a first bid.

The UID2 row has gaps for its US reach measure and for tests of its output ◆. The guide names US production endpoints where the operator accepts calls ◆. How many of this brand's customers could the bidder reach on that path? Ask for the input base, the time frame and the part of that base the bidder can act on. For a claim that the links find the right person, ask who labeled the pairs and how the test counts false links. A single test plan can ask both questions. It needs a clear base and a way to judge the result for each.

Yahoo's ConnectID check looks for an ID in an ad request, while its DataX report gives the result of matching a partner's file ◆. ConnectID has a scored handoff cell and a gap for a match-rate rule on the route scored here ◆. An ad team could use the first check to see if an ID leaves its site. For a deal priced on the share of customer records matched, set a test for that job. Name the list that went in, the records that met the rules and the firm that did the count. State the point in the job at which the rate is due.

Why the clock and the receiving party affect the score

ID5 and Lotame Panorama ID sit in Partly documented within the same ID group ◆. ID5's Prebid example sets a life for the stored ID and a time to check it again ◆. ID5 gives a further rule for how long it keeps data used to run its live service ◆. Say an old ID still turns up in an ad request. Which clock would explain that? The stored value, the response from the firm and the link used to assign it may each need their own checks. A score for a stated refresh can stand even if a reader still needs the age of the link.

In Lotame's Michigan case, Advance Local used its PubMatic seat to set up a Panorama ID deal, and the ads ran through Xandr and Adelphic ◆. The SSP did the targeting ◆. To check the destination count, ask who used the ID itself. A site could set up a deal for selected ad space. A DSP could bid on that deal without seeing the ID used to select the space. Keep the path of the ad in the notes. To count a system as a user of the ID, look for the point where it gets the ID and acts on it.

SharedID's guide puts the ID on the site's own domain ◆. A US exchange list calls it a passthrough ID, with the site holding the link to the ID firm ◆. The scored row has a handoff cell and a gap for systems that use the ID ◆. Say the point of a deal is to buy through a single DSP. Ask for a test with that DSP. The exchange list can give the site a place to start. A dated log from the DSP could meet a different need if it shows both receipt of the right ID and what the bidder did with it.

Read an unbanded row on its own terms

A graph buyer can read each row in group B on its own. Experian sells the US Digital Graph as a whole set of data or as links added to the buyer's own rows ◆. It says it groups digital signals into links to a home or a person ◆. It says it builds the graph afresh each week ◆. The cells for how it makes a link and how it refreshes the output have scores ◆. The cells for rights at the handoff and for withdrawal have gaps ◆. Ask what to do with last week's list if a link is gone from this week's graph. Who would change a list that the client built from that link?

Deep Sync’s grocery case passed H1’s disclosure test because it gave the input base, the group it linked those inputs to and the three steps it used ◆. The same case earns 2 out of 5 for how it defines the rate because the seller names a one-month run but gives no calendar month or as-of date for that run [10, 11, 12]. The cumulative rate after the last step is 73.0%, the top of the page says about 70%, and the results give a range of about 64–73% of monthly volume ◆. The rounded step counts do not add up to the reported total ◆.

Deep Sync's retail case runs through more than one pass to link a sale to a buyer ◆. Later passes use a card signal or infer a buyer from the store and the home ◆. In its profile case the input is a retailer's CRM ◆. Both rows are thin in group B ◆. If the job is to link a receipt to a shopper, open the row for sales. If the job is to clean a customer list, open the row for profiles. In each case, start with the record the firm had to work with. A result for one type of record needs its own check before it can help with the other.

In cohort C the match-rate definition is outside the mask ◆. For example, Proximic offers an ID-free predictive audience, and a US political buying route has offered that approach alongside an ID-based option ◆◆. The scored row is the ID-free buy ◆. Ask which audience a buyer can select, how the supplier tests whether members or placements meet the brief, and which systems honor the selection. For a campaign that buys a group, those questions are more relevant than a request for the share of submitted email addresses matched to a person.

In the TV household cohort, Blockgraph's v2.29 guide requires a household record ID and postal address and allows additional signals such as IP ◆. A permitted partner match can return a file of Blockgraph IDs ◆. Assignment and interface count in the row, while the evidence falls short of a scored validation of the sold output ◆. A TV buyer might accept that the household match ran and still ask who was in the room. Set the unit of the contract and then ask for evidence appropriate to that unit. Giving a valid home a single key does not label which member used a screen.

Test which assumptions matter

The stress tests change the group weights, change the pull to the field, drop scored cells one at a time and try high and low values in the gaps ◆. Which test suits the deal? Say a brand puts a great deal of weight on its right to stop use. It can check what happens when Standing gets more say. Say a reader finds a flaw in a source for one cell. Check what happens when that cell drops out. A team may also have a private test the public study could not see. Check the gap in the row before using that test to make a new score.

Changing the group weights leaves 4 of 7 observed bands unchanged in cohort A ◆. Under the Standing-led weighting UID2 moves from Well documented to Most documented, and ID5 moves from Partly documented to Well documented ◆. RampID moves down one band under the Reach-led weighting ◆. Nothing about the source records changes in these calculations ◆. The choice changes what an analyst wants the summary to emphasize. Read the cells first if the deal rests mainly on one group.

Removing the pull toward the field changes 3 cohort A bands ◆. Removing a counted cell can even raise a row's number if the cell being removed was pulling down its group means ◆. In the stock calculation, deleting the low destination-coverage cell moves UID2 from 64

to 66 ◆. The study has learned less in that scenario. A reader should flag the lost evidence rather than treat the higher display value as an improved product. It is the quickest way to see why a score with no coverage count can mislead.

To test the gaps, hold the field and the other rows fixed ◆. In the row under review, fill all the gaps that apply with the same low value, then with the same high value ◆. Keep the count of real scored cells and the rules for bands as they were ◆. A thin row stays thin in both tests ◆. The observed band can change for all 7 banded ID rows ◆. If a seller has a new test, check which cell it bears on. Does the test meet the same rule that was used on the peers? If so, score the actual proof and run the sums again.

What to open when the figures look alike

A buyer reading the table may see peers with the same display score and assume that the rows answer the same questions. Test that assumption on the gaps. SharedID and Yahoo ConnectID have the same rounded IQ in cohort A ◆. The rows both have counted evidence on changes to the product and neither has a counted output-validation cell ◆. Yahoo has a counted US coverage measure, while the SharedID record leaves that cell open ◆. Even the presence of a score needs a closer look. Yahoo's own US user counts do not supply a common time window, a rule for removing repeats or the base of people a buyer could reach ◆. If reach is the point of the buy, ask for the count of eligible people in the proposed campaign and the count reached in the same period.

A near tie calls for the same care. ID5 and Lotame carry the same band in the baseline, but their bands react differently when the test gives more weight to Standing ◆. Does the planned use depend on which party can revoke an ID? Is a named destination more important than the range of destinations advertised? Might a new release change the input a publisher has to send? The weight in a research index cannot settle those choices for a buyer. Keep the firm's answer and the document used to check it next to the condition in the order. If two teams use the same index to plan different deals, each should be able to explain which cell led it to ask a different question.

Deep profiles — select a company

Each card shows the matrix scores as a bar strip. Open a company for its SWOT, what it sells, who buys it, how it earns, its verified capabilities with availability and evidence grade, performance evidence with sponsorship, limits, risks and fit. Pick a SWOT quadrant to isolate it and compare every profiled company on it. Each SWOT line is tagged record, vendor documentation, vendor claim or inference, and opportunities and threats are the author's reading of dated facts.

For each company, capabilities by dimension, performance evidence, financial record and timeline are in the web edition and in data/deep-profile-records.csv.

Blockgraph ACTIVE

Blockgraph, LLC

STRENGTHS

The enterprise guide identifies the household key, required postal address and additional signals a distributor can supply. VENDOR DOCUMENTATION [109]

A permitted universe match returns a downloadable, headerless column of household BG IDs. VENDOR DOCUMENTATION [110] [111]

WEAKNESSES

Kantar's reported gain cannot be reproduced from the published case because the two base rates, counts and eligibility rules are absent. INFERENCE [112] [113]

Published historic IP lookup periods leave the maximum age of a currently accepted household link open. INFERENCE [114] [115]

OPPORTUNITIES

A measurement partner could test how timestamped IP and set-top-box signals change matched household counts within one distributor footprint. INFERENCE [109] [114]

The August 2026 hashed-email input gives a distributor and measurement partner another documented signal to test where emails are available. INFERENCE [116]

THREATS

A buyer that treats Spectrum's MVPD match rate as a service-wide accuracy estimate may purchase against the wrong denominator. INFERENCE [38]

A partner using old exported results after an opt-out could retain links that the originating node now marks stale. INFERENCE [115] [111]

WHAT IS SOLD

US TV identity software lets a participant establish a postal-address household record, match its permitted partner's records, retrieve overlap counts or IDs, and resolve impression or outcome signals. GraphPort maps external graphs into IDoS. The enterprise identity node is the delivery route covered here.

WHO BUYS IT

TV distributors, publishers, measurement providers and their participating partners use the platform. Spectrum Reach offers attribution reports to advertisers. TVSquared and Kochava describe consuming identity within measurement. An advertiser buying a report need not receive household identifiers directly.

HOW IT EARNS

In 2020, then-general manager Jason Manningham described a software subscription with fees that varied by company data type and size. Enterprise rates and service-level revenue as of the cutoff were not disclosed in the records reviewed.

BEST FIT

A US TV distributor matching its own subscriber households against approved partners.

A measurement provider linking TV impressions to website or sales records at household level inside a permissioned workflow.

POOR FIT

A buyer requiring a verified individual viewer for a shared television.

A procurement team that requires a public, current price, a service-wide US eligible reach denominator or a validated household precision and recall estimate.

Experian

LIVE US OFFER, AS READ ON NOVEMBER 11, 2026.

Experian Marketing Services, Inc. is the Digital Graph sheet's copyright holder. The US marketing business privacy notice names Experian Marketing Solutions, LLC. A US graph license identifying its contracting entity was not located in this review.

STRENGTHS

Buyers can choose person or household resolution and receive the whole graph or links appended to their own data. VENDOR CLAIM [117] [36]

MiQ describes how its traders use the licensed IDs. The anonymous DSP case traces buyer cookies to a weekly file. VENDOR CLAIM [37] [21] [118]

WEAKNESSES

The two seller cases report match or sync rates without the counts and eligibility rules needed to reproduce either percentage. INFERENCE [20] [36] [21]

The US individual count lacks a public measurement window or deduplication rule on the materials reviewed. INFERENCE [117] [119]

OPPORTUNITIES

A buyer could label a sample of file links and test person or household accuracy alongside the reported match rate. INFERENCE [37] [20] [36]

Separate graph and attribute offers let buyers specify which identity links and enrichment fields they need in a procurement test. INFERENCE [117] [120] [121]

THREATS

Snowflake blocked new legacy rooms in its web app on October 1. Buyers planning a new Experian setup there need a different route. INFERENCE [122] [123] [124]

A buyer relying on a browser opt-out could misstate its coverage if it assumes the same suppression reaches every linked device and recipient. INFERENCE [125] [126]

WHAT IS SOLD

Experian Digital Graph connects digital identifiers at the buyer's chosen household or individual level. A buyer can license the full dataset or have links appended to its own records. Offline Graph connects names, postal addresses and emails. Marketing Attributes can be bought with Digital Graph as a joint offering.

WHO BUYS IT

The named user is MiQ, a programmatic media partner. Its traders and analysts use graph links in MiQ's Identity Spine for audience work and measurement. A separate, unnamed DSP used the graph to relate ad exposures to website conversions.

HOW IT EARNS

Experian sells graph licenses and offers to match a customer's records. The seller describes MiQ licensing hashed emails, UID2s and partner cookies. Product rates, contract minimums, billing units and Digital Graph revenue were not located in the product, case and financial records reviewed.

BEST FIT

An ad platform with its own identity system can license selected linkage data. MiQ is the documented example. [IDN-EXP-F06]

A buyer that needs a link file to compare CTV exposures with web conversions can inspect the unnamed DSP workflow. [IDN-EXP-F04]

POOR FIT

An analyst requiring independently measured error rates for person or household links would still need a labeled test of the current graph. [IDN-EXP-F07, IDN-EXP-F08, IDN-EXP-F13, IDN-EXP-F14]

Teams requiring a guaranteed daily graph file or an edge-age limit would need delivery terms beyond the reported weekly route. [IDN-EXP-F04, IDN-EXP-F05]

ID5

ACTIVE IN THE UK REGISTER AS OF 11 NOVEMBER 2026.

ID5 Technology Limited (UK company 10735438).

STRENGTHS

Adobe documents placement targeting with ID5 IDs and lets a buyer select a universal ID type for a placement. VENDOR DOCUMENTATION [127]

ID5 publishes separate opt-out and deletion feeds, their update schedules and the partner's ingestion responsibilities. VENDOR DOCUMENTATION [128]

WEAKNESSES

The published Sovrn test reports auction pricing for a combined treatment. It supplies no labeled US person-link errors. VENDOR CLAIM [129] [130]

The onboarding guide illustrates the share of uploaded emails matched. It gives no observed US bidstream match rate. VENDOR DOCUMENTATION [32]

OPPORTUNITIES

Publishers could test the value of sending hashed email separately from linking it by adapting the published three-group auction design. INFERENCE [129] [130]

A DSP could compare its deletion completion timestamps with ID5 feed delivery to quantify the delay buyers experience. INFERENCE [128]

THREATS

A partner that processes a withdrawal file late could continue using an ID after ID5 publishes the request. INFERENCE [128]

A buyer assuming the acquisition added Twine's licensed records could overstate addressability. ID5's current policy keeps those datasets separate. INFERENCE [131] [132]

WHAT IS SOLD

WHO BUYS IT

A publisher can obtain an encrypted ID5 ID and forward it in an ad request. The agreement sells decryption, connections between IDs and use of ID5 data as additional services. ID5's DSP guide describes out-of-auction keys and merge instructions for linking publisher-specific IDs. [IDN-ID5-F05, IDN-ID5-F08, IDN-ID5-F10]

Publishers register to distribute the encrypted ID. DSPs may purchase decryption and linkage information. Adobe documents a targeting setting for advertisers. Adform reports a retargeting route, and Sovrn and ID5 describe a historical test with participating publishers' US audiences. [IDN-ID5-F05, IDN-ID5-F11, IDN-ID5-F12, IDN-ID5-F14]

HOW IT EARNS

ID5 offers encrypted ID delivery without charge under its agreement. It offers decryption, information linking IDs and use of its data for purchase. Adobe says ID5 IDs carry no fee in its own DSP placement feature. Enterprise licence rates, revenue per ID and US ID5 ID sales remain undisclosed in these records. [IDN-ID5-F04, IDN-ID5-F05, IDN-ID5-F11]

BEST FIT

Inference: a publisher and a DSP that can exchange encrypted IDs and integrate keys can test addressable inventory on a documented route. [IDN-ID5-F05, IDN-ID5-F10, IDN-ID5-F11]

Inference: an advertiser using Adform's tag can test an ID5-based retargeting workflow in that system. [IDN-ID5-F12]

POOR FIT

Inference: the published partner test does not support procurement that requires independently measured US person-level false-match rates. [IDN-ID5-F06, IDN-ID5-F14, IDN-ID5-F15]

Inference: the public feed alone does not meet a buyer's need for documented recipient deletion completion times. [IDN-ID5-F13]

LiveRamp

OPERATING SUBSIDIARY UNDER PUBLICIS GROUPE; US ATS/RAMPID DOCUMENTED.

LiveRamp, Inc. (US service provider named in general terms); LiveRamp Holdings, Inc. (SEC registrant acquired in November 2026).

STRENGTHS

ATS documentation traces the publisher envelope through SSP decryption to a buyer-specific RampID. VENDOR DOCUMENTATION [133] [134]

AWS publishes the hashed-email and placement requirements for using ATS with its MediaTailor streaming service. VENDOR DOCUMENTATION [135]

WEAKNESSES

A derived RampID can be issued for an input absent from the offline graph, so issuance alone cannot demonstrate a person match. INFERENCE [134]

The cited US reach figure uses consumer time online. Buyers cannot convert it into a count of authenticated people from the disclosed information. INFERENCE [136]

The publisher case combines UID2 and RampID. It does not isolate how much additional revenue

RampID generated. INFERENCE [59]

OPPORTUNITIES

A publisher can use the documented envelope expiry to measure how often refresh restores bidder access in its own traffic. INFERENCE [137] [133]

A streaming publisher with an ATS agreement can test the documented MediaTailor route using its own eligible viewer base. INFERENCE [135]

THREATS

If a recipient misses a withdrawal, local envelope removal alone gives the publisher no proof that the recipient deleted an earlier copy. INFERENCE [138] [139] [140]

The FTC's discrimination and confidentiality provisions give rival agencies a basis to scrutinize standalone service access after Publicis's acquisition. INFERENCE [88] [89] [141]

WHAT IS SOLD

US publishers can license ATS to request an envelope from LiveRamp, store it and pass it to enabled partners. At an enabled SSP, Sidecar can translate it to a DSP-specific RampID. The separate Known Identity Resolution service (IDN-P012) returns AbiliTec Links by API or Known IDs in the cloud.

WHO BUYS IT

Publishers can implement ATS, SSPs can contract for Sidecar, and separate terms cover DSPs and DMPs. Advertisers can buy enabled inventory through those platforms. Google reports that New York Times Advertising used ATS. AWS provides a MediaTailor example requiring an active ATS agreement and a domain placement ID.

HOW IT EARNS

In 2021, LiveRamp's CEO said the company did not intend to charge publishers or media-platform partners for ATS and expected it to drive platform use and cross-sales. The publisher form licenses limited envelope use. General terms put any applicable service fees in the signed order. The reviewed records give no current universal per-envelope price or buyer CPM. They disclose group subscription, revenue-sharing, usage and services income without a standalone RampID line.

BEST FIT

Publishers with authenticated inventory and approved demand routes needing a contractually scoped identifier handoff.

Buyers able to test a named bidder and delivery route against their own eligible first-party base.

POOR FIT

A buyer requiring an independently measured US person-level error rate for the exact bidstream output.

A purchaser needing a public per-envelope price or audited nationwide count of unique authenticated persons available to one DSP.

The Trade Desk

ACTIVE UID2 PUBLIC OPERATOR AND CORE ADMINISTRATOR AS READ ON 2026-11-11.

The Trade Desk, Inc.

STRENGTHS

The permission matrix distinguishes token generation, raw-ID mapping and bidder decryption. Each participant has a defined role. VENDOR DOCUMENTATION [142] [143] [144]

The v3 migration guide supplies old and new parsing examples and exposes the prior raw ID for 90 days after rotation. VENDOR DOCUMENTATION [145] [146]

WEAKNESSES

Deep Sync reported matched CRM records without the exact eligible denominator. The Trade Desk's HP case measured reach against one campaign's estimated target households. INFERENCE [31] [147] [148]

A site opt-out stays with that participant. A consumer must submit a separate portal request for each email address or phone number they want suppressed across UID2. VENDOR DOCUMENTATION [149] [150]

OPPORTUNITIES

Publishers on affected Apple browsers can evaluate the server-side route that the UID2 guide documents. INFERENCE [151] [152] [145]

A buyer with customer credentials can test a specific activation through Roku Exchange and compare its own results against a defined baseline. INFERENCE [143] [144] [153] [154]

THREATS

A token in a bid request can be unusable for targeting. One private operator reported finding its encryption error after three months. INFERENCE [155]

To keep UID2 on affected iOS 27+ browsers and macOS 27+ Safari, publishers using browser-side token generation or refresh must move those steps server-side. INFERENCE [151] [152] [145]

WHAT IS SOLD

Publishers can obtain an encrypted advertising token from an email address or phone number. Approved mappers can receive raw IDs. CRM onboarding instead puts IDs into a Trade Desk account for targeting without returning them to the client. The separately branded Identity Alliance is a cross-device graph. [IDN-UID-F03, IDN-UID-F05, IDN-UID-F06, IDN-UID-F09]

WHO BUYS IT

Publishers and their service providers put the token into supply. Advertisers, agencies and data providers onboard records. DSPs receive the encrypted token from the supply path. HP is a named advertiser, while Roku describes the publisher-side route through Roku Exchange. [IDN-UID-F05, IDN-UID-F06, IDN-UID-F09, IDN-UID-F10, IDN-UID-F17]

HOW IT EARNS

UID2 says a participant with a contract and credentials can use a Public Operator at no charge. Private operators supply their own infrastructure and engineering. The Trade Desk earns platform fees linked to client spend and earns fees for services and data. Its filings do not disclose UID2

revenue or profit. [IDN-UID-F02, IDN-UID-F03, IDN-UID-F09]

BEST FIT

Publishers with usable customer credentials and a verified supply path, or buyers mapping their own identifiers for a named participating DSP or publisher route. [IDN-UID-F05, IDN-UID-F06, IDN-UID-F09, IDN-UID-F10, IDN-UID-F17]

POOR FIT

A buyer requiring independently validated person-level error rates or a complete national reach estimate cannot establish either from the sources reviewed here. [IDN-UID-F16, IDN-UID-F17, IDN-UID-F18, IDN-UID-F19, IDN-UID-F22]

A buyer whose platform-only CRM onboarding must return a portable customer-to-UID2 lookup would need a different approved access route. [IDN-UID-F09]

Yahoo

LIVE US PUBLISHER AND YAHOO DSP ROUTE DOCUMENTED AS OF 2026-11-11.

Yahoo Ad Tech LLC is the US signatory for this service. The contract allows Yahoo affiliates to deliver it. [IDN-YAH-F01]

STRENGTHS

On web inventory, Ad Manager publishers can configure the Google-listed ConnectID signal for Yahoo's named Authorized Buyers bidders. VENDOR DOCUMENTATION [156] [157]

Allen Media Group described its ATS integration, and Mediavine reported connecting its Grow publisher toolkit to ConnectID. VENDOR CLAIM [158] [159]

WEAKNESSES

The US agreement directs publishers to include ConnectID in bids to Yahoo and restricts sharing beyond the company and its approved publishers. RECORD [160]

Mediavine reports publisher yield. Truthset describes ratings of its own audiences. Neither account tests whether Yahoo linked the right person. INFERENCE [158] [161]

OPPORTUNITIES

An advertiser already buying through Yahoo DSP could use Truthset's rated segments or Merkle's custom audiences within that platform. INFERENCE [162] [161]

A publisher running ATS or Magnite Demand Manager could add Yahoo demand through an existing integration. INFERENCE [159] [163]

THREATS

If required consent is missing or a user opts out, fewer eligible ConnectIDs may be available for a planned buy. INFERENCE [160] [164] [165]

Buyers requiring interchangeable demand destinations may find the named Yahoo-only bidder configuration and contractual sharing limits too narrow. INFERENCE [160] [157]

WHAT IS SOLD

WHO BUYS IT

Yahoo returns an identifier to a participating publisher for a bid request. The approved publisher can send it to Yahoo, including via an SSP or Ad Manager. Advertisers can use the identity within Yahoo DSP. Next-Gen is the associated offer for non-addressable supply. [IDN-YAH-F04, IDN-YAH-F05, IDN-YAH-F09, IDN-YAH-F11, IDN-YAH-F21]

Participating publishers and approved supply partners integrate the ID. Advertisers use supported audiences in Yahoo DSP. Yahoo's Merkle announcement and Truthset's own release identify upstream audiences for that DSP. [IDN-YAH-F04, IDN-YAH-F09, IDN-YAH-F12, IDN-YAH-F13, IDN-YAH-F21]

HOW IT EARNS

Yahoo links the publisher agreement to demand in its DSP and markets ConnectID within DSP campaigns. The reviewed service agreement, integration guide and issuer announcements disclose no separate per-ID fee, take rate, product revenue or margin. [IDN-YAH-F01, IDN-YAH-F04, IDN-YAH-F21]

BEST FIT

Publishers with approved supply and Yahoo demand that want a documented bidstream handoff. [IDN-YAH-F04, IDN-YAH-F05, IDN-YAH-F09]

US advertisers buying in Yahoo DSP that want to activate supported partner audiences. [IDN-YAH-F12, IDN-YAH-F13, IDN-YAH-F21]

POOR FIT

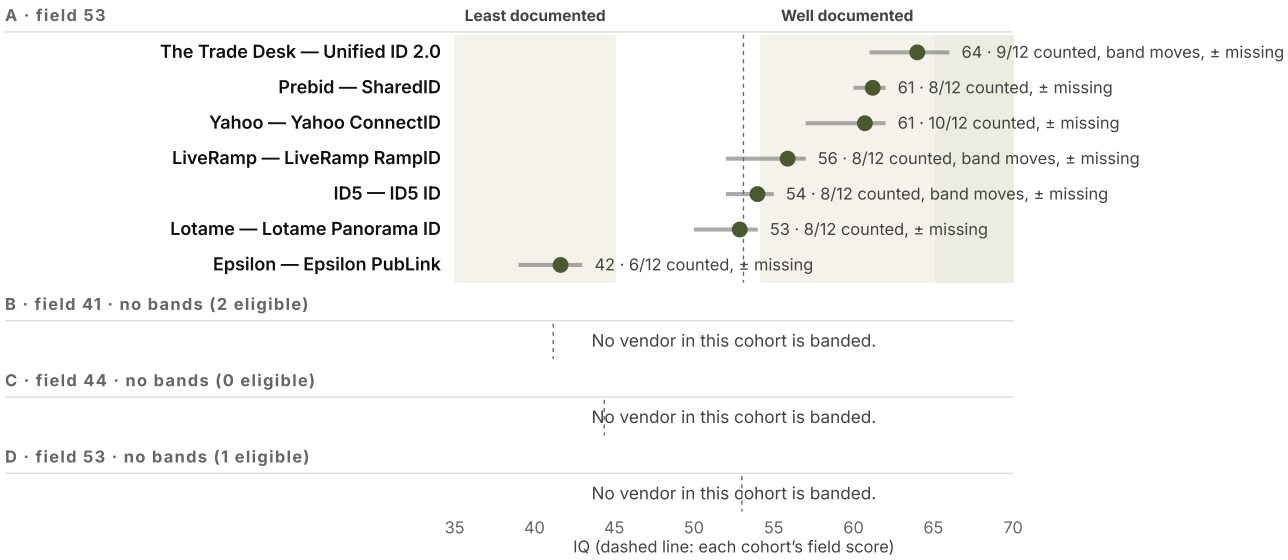
Buyers requiring independently documented reuse of the identical token by several unrelated DSPs. [IDN-YAH-F04, IDN-YAH-F09, IDN-YAH-F11]

Procurement requiring verified person-link precision, a stated graph edge expiry or downstream proof of erasure. [IDN-YAH-F06, IDN-YAH-F07, IDN-YAH-F13, IDN-YAH-F16]

Take the record into diligence

Use the profiles to trace a decision back to an actor. If access is the issue, identify who grants the key, where the receiving system gets it and which agreement covers that route. If a partner reports higher yield, ask for the input population, rejected cases, inventory and test period. If a buyer needs to remove an audience, identify who can stop future issuance, who can remove a prior export and what confirmation each can return. Bring the open cell into the deal brief as a request for a particular record. A buyer can then decide whether to run a test, narrow the use or accept the remaining uncertainty for that purchase.

IDENTITY QUOTIENT (0–100) BY COHORT, WITH THE RANGE UNDER FOUR REWEIGHTINGS



Grey bar: range under the four reweightings. Not plotted, A to Z: 33Across — 33Across Lexicon (thin record), Flashtalking by Mediaocean — Flashtalking… (thin record), LiveIntent — LiveIntent nonID (thin record), Neustar — Neustar Fabrick ID (thin record), Deep Sync — Deep Sync Profile Hygiene & E… (thin record), Deep Sync — Deep Sync Transaction Matching (thin record), Epsilon — Epsilon CORE ID (thin record), Experian — Experian Digital Graph (cohort too small), LiveRamp — LiveRamp Known Identity Resolu… (thin record), Merkle — Merkle Merkury (thin record), TransUnion — TransUnion TruAudience Ident… (cohort too small), Zeta Global — Zeta Customer Growth Intell… (thin record), Ogury — Ogury Personified Advertising (thin record), Permutive — Permutive publisher cohorts (thin record), Proximic by Comscore — Proximic by Comsco… (thin record), Seedtag — Seedtag contextual audiences (thin record), Blockgraph — Blockgraph Identity Operatin… (cohort too small). Their scores are in data/iq.csv.

> **Read the band, not the rank: no product clears the most documented line, and 17 rows are not banded.** The Identity Quotient for the products with enough evidence to band, one section per cohort. The IQ uses the kit's Depth, Reach and Standing weights and its documentation bands. Its field mean is the average raw score of admitted products within a buying task. Earlier Contextual and Native Quotients used a pooled group mean. Depth, Reach, Standing group means are combined 45/25/30 and shrunk toward the cohort's field mean (the mean Raw score of its admitted rows) with a prior strength of 4; bands come from the unrounded distance to that field score, and only verified or qualified cells count. A band needs at least 6 counted cells with one in every applicable group, in a cohort with at least 6 such rows. Across the reweightings, positions move by up to 3 places within a cohort, and 4 of the 7 banded products keep their band under every weighting. IQ measures publicly documented capability within a cohort, not product performance.
>
> Units: IQ points on a 0–100 scale, pulled toward the cohort field mean; shown rounded, plotted unrounded · Scope: 7 banded products of 24 in the capability matrix, scores from evidence read in November 2026; recheck on 11 December 2026
>
> Single scorer. The index inherits every limit of the dimension scores and is sensitive to the weights; the bands, not the positions, are the finding.

CHAPTER 12

Buyer’s decision guide

What will the buyer get? Disney's terms define a group made from the overlap of a brand's data and Disney's data ◆. Experian offers its US Digital Graph as a full dataset or as links it adds to a buyer’s records ◆. Either could fit a brief. The team that takes the work needs a different test for each. Name the seat, file, deal or report where you expect to see the result. Agree on a check you can run there before you sign.

> IN SHORT
>
> CIMM asks buyers to check how much of a matched list their main ad platforms can reach ◆. It also asks them to set up a truth set to check how often the links are right ◆. Put both checks in the brief when the job needs them. Give each a named owner and a due date. Tie the price to the part that passed. Set a time to check it again and agree on what would pause the buy.

Write down what would make the job a success

Ask the team that will take the work to fill in one line. “We can use this file or group here, for this job, until this date.” Pick a verb that has a test. Find old customers in a new file. Keep people on the loyalty list out of a buy. Choose a group for a deal. Link an ad on TV to a visit in a report on homes. If two of these matter to you, write two lines. Get a price and a sign-off for each. Put the name of the person who owns the seat or file next to the line.

Say a brand wants to keep club members out of its offer for new shoppers. What should happen when someone joins the club at lunch? How soon must the seat stop showing them the offer? What about a member whose record has no key the seat can use? Which person on the team will check that the list on the seat is up to date? For this brief it might be enough to act on a list in one seat. If a new brief asks you to merge two files the brand holds at home, write a new line. Ask for rights to take the link back.

Disney's terms put the duty to warrant rights and consents on the party that sends the brand's data ◆. Meta's customer-list terms say a brand does not learn which people make up the matched group ◆. Amazon Marketing Cloud describes a data report that gives back sums for groups and a separate path to use a custom group for ads ◆. Decide what sort of receipt you need. For a seat, ask for a group ID and a way to check it in the account. For a file, get a sample row, a key you have the right to keep and the uses your terms allow. Ask the team to show where it would store that row.

Put names on the route

Who sends the keys? Who does the match? Who passes the result? Who can use it to buy an ad? Write down the names as the traders know them. Include the seat and who owns it. Put a contact next to each handoff. Ask which party can still reject an audience after the seller has accepted it. Run the test with the rights the team would have on the first day of the buy. If the team borrows an admin account for the test, record the step it will need to run again from its own seat.

Roku described a path from The Trade Desk via Roku Exchange for ads that use UID2 and Roku's first-party data ◆. In its guide for Google Ad Manager, Yahoo names the Yahoo App & Display and Yahoo Video bidders for Authorized Buyers ◆. Its Open Bidding route uses a sharing switch ◆. Yahoo also named Amazon Publisher Services, InMobi, Magnite and PubMatic as ways for publishers to take part ◆. Use each name for the role it plays. A name on the supply side could help you find stock. Before you promise an audience to a buying team, ask that seat to read an allowed test value. Save its answer.

The Trade Desk says a client can onboard a CRM list for use in its own account without getting the customer map back ◆. It sets out separate rights for UID2 API access ◆. Which option does your quote cover? Can the buyer keep what comes back? If all it sees is a group on a screen, what will tell it the send has worked? Ask for the reply on a good send and on a failed one. If one agency buys and a second one reports, test that both can see the part they need.

A team can bring good evidence and still be early in the sale. In January 2025 dentsu reported a test of its Merkury and Trade Desk route with Hy-Vee's RedMedia ◆. An October 2025 agency announcement called for Merkury to link Hy-Vee’s enterprise media, RedMedia and loyalty programs ◆. RedMedia's own site describes using shopper data with outside data for off-site ads without naming UID2 ◆. Put a test, a plan and a live run on separate lines. To sign off on the run, ask for the date, the account and a receipt from the team at the far end.

Pick the unit you really need

Does the buyer need a person at all? Google says TelevisaUnivision sent Permutive’s standard groups in ad requests ◆. Its US figure counts groups per impression ◆. OpenX also announced a US way to buy Permutive audiences without third-party cookies or device IDs ◆. Seedtag says its custom audiences can score URLs from the brief the brand gives it ◆. Ogury describes groups that brands and agencies can use in Ogury One ◆. Ask what gets put in the group. Is it a page, a chance to show an ad, a device or a login? Does the unit stay the same when you send it to the seat?

For a page-based buy, ask to see one page the rule should accept and one it should reject. Compare both with the brief. If a page is a poor fit for the brand, tell the seller why. You may want all sports stories, or just those about a team in your market. Ask what the buyer sees in the deal and what it gets back from a win. Is there a cost to update the rule as the news changes? If you want to cap the number of ads one person sees across sites, ask for a way to test the cap. Pay for a page match on terms that fit a page.

For TV, say which claim about a home the team needs to make. Spectrum Reach describes supplying household TV exposure while Innovid supplies household website visits and Blockgraph matches them ◆. The visits can count within seven days of an ad in that workflow ◆. What if one person in the home watches while someone else makes the visit? Could the buyer still count a home with a later visit? Would it be able to name who watched? To test if the ad drove a visit, randomly hold it back from some eligible homes where feasible, then compare visits across the groups. Have the team say how it would choose that group before it buys the spots.

Try the service on a file you know

Pick a small, permitted part of the real file. Ask the data owner to record the columns, count and date. Put in some known good cases, some that should fail and some with no known answer. For a job that removes customers from a buy, add a test account that should stay in on the first run and come out on the next. For a job that adds links to rows, add a known duplicate and a changed email. Keep the answers with the person running the check. Give the seller only what it needs to do the job.

Keep a sheet that both ends of the route can read. How many distinct keys went in? How many could the seller use? How many came back? Did one input count once, once per device, or each time the seat saw it? Give both ends the same date and file code. Get the failures by cause as well as the good rows. If a screen hides small groups, find out how large the test needs to be. Google displays a match rate on an API upload only once at least 100 unique users match ◆. Keep a blank with its reason. If the result is below the limit for display, a zero would give the trader the wrong answer.

Choose a test that fits the cost of a mistake. You may be able to plan broad reach with a range. If your job is to keep ads away from a group, you may want a strict cap on how many of its members could still see one. Set the bar as a buyer. Look at how the test file was picked. Does it have the same mix of frequent and rare users as the full buy? Keep wrong links and missed links on separate lines. Leave space for cases where no one can check the answer. Agree on how to count that group before you see the rate.

For a media test, hold the buying rules as still as you can. Use the same dates, bid rules and time for the buyer to act. Which effect do you want to buy? An extra chance to bid? A better chance of winning the same stock? A gain in sales? If the new route lets you bid on a different set of sites, split those sites out. If the bid price changes, keep the price and the win count. Decide how much gain would cover the fee. A test of media value can tell you where to spend. Keep a test of links to known people on its own line.

Follow a change all the way to the seat

Set up a test account you have the right to use. Start with a permitted use. Get the value and ask the seat what it may do with it. Change the choice at the agreed source. Log when the source accepts it. At what time does the seat find out? What does it do when it next sees the old value? Ask for the output from the first run after the change. If a saved group also needs to be cleared, name who can clear it. Agree on what proof of the change the buyer can keep once the data itself is gone.

UID2 says a site must stop making the ID for a user who opts out at that site ◆. For an ecosystem request, the user supplies each email or phone number to the service ◆. The UID2 guide calls for a separate message to the DSP and tells it to stop using that UID2 to bid, while allowing another ID or no bid ◆. Which request did the team use in the test? Which ID did the seat stop using? If the brief calls for all targeted ads to stop, add a test for any other path the seat may still use.

ID5 says partners should pick up opt-out updates it issues every 30 minutes and routine deletion updates it issues once an hour ◆. It also describes a separate, best-effort feed for deletion on demand ◆. LiveRamp tells a publisher handling its own opt-out to clear its stored envelope and keep a flag to stop it being made again until the user opts back in ◆. Ask to see the time of the last good import at the seat. What would happen if that import failed? What can the seat still do with an old copy? If that step needs a separate service, get a price and name the team that will check it.

Give the age of a household link a test of its own. Blockgraph offers historical IP lookbacks of 30, 60 or 90 days where the node keeps household signal history ◆. In version 2.29, a full manual refresh replaces the node's identity layer and leaves out rows missing from the new file ◆. Experian says it builds its Digital Graph anew each week ◆. Ask for a permitted test of a move. Which version first shows the new home? When does the old home stop being used? What happens to a file that has already reached a client? Let the team that uses the file show its own rule.

Pay for the step that passed

Break the quote into lines you can check. Does the brand pay per row sent, per home the seat can use, per thousand ads shown, or per month of access? What does a second run cost? What fee does the seat take? Put a price on work to set up the file, read the ID and keep the job going. Ask finance to price the trial and a full term. If you get a credit for the trial, say which step earns it. Set a date when the buyer can cut its loss if the job will not work.

LiveRamp's publisher form limits use of ATS envelopes to parties enabled under a statement of work ◆. Its general terms place any fees in the order form ◆. ID5 offers encrypted IDs to registered publishers at no charge and has a commercial licence for platforms and other covered uses ◆. UID2 says a firm under contract can use a public operator at no charge, while a private operator provides its own hosting and engineering ◆. Put each price next to the party and step it covers. Get the cost for the whole route from the team that has to pay it.

Write an exit clause that a trader could use. Which files can the team keep after the term ends? Which old keys must it clear? Who will close the account? Can it still read reports from the months it paid for? Set a rule for a change of source data, owner, terms or route. Which test would you run again? Who would pay for the work? How much time would you have to challenge the result? Treat the test file and the signed receipt as part of a handover when a new agency takes the seat.

Set one last check on the bill. Pick a date on the invoice. Have the media lead get the count for that date from the seat. Have the file owner get the count from its send. Ask finance to

price both on the units in the order. If the bill uses a third figure, who can explain it? A repeat send, for instance, might incur a fee even if it put no new homes in the group. Settle how to treat that case while both sides still have the run sheet.

Keep the test with the decision

What to ask before buying an identity product

Choose a buying question to see the evidence it calls for, what a test assumes, where it can fail and which decisions still need other evidence.

BUYER QUESTION	TEST THAT FITS	WHAT THE INFERENCE NEEDS	WHERE IT FAILS	WHAT IT CANNOT TELL YOU
What does the quoted rate count?	Ask the seller to take one dated file through the same route you plan to buy. Request raw rows, distinct inputs, eligible inputs, matched inputs and unmatched inputs.	The same population, market and counting rule apply at each step. Each excluded record has a reason.	The denominator shifts from people to devices, or only the matched subset is in the report.	A high yield alone cannot tell you whether the output names the right person.
How many matches can my destination use?	Trace one approved audience from upload to the receiving system. Request separate counts for linked, accepted and usable records at the same time.	The buyer and destination agree on namespace, deduplication, time window and what successful delivery means.	A delivered file or a field in a bid request is counted as a usable audience without a recipient check.	The receiving system's count does not establish correct links or impressions delivered.
How often does a link point to the wrong person or home?	Use a blinded sample with independent labels. Ask who supplied the truth, how the cases were selected and which pairs were left out.	Labels must be separate from the keys used to create the links. Record the tested product, market and unit.	A device-ID match, a common IP, campaign lift or model agreement is treated as independent truth.	A household test cannot tell you which household member watched or bought.
Which party stops use when someone opts out?	Follow a permitted request and a refused one through a named route. Check issuer response, recipient interpretation, the treatment of cached values and logs from each party.	Use approved test accounts, a defined market and a documented response. Avoid real personal records in a demonstration.	A consent field is populated but nobody can trace what the far end did.	A successful local opt-out cannot prove deletion of every exported copy.
When should the household link stop being used?	Ask what happens after a move, new router, record removal and full rebuild. Record the actor, affected link, start time and reuse rule.	Keep the same household definition and note whether the buyer uses a live lookup, a snapshot or a downloaded file.	A lookback window, attribution window or delivery schedule is offered in place of an edge-level rule.	A documented clock does not measure the number of stale or incorrect links in your campaign.
Can this group help when a person has no usable ID?	Request the assigned unit, the input evidence, a sample allowed placement and one rejected placement. Test the same audience under the buying route you plan to use.	A group delivered to a buyer must mean the same thing as the group the publisher assigned. Keep the original inventory and model version.	An ordinary contextual placement or forecast is counted as a verified user match.	A valid group assignment cannot identify which person read the page.
Will the offer work in our market and on our platform?	Trace the US service from the seller's offer through a named partner or platform. Ask for production state, checks on receipt, and a date.	The records refer to the same brand, service, namespace and geography.	A corporate office, a global partner list or a beta feature in another country stands in for availability.	A working route does not establish the size of its usable US audience.
Can an agent act on this identity signal?	Ask for the versioned field and the code path that reads it. Then ask for a trace between two implementations and a record of a buy where identity influenced the outcome.	Keep the schema, connector, environment and receiving actor identifiable. Use blinded, permitted test inputs.	A media-buy identifier or a buyer's reported match-rate field is mistaken for a resolved audience or completed identity-linked transaction.	A connector can prove implementation while production volume and transaction effects remain unknown.
Does the new offer use the same underlying graph?	Compare dated inputs, linking rules, treatment of stored edges and output continuity across the predecessor and successor. Ask the provider to name the exact links retained or rebuilt.	Compare the same commercial unit, market, route and assignment level on both sides.	A shared owner, input, namespace or new brand is substituted for evidence about the linkage itself.	A new token or integration cannot by itself establish a new graph.

Give each question in the tool a name and a date. Ask the owner to attach the result it saw at its end of the route. Write down what passed and for which use. If only half the brief passed, get the buyer to say which half it will buy. If no one could see the answer, record that and a price for the next test. A team coming back at renewal should be able to tell what it bought and where the proof lies. That is a test you can run on the paperwork itself before you sign.

For a buy run by an agent, follow the ID to the point where the agent makes its choice. The experimental AdCP Trusted Match spec defines a request with opaque identity tokens and no page context ◆. Its Go client builds a typed request, and the reference engine can check group membership if it has the required inputs and service ◆ ◆. Ask for a trace from the version you will run to the system that should act on it. What did that system decide? Request a separate receipt if the seller also claims a paid buy. Keep both with the terms so the next trader can see what the team agreed to pay for.

CHAPTER 13

Method

This paper starts with what a buyer can get ◆. It follows the named US service from the first input to the last output that a public source can show ◆. The plan called for a search through the end of November 11, 2026, in New York ◆. The final source sweep closed early, at 8:37 a.m. EST that day ◆.

IN SHORT

The register keeps both the services that passed the screen and the leads that fell short ◆. A source can show what a firm said it would sell, what its code does or what a buyer used. The test must fit the claim. A score applies to the named US buy, and each research test has its own rules for which cases count ◆. The author discloses his work in TV, past roles in the field and a role in the group behind AdCP ◆.

Who did the work

OpenAI models set down the rules from the author's brief, read the sources, wrote the profiles, scored the products and drafted the paper ◆. In the refute pass, other model runs reopened the records and challenged the findings and scores ◆. The last pass checked the cited sentences against the ledger and reopened the sources for names, dates, figures and verdicts ◆. These were internal AI checks ◆. No independent human peer review or second human scoring exercise is documented ◆.

After the handoff, a separate Claude Code session checked a sample of 36 claims ◆. It found support as written for 28, slight overstatement in two and partial support in one ◆. It could not open the sources for the other five ◆.

Start with the thing a buyer gets

For each lead, write the line you might see on an order. Does a site get a token it can put in an ad request? Does an agency get a set of links to add to client records? Does a TV team get a list of homes that match a partner's list? Does a desk get the right to bid on ads for a group, with no right to see the names in it? Use that line to trace who gets what. It tells you which end of the trade to start with and what proof to look for on the way back.

The register starts with named leads and adds firms and services found in the source sweep ◆. For each one it keeps the bought service, who runs it, who owns it, its names, its markets and the reason it is in or out ◆. Treat a new name as a lead. Did the buyer get a new output? Can it still buy the old one? A new field in a bid request could give the buyer a new way into the same service. To count a new row, look for proof of a new buy.

Take Epsilon's publisher link. A site can sign up for PubLink, join its own data to CORE ID and return a PubLink ID to a bidder ◆. That gives the study a way to trace a specific handoff while it looks at the graph as a buy in its own right. Merkle gives us a second case. Prebid says its Merkle ID module is a route from a site to the Merkury private graph ◆. The short name a DSP uses for a source may help us find the right guide. It takes more to make a case for a second buy.

Set the market and record the dates

The study looks first at the US and uses EU and UK records when the named service has a link to that market ◆. Read the terms, the country list, the guide or the case. What does the source place in the country? A US office could run a service in many markets. A US traveler could see an ad abroad. A data center could take records from clients in several countries. Each fact could help in a study of how the firm works. Only some of them show where a client could buy the named service.

Ogury describes ads shown to people on trips to Japan, including US visitors ◆. NIQ names the US as a market for purchase insights it supplies to Ogury for its personas ◆. Keep three columns. Where did the traveler come from? Where did the ad run? For which market did the data firm say it could supply those inputs? If a source shows a US buying route, add it to the case for that buy. You can preserve each fact about the trip without turning a US visitor into proof of an ad shown on US soil.

The study keeps the day a source went public, the day of the event and the day of the check apart ◆. A guide may be right about how to use the service now but give no clue to how it worked last spring. A release may set out a plan for work still to come. Look for a dated copy of the guide, the note on the planned change and the record that says when it went live. When a firm edits a page, try to find the text that was live on the day in question. If that fails, leave the old state open.

Trace the number from the submitted file

For a match rate, ask who sent which records, who checked them and who did the count. Seek the rows sent in, the inputs left once repeats are gone, the ones that met the rules and the ones that matched. Two email addresses might belong to the same client. If they are merged before the match, the base can change. A bad address could be dropped for good cause. State that rule so the reader can use the same base. Give the top of the fraction the same care. One person, one phone and two devices linked to that phone could each yield a different count.

Say a buyer sends a list with some of the same addresses on it twice. The graph firm drops the repeats, checks the rest and returns a key for some of the rows that pass. The DSP can use just some of those keys. To check the first step, count what is left after the clean-up. To check the match, take the rows that matched as a share of those that met the rules. To check the handoff, follow the keys to the named DSP. To check for error, take pairs for which a source apart from the graph can say what link ought to be there.

For its standard activation rate, LiveRamp counts unique identifiable records due for distribution and leaves out those which are not being sent ◆. Yahoo's file-match report and its check for an ID in an ad request concern two different steps ◆. If a rate came from a file upload, name the job. Which firm got the file? In what time frame? What was the base? Add a line for any test of whether the returned links were right. A clear rate for a file can stand on its own terms. A gap on the line for link tests gives the buyer a clear next question.

Read the original and try to break the claim

For each finding the ledger ties the claim to a source, a passage and the limits of that source ◆. A fresh review tests the words against the source, logs the result and carries the revised claim forward ◆. Two news sites may carry the same press release. Go back to the firm that made the claim. If a partner who ran a part of the test adds a new fact, use that partner's record for its own part. What is the most a reader could learn from each? Be clear about the interest of a firm that sells the service and of a buyer named in a joint release.

The Yahoo module shows why a line of code can matter. Yahoo's guide says it needs an email hash in versions below Prebid 7.52 ◆. In the released 7.51.0 code, an email hash or a publisher user ID will do ◆. Release 7.52.0 removed the need to send either one ◆. The code answers a narrow question. What will this version accept? To find out which inputs a live site sent, ask for a test from the site. To check who was linked, ask for a test with known answers. The source that settled the first point has already done its job.

A source can stay on the list when a claim based on it has to change. Keep the words at issue, what the source says and the row or cell where the change was made. For a sales figure, check which firm filed it. For a code change, check the release itself. For a claim about IP, does the guide refer to a home's current link, a past link or a network signal seen once? If the source can only show what was true in the past, keep that time in the sentence that uses it. A reader can then see what still needs a new check.

Preserve the difference between a disclosure and a test

The study grades the proof for the score it gives to each cell ◆. A firm may give precise guidance on the fields its API takes. A partner may know which part it ran. Neither role alone makes it a third party with no stake in the test. If a score needs several facts, check them one at a time. The grade goes with the weakest source needed to meet the rule for that score ◆. A strong source for the date of a launch may settle the date. You still need the right source for a claim that a link worked.

Say a team wants to check links from two records to the same person. Start with a pair that should match. Add a pair that should stay apart. Who set the true label for each pair? Did the team that built the graph see those labels while it trained the model? Include true pairs the service missed if the aim is to estimate recall. Add pairs the service turned down if the rate you seek needs them in its base. A test of just the links that the graph accepted can answer a question about that set. It leaves the number of true links missed open.

Experian describes a DSP that got a weekly graph file with links from cookies to other digital IDs ◆. Experian says the DSP synced 84 percent of IDs within weeks, with no precise

base for that share ◆. The case gives a reader a reported route to the DSP and a claim about how many IDs synced ◆◆. Ask for the inputs that went into the rate, the ones that failed and the pairs for which someone checked the true link. Each would fill a different gap. The arrival of a new file each week would settle none of those questions on its own.

Choose the test population before its outcome

The tests set different rules for what can settle the claim ◆. In some, one case can overturn the claim ◆. In others the result turns on whether more than half of the products meet a test ◆. Read the group first. Is it made up of scored services, US TV household buys, dated graph launches or cases where a public order names an in-scope service? The same case may belong in one test and fall outside the next. State which rule put it in the group before looking at how the case might change the result.

For a test of more than half, ask two things. Do we know whether this product is in scope? If so, do we know its outcome? A case that is in scope but has an unknown result stays in the main count ◆. A case whose scope is in doubt goes into a wider check ◆. For the low end of the range, assume that none of the unknowns qualify. For the high end, assume they all do. If the high end is exactly half, the claim of more than half fails ◆. If the low end is half and the high end above it, leave the result open ◆.

LtvAdx shows why both steps count. Its guide lets a shared IP help place a device in a home ◆. It says the device link drops out thirty days after the device was last seen ◆. The US ad plan bills for ads shown and lets a buyer target a HouseholdID ◆. The reviewed terms did not establish a separate US purchase of household resolution ◆. Keep the rule for the link in the record. It is a clear example of what a TV buyer might ask for, even as the right to buy that service on its own stays open ◆◆.

Follow the clock, the field and the duty

For a time claim, name the thing, the firm that acts, the event that starts the clock and the time it has to run. Does the clock start when a device is seen, when a file comes in, when an ID is made or when a user opts out? What should happen at the end? Should the firm stop using the link? Should the row drop out of a file? Should it get a new key or just be checked again? If the job then falls to a new firm, trace that handoff. The trade may depend on what the next firm does.

Blockgraph's resolver can look up past IP records in a set time frame ◆. Read the manual-refresh job separately. A manual refresh replaces the node's identity layer with the supplied file ◆. Spectrum Reach gives a length of time after a TV ad during which site visits can count for that ad ◆. For each job, write the name of the clock next to its start date. What is the age limit of the current home link itself? To settle that, look for a rule that ages or drops that link. A buyer can use this wording to get the request to the right team.

For a rights claim, follow the choice from the site to the firm that gets the ID. LiveRamp tells a site handling an ATS opt-out to drop its local envelope and set a flag to stop the envelope from coming back till the user opts in ◆. Its guides for a different workflow describe requests to ad partners and leave the work to the firm that gets the request ◆. Ask for the

ID, the job and the system at each end. A record of the user's choice can show where the process starts. A record of a change to a past export could show where it ends.

Freeze the scoring rule and retain the exceptions

The study froze the buying tasks and the scoring rules before the team opened the cells ◆. To enter the matrix a service had to be live or in beta in the US, fit the task in its peer group and have enough scored cells ◆. The mask sets which cells apply to a group ◆. If a cell applies but lacks a score, keep the reason in the note. Use zero only when the source meets the rule for zero. A price kept in a private agreement or a test that a reader cannot open does not show how well or how poorly the service works.

The second pass opened the sources for the proposed scores and logged which scores held up, needed a change or lost their support ◆. The paper has no independent second scorer ◆. There are 324 cell checks, 15 changes and 12 proposals that lost their support ◆. To challenge a score, name the product, the cell and the version you used. Which premise in the note does your source change? If it puts a new fact on the record, state the date. That helps distinguish a fact that was wrong at the cutoff from a change that took place after the study closed.

Distinguish a power from its use

For a court or regulator record, name the party, the act at issue, the date, the body that heard it and the stage of the case. Is it a complaint, an order, an appeal or a record that shows who did what under the order? If the record names a product, keep its name with the source. If it describes a type of work, can you tie that work to the service on the list? A firm may have a graph, a unit that measures ads and a business that sells other data. Which one did the order cover?

In the private Yahoo case, a US court sent named claims to arbitration and stayed the court case for those claims ◆. That tells us what the court did. To code an actual change, ask what changed in the way the product collects data, keeps it, shares it, links it or acts on a request to stop use. A duty with a due date may tell us what to look for in a future report. A reader still needs proof of the work and when it was done. If the search turns up just the duty, keep the date of the change open.

Give code the same care. The AdCP Go client takes a token and its namespace type, builds a request and sends it to the Trusted Match route ◆. With an audience service set up, the checked code can test for group membership and the handler can send back the IDs of eligible packages ◆◆. To show a live trade, look for the request and the response and ask who was at each end. To show a paid use, ask where the record shows that step. Working code can tell a reader what to test even when the source trail stops at the connector.

Declare the author's interests

Evgeny Popov has worked at Samba TV since May 2025 ◆. Samba sells TV measurement and ACR data and maintains a household graph ◆. The paper excludes Samba from scoring, profile selection, cohort field means and every hypothesis denominator restricted to scored

products ◆. It retains Samba for the separate legal screen under that test's stated attribution rule ◆. This preserves the scope of the legal review while keeping the author's employer out of scored comparisons ◆.

Popov co-leads the Signals & Measurement working group of AgenticAdvertising.org, the organization associated with AdCP ◆. The protocol analysis carries that disclosure and applies the same evidence threshold to a schema, a connector, an observed execution and a production use ◆. Popov's prior roles include EVP at Verve Group from September 2022 to August 2024 and roles at Hearts & Science and Lotame ◆. The study flags Lotame Panorama ID and the separately screened former-employer product from Verve ◆. The author's published doubts about match rates and relabeled graphs supplied rival hypotheses to test ◆. His views supply no corroborating evidence for either result ◆. The study used public records and conducted no vendor outreach ◆.

10	6	324	142
research streams	**deep profiles**	**cell decisions**	**counted cells**
plus one product sweep	each with a separate review	every proposed position checked	among admitted products

> **What made it into the IQ** The cell review includes all proposals, unknowns and masks. The last panel counts only usable evidence for products admitted to the IQ.
>
> Units: streams, profiles and cell decisions · Scope: US buying tasks through the research cutoff · Sources [11] [10] [218]
>
> Internal verification cannot establish whether a vendor’s links are accurate in a buyer’s own file.

APPENDIX

Sources, scores and changes

Use this page to check a line in the paper. Start with the link next to the claim. Read the part of the source that backs it. Look at what the firm sold, who took it and what they could do with it.

> **IN SHORT**
>
> For a score, find the product and its bought task. For a test, read the rule and the result. For a claim that changed, open the old and new text side by side. Keep the scope with the claim when you cite it.

Check a line

Follow its mark to the claim ledger. Read the final words, the short quote and the place it came from. Then open the source. Who speaks? Whose data did they use? What dates does the source give for the work? Which date belongs to the news release? Check whether a case gives you the date of a test, the day of its release or both.

For a company filing, find the line and check the name on the account. If you need sales for one product, look for that product in the line. For a case study, check who paid for the work, who ran the test and who put out the news. Ask for the full test if all you have is the firm's account of it.

The table shows the claims used in the paper or marked as headlines. The full claim ledger also gives the source passage and locator for each claim.

The claim ledger lists the 286 claims marked in the text. The print edition leaves it out; it is listed in full in the web edition and in data/claim-ledger.csv, with each claim's evidence class, review outcome and confidence.

Check a product

Find the name a buyer would see. Check the route used to buy it and the market served. Where there is an old name, see what the note says about it. Use the product register to trace the service that met the buying test. Use the cell record to see which facts counted towards its score ◆. If the row was left out, read the reason before you draw a conclusion.

Advertising identity product register

The universe table shows the product, owner, media formats, routes and markets. The product register records the purchased service, operating entity, US availability, treatment and declared interests. The author's current employer, Samba TV, is excluded from scoring. The Lotame Panorama ID row carries an interest flag.

Machine-readable copy: data/vendor-universe.csv.

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
LiveRamp RampID	LiveRamp Holdings, Inc., wholly owned by MMS USA Holdings, Inc., a wholly owned subsidiary of Publicis Groupe S.A.	Not extracted	A	As specified in product record	An enabled publisher supplies an ATS envelope, an SSP decrypts it and a DSP receives its specific RampID in the bid.	yes — ATS is an integration path; Known Identity Resolution is a different deliverable. US terms cover SSP Sidecar and DSP/DMP roles.	admitted	[234] [181] [133] [140] [183] [345] [185] [141] [318]
Unified ID 2.0	The Trade Desk, Inc., Nasdaq-listed company, for the US public operator covered here. IAB Tech Lab stewards the separate tokenization framework.	Not extracted	A	As specified in product record	A participant can obtain a UID2 token from the public operator and a credentialed bidder can decrypt it.	yes — Private operator instances, the EUID namespace, The Trade Desk's DSP and Identity Alliance have separate roles. Ohio and Oregon production endpoints and the Roku Exchange buying route are documented.	admitted	[203] [153] [142] [143] [365] [366] [154] [331]
European Unified ID	Ultimate owner unconfirmed in the cited product records	Not extracted	A	As specified in product record	Test whether an in-scope US buyer can buy or license cross-party use of EUID.	unconfirmed — EU/EEA and named additional territories; United Kingdom explicitly listed.	listed	[211] [367] [368]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
ID5 ID	ID5 Technology SAS controls the UK company. The ultimate owner of the French company is unconfirmed.	Not extracted	A	Web / app	A registered publisher distributes an encrypted identifier; authorized demand partners obtain commercial rights to decrypt and recognize it.	yes — The SDK and Prebid modules implement the same service. Twine Data's US licensing and the sold TrueData audience business do not constitute ID5 ID. The partner case documents participating US audiences.	admitted	[369] [132] [177] [370] [339] [56] [131] [177] [176] [129] [351] [280]
Yahoo ConnectID	Yahoo Ad Tech LLC named College Parent, L.P. as its corporate parent in a September 2025 court disclosure. Apollo Funds acquired Yahoo in 2021, when Verizon retained 10%. A current ownership split was not verified.	Not extracted	A	Web / app	An approved publisher receives an encrypted ConnectID and passes it through authorized supply to Yahoo's bidder for use in Yahoo DSP.	yes — Google documents the web secure-signal path and Yahoo names its App & Display and Video bidders. Publisher software integration does not confer rights to share an ID with any DSP.	admitted	[165] [371] [372] [160] [347] [199] [156] [157] [196] [329] [348]
Lotame Panorama ID	Publicis Groupe; acquired April 2025	Not extracted	A	Web / app	Lotame documents its publisher and SSP EID. TripleLift names a USA route and a Michigan case names a publisher and SSP. Lotame is an author-declared former employer.	yes — Lotame documents its publisher and SSP EID. TripleLift names a USA route and a Michigan case names a publisher and SSP. Lotame is an author-declared former employer.	admitted	[373] [374] [375] [279] [215] [263] [264]
Criteo ID for Exchanges	Criteo	Not extracted	A	Web / app	Prebid identifies the criteo.com EID and exchange adapter path to Criteo demand. Equativ maps that namespace separately from Criteo OB. TripleLift lists a US Criteo ID passthrough. The OneTag provisional name remains an unverified alias.	yes — Prebid identifies the criteo.com EID and exchange adapter path to Criteo demand. Equativ maps that namespace separately from Criteo OB. TripleLift lists a US Criteo ID passthrough. The OneTag provisional name remains an unverified alias.	below minimum	[250] [250] [376] [263] [377]
Amazon Publisher Services publisher ID (unconfirmed)	Ultimate owner unconfirmed in the cited product records	Not extracted	A	Web / app	Test whether publishers can supply a distinct Amazon publisher identifier to independent bidstream recipients.	unconfirmed — Amazon cites US publisher data for its measurement tool; proprietary interoperable ID unconfirmed.	listed	[378]
SharedID	Prebid project / publisher-operated implementation; no single corporate graph owner established.	Not extracted	A	Web / app	Prebid provides the publisher-scoped identifier, available to its adapters. TripleLift names US passthrough. The recipient can receive a publisher's identifier without establishing any persistent identity across unrelated publishers.	yes — Prebid provides the publisher-scoped identifier, available to its adapters. TripleLift names US passthrough. The recipient can receive a publisher's identifier without establishing any persistent identity across unrelated publishers.	admitted	[286] [258] [278] [263]
Utiq identity service	Ultimate owner unconfirmed in the cited product records	Not extracted	A	As specified in product record	Test whether a publisher or buyer can use a Utiq identifier across parties on US inventory.	unconfirmed — Named European markets; US eligibility unconfirmed.	listed	[379] [380] [263]
Parrable ID	Ultimate owner unconfirmed in the cited product records	Not extracted	A	Web / app	Test whether an independent seller and buyer can use the same identifier.	unconfirmed — US eligibility unconfirmed.	listed	[249] [249] [381] [382] [377]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
LiveRamp Known Identity Resolution (AbiliTec API)	Publicis Groupe via MMS USA Holdings, Inc.	Not extracted	B	As specified in product record	Direct AbiliTec API for known US records. Microsoft Dynamics 365 is a separately named US preview integration and does not establish a completed production transaction.	yes — LiveRamp documents maintained US AbiliTec links and an available REST API for known PII. Microsoft documents US-only preview enrichment requiring active LiveRamp and AbiliTec subscriptions; this preview does not mean the standalone API is beta.	admitted	[235] [141] [318] [212] [243] [383]
Experian Digital Graph	Experian plc	Not extracted	B	As specified in product record	Direct Digital Graph licensing, full dataset or buyer-file append. The MiQ IP and unnamed DSP case rates remain separate geographic-unknown cases.	yes — Sales page labels US Digital Graph, advertises license or first-party file append, and provides sales access. The customer cases do not identify a US sample.	admitted	[117] [119] [336] [337] [338]
TransUnion TruAudience Identity Resolution	TransUnion	Not extracted	B	As specified in product record	TruAudience Identity Resolution & Enrichment for Snowflake (customer records to persistent identities); excludes Data Health Assessment, Graph Extracts, streaming media activation.	yes — TransUnion offers TruAudience Identity Resolution & Enrichment as a Snowflake native marketplace workflow that links customer records against historical and current attributes for over 250 million US consumers. The Data Health Assessment insurer case is a different service.	admitted	[384] [246] [17] [18] [19] [316]
Epsilon CORE ID	Publicis Groupe	Not extracted	B	As specified in product record	Core ID Services customer-file onboarding (not Intent Messaging or a combined platform).	yes — US solution page advertises Core ID recognition for US consumers; processing description identifies the USA for identity resolution and describes client file onboarding. US processing location alone would be insufficient.	admitted	[385] [386] [22] [319] [320] [216]
Acxiom Real ID in the cloud	Omnicom Group via Interpublic	Not extracted	B	As specified in product record	Brand-cloud Real ID app; no qualifying US route frozen. Distinct Digital Recognition noted.	unconfirmed — A US retail deployment exists for Digital Recognition powered by Real ID. The public records do not establish standalone US access to the specifically registered brand-cloud Real ID application. Do not conflate the two offers.	listed	[387] [388] [327] [328]
Merkle Merkury	dentsu	Not extracted	B	As specified in product record	Merkury private identity platform; US Merkury-to-The Trade Desk test with Hy-Vee's RedMedia.	yes — US private-graph offer at launch. Dentsu reports a later US Hy-Vee/RedMedia test of the Merkury integration, and the ensuing agency appointment identifies a continuing planned use. These do not measure delivery in every commercial configuration.	admitted	[389] [359] [360]
Zeta Customer Growth Intelligence	Zeta Global Holdings Corp. (group; distinct graph signer unverified)	Not extracted	B	As specified in product record	Customer Growth Intelligence Snowflake native app, buyer first-party records against Zeta Data Cloud. Do not transfer Customer Matcher rules for two client tables.	yes — Zeta announced US-graph enrichment inside the Snowflake native app; the current regional guide specifies US-only Streamlit availability, a named CGI first-party data-share request, and the account-based views containing enriched data.	admitted	[390] [244] [391]
Permutive publisher cohorts	Ultimate owner not established by the verified records for this service.	Not extracted	C	As specified in product record	TelevisaUnivision sent Permutive's standard cohorts in Google Ad Manager requests.	yes — Google reports a measure for TelevisaUnivision's US inventory. OpenX separately announced a buying route for US marketers in 2022.	admitted	[205] [206] [207] [208]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
Audigent SmartPMP	Experian reported acquiring 100% of Audigent on 4 December 2024.	Not extracted	C	As specified in product record	Test whether the named service offers audience targeting as an explicit substitute for a persistent identifier.	unconfirmed — US service terms unresolved.	listed	[236] [237] [238] [239] [321] [322]
Ogury Personified Advertising	Ultimate owner not established by the verified records for this service.	Not extracted	C	As specified in product record	Ogury One self-serve or API persona activation	yes — Ogury's identifiable group-targeting offer and US market activation inputs are documented. The preceding Japan campaign remains Japan-only.	admitted	[248] [210] [356]
Verve Moments.AI	Ultimate owner not established by the verified records for this service.	Not extracted	C	As specified in product record	Verve managed service for Moments.AI contextual audience segments	yes — US general offering is explicit in original 2022 issuer release; Q1 2026 report again describes this product for ID-deprecation environments. Provider markets high-quality contextual segments for brands to replace personalised targeting.	below minimum	[392] [393]
Seedtag contextual audiences	Ultimate owner not established by the verified records for this service.	Not extracted	C	As specified in product record	Seedtag managed activation of custom contextual audience segments from a campaign brief	yes — Documented Michigan targeting option. Distinguish availability from actual US deployment. Eurail's separate campaign documents US activity but does not establish which formal segment type it used.	admitted	[394] [395] [349] [355]
TransUnion TruAudience streaming household identity	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Test whether a US TV buyer can purchase household linkage across devices or streaming endpoints.	unconfirmed — US household graph and CTV audience route explicitly described.	listed	[245] [246] [247]
Blockgraph Identity Operating System	Blockgraph names Comcast NBCUniversal, Charter Communications Inc. and Paramount. In May 2020 Comcast, Charter and ViacomCBS announced an equal-ownership agreement. Current percentages are undisclosed in the reviewed records.	Not extracted	D	TV / CTV	Blockgraph enterprise identity node for permissioned TV household matches	yes — US commercial scope in 2021 notice; Spectrum Reach and TVSquared describe US TV matching use. Active dated v2.29/2026 product documents.	admitted	[396] [170] [332] [334] [335] [116] [333] [172] [168]
Viant Household ID	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Test whether a buyer can purchase TV household resolution or a household identifier.	unconfirmed — US adult scope claimed in a Viant/TransUnion partner release.	listed	[312] [313]
OpenAP OpenID	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Test whether TV buyers or sellers can buy cross-publisher household linkage using this service.	unconfirmed — US publisher adoption claimed in 2021.	listed	[397] [398]
FreeWheel Identity Network	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Test whether a TV buyer or seller can obtain a household linkage output.	unconfirmed — US service geography unresolved for the specific implementation.	listed	[305] [399]
Cadent Viewer Graph	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Test whether household-level resolution for TV can be purchased from a named service.	unconfirmed — Cadent markets US CTV buying using its Viewer Graph within Total Video. Separate graph access or licensing is unconfirmed.	listed	[306] [314] [315]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
Samba TV household graph	Ultimate owner not established by the verified records for this service.	Not extracted	D	As specified in product record	Author-declared TV household graph and ACR-related interest.	unconfirmed — US eligibility immaterial to exclusion.	listed	[400]
AWS Clean Rooms	Amazon	Not extracted	Outside scope	As specified in product record	Boundary lead for controlled collaboration between parties.	unconfirmed — Product territory outside IQ scope.	listed	[240]
Microsoft Curate	Microsoft	Not extracted	Outside scope	As specified in product record	Boundary lead for curated deals and inventory packaging.	unconfirmed — Product territory outside IQ scope.	listed	[241]
OneTrust Consent Management Platform	Ultimate owner unconfirmed in the cited product records	Not extracted	Outside scope	As specified in product record	Boundary lead for collecting and sending preference signals.	unconfirmed — Product territory outside IQ scope.	listed	[242]
IAB Tech Lab Curated Audiences (formerly Seller Defined Audiences)	IAB Tech Lab	Not extracted	Outside scope	As specified in product record	Standard describing an audience signal for the seller-side implementation search.	unconfirmed — Standards document; no US product assumption.	listed	[251]
Chrome Topics API	Ultimate owner unconfirmed in the cited product records	Not extracted	Outside scope	Web / app	History lead for the browser's audience-topics interface.	historical — Chrome and Android named separately in the announcement.	historical	[282]
Chrome Protected Audience API	Ultimate owner unconfirmed in the cited product records	Not extracted	Outside scope	Web / app	History lead for the browser's interest-group auction interface.	historical — Chrome 153 release note; distinct from Android.	historical	[283]
Chrome Federated Learning of Cohorts	Ultimate owner unconfirmed in the cited product records	Not extracted	Outside scope	Web / app	History lead for a browser cohort proposal or trial.	historical — Chrome proposal; no vendor admission.	historical	[284]
33Across Lexicon	Ultimate owner unconfirmed in the cited product records	Not extracted	A	Web / app	Prebid states US support and a partner-ID authorization path. TripleLift identifies US bridging. The 33Across User ID module implements the Lexicon service.	yes — Prebid states US support and a partner-ID authorization path. TripleLift identifies US bridging. The 33Across User ID module implements the Lexicon service.	admitted	[401] [263]
Zeotap ID+	Ultimate owner unconfirmed in the cited product records	Not extracted	A	As specified in product record	The issuer's North America statement refers to the underlying graph. PubMatic names five European countries for the ID+ implementation; Equativ lists its namespace without a country. US availability of the distinct ID+ offer remains unconfirmed.	unconfirmed — Historical issuer document; current US offer unknown.	listed	[402] [377] [403]
Proximic by Comscore Predictive Audiences	Comscore identifies Proximic as its business; ultimate beneficial ownership not determined.	Not extracted	C	As specified in product record	Proximic Activation Platform, custom ID-free Predictive Audiences	yes — US political TV exposure segments explicitly offered with the ID-free route, independently of the sold ID-based variants. The current product page offers ID-free audience creation; 2023 Trade Desk evidence is historical access, not a current seat count.	admitted	[404] [209] [350]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
The Trade Desk Galileo	The Trade Desk	Not extracted	Outside scope	As specified in product record	Do not double-count a UID2 integration as a second interoperable ID. Reopen if a distinct service meets a registered task.	unconfirmed — US-specific eligibility not tested for distinct identifier.	listed	[405]
Deep Sync Profile Hygiene & Enrichment	Ultimate parent unconfirmed in verified case records	Not extracted	B	As specified in product record	Profile Hygiene & Enrichment, customer CRM file against Deep Sync graph.	yes — Explicit US outdoor/RV retailer submitted its CRM for matching and appending links under this service. A separate call to purchase offers a match test.	admitted	[27] [27] [28]
Deep Sync Transaction Matching	Ultimate parent unconfirmed in verified case records	Not extracted	B	As specified in product record	Transaction Matching via the monthly POS matching waterfall.	yes — Dedicated Transaction Matching case, buyer call to send distinct POS data and a monthly production pipeline establish a separate US identity deliverable: POS transactions resolved to individuals/households, with attribution an optional use. Different from CRM record resolution.	admitted	[12] [12]
Kochava advanced measurement household graph (QSR case)	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Trace the relation of that deployment to Kochava Collective and to independently purchasable household mapping; a CTV measurement case cannot establish a current graph licence. Track legal scope separately in H.	unconfirmed — Kochava describes a US QSR CTV campaign using household mapping. The source does not establish a Kochava Collective product or standalone graph licence.	listed	[35]
LtvAdx Identity API / HouseholdID	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	Identity API documents household creation and lookup. The US page and pricing evidence establish paid media access to HouseholdID targeting, without a separately priced graph licence. Distinguish device-link and household retention from VAST serving fallback.	unconfirmed — LtvAdx markets a US TV campaign route with HouseholdID targeting in a paid-impression plan. Separate licensing of household resolution is unconfirmed.	listed	[227] [229] [230] [231]
LiveRamp Advanced TV programmer CTV Audience Recognition	Publicis Groupe via MMS USA Holdings, Inc.; 2 November 2026 close.	Not extracted	D	TV / CTV	Check separate TV purchase and deliverable to avoid duplicating P001 or P012; the guide establishes a named workflow.	unconfirmed — US purchase or deployment unconfirmed for this programmer workflow.	listed	[307] [141] [318]
Factori Cross Device / CTV Graph	Ultimate owner not established by the verified records for this service.	Not extracted	D	TV / CTV	A contract subscription for the cross-device/CTV data is documented. Confirm US-specific records or a US use case, and a rule for household-link aging. The daily feed cadence does not document that rule.	unconfirmed — Factori markets the CTV/cross-device dataset globally through AWS Marketplace. The listing does not identify US dataset coverage or a US deployment.	listed	[308] [309]
Datonics Cookieless Audience Targeting	Ultimate owner not established by the verified records for this service.	Not extracted	C	As specified in product record	Datonics describes 1:1 targeting through an ID graph and a limited release for existing clients. The record does not identify a buyable cohort, modelled audience or seller-defined output meeting the registered C task.	unconfirmed — US eligibility unconfirmed.	listed	[406]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
Project Rearc Accountability Platform draft	IAB Tech Lab	Not extracted	Outside scope	As specified in product record	No dated withdrawal was located in the registered IAB searches. Keep publication of the draft and possible retirement as distinct questions.	unconfirmed — Standards proposal; no US availability assigned.	listed	[407]
Audigent Hadron ID	Ultimate owner unconfirmed in the cited product records	Not established in cited service documents	A	See buying task and route	Dedicated Prebid module and namespace. TripleLift lists the product by name for US passthrough. Google identifies a beta curation path. The ID is distinct from Audigent SmartPMP.	yes — Dedicated Prebid module and namespace. TripleLift lists the product by name for US passthrough. Google identifies a beta curation path. The ID is distinct from Audigent SmartPMP.	below minimum	[237] [238] [263]
Neustar Fabrick ID	Ultimate owner unconfirmed in the cited product records	Not established in cited service documents	A	See buying task and route	The documented Prebid module requires a registration key. Equativ maps neustar.biz to Fabrick. TripleLift describes US passthrough with the same issuer and spells the identifier “Fabrik.” No equivalence to TransUnion’s general person graph is inferred.	yes — The documented Prebid module requires a registration key. Equativ maps neustar.biz to Fabrick. TripleLift describes US passthrough with the same issuer and spells the identifier “Fabrik.” No equivalence to TransUnion’s general person graph is inferred.	admitted	[408] [263] [377]
Epsilon PubLink	Publicis Groupe	Not established in cited service documents	A	See buying task and route	Publisher Link requires its own enrollment for publisher first-party authenticated inputs. It issues a distinct publisher ID linked to Epsilon CORE ID, taken by TripleLift in US passthrough. The US exchange path is selectable independently of a buyer-side CORE ID resolution engagement.	yes — Publisher Link requires its own enrollment for publisher first-party authenticated inputs. It issues a distinct publisher ID linked to Epsilon CORE ID, taken by TripleLift in US passthrough. The US exchange path is selectable independently of a buyer-side CORE ID resolution engagement.	admitted	[263] [362] [385]
Flashtalking FTrack	Ultimate owner unconfirmed in the cited product records	Not established in cited service documents	A	See buying task and route	The provider module offers a persistent probabilistic device identifier for publishers’ bidding routes. TripleLift names FTrack US passthrough. Optional household output is outside this A row.	yes — The provider module offers a persistent probabilistic device identifier for publishers’ bidding routes. TripleLift names FTrack US passthrough. Optional household output is outside this A row.	admitted	[263] [409]
LiveIntent nonID	Ultimate owner unconfirmed in the cited product records	Not established in cited service documents	A	See buying task and route	A publisher uses the LiveIntent module and product-registration route to obtain the email-linked nonID. TripleLift lists LiveIntent for US bridging. The ID route is distinct from general graph or media services.	yes — A publisher uses the LiveIntent module and product-registration route to obtain the email-linked nonID. TripleLift lists LiveIntent for US bridging. The ID route is distinct from general graph or media services.	admitted	[263] [377] [260]
Merkle ID	Ultimate owner unconfirmed in the cited product records	Not established in cited service documents	A	See buying task and route	Prebid attributes the identifier to Merkury’s private identity graph. TripleLift uses Merkle ID for its own audiences, and Merkle describes US Merkury services. Distinct direct A purchase in addition to P017 B remains unconfirmed.	unconfirmed — Prebid attributes the identifier to Merkury’s private identity graph. TripleLift uses Merkle ID for its own audiences, and Merkle describes US Merkury services. Distinct direct A purchase in addition to P017 B remains unconfirmed.	listed	[263] [377] [363] [410] [389]

PRODUCT	OWNER	HEADQUARTERS	PEER GROUP	MEDIA FORMATS	ACCESS AND DELIVERY ROUTES	MARKETS COVERED	STATUS AT CUTOFF	SRC
Viant ID (exchange label)	Ultimate owner unconfirmed in the cited product records	Not established in cited service documents	A	See buying task and route	TripleLift lists a US passthrough identifier but provides no unit or relationship to the separately documented Viant Household ID route, on which Viant says the household ID is not passed in the bidstream. A separate selectable A offer is unconfirmed.	unconfirmed — TripleLift lists a US passthrough identifier but provides no unit or relationship to the separately documented Viant Household ID route, on which Viant says the household ID is not passed in the bidstream. A separate selectable A offer is unconfirmed.	listed	[263] [312] [313]
Zeta Customer Matcher	Zeta Global Holdings Corp. (group; distinct graph signer unverified)	Not established in cited service documents	B	See buying task and route	Two input tables, threshold-based matched pairs, separate from CGI.	unconfirmed — US-only Streamlit application; matches records between two customer-supplied tables. The documented processing does not establish a sold first-party-to-Zeta-graph link for this operation, or equivalence to CGI.	listed	[244]

Check a result

Look up the test in the register. Read its rule for when the claim stands, when it falls and when the answer stays open ◆. Start with the cases known to be in scope. Then read the result for the wider set if the rule calls for one. If your own buying job falls outside that set, use the source for the specific route you need.

The legal record sits outside the IQ ◆. Look for the firm, the court or agency and the date. Read the signed text for the duty it sets. Look for separate proof that the firm made the change. A class of data in an order may be much wider than the service you plan to buy.

Check a change

The log keeps the first claim, the challenge and the change ◆. Read what the reviewer found at the source. A score can change when the date of the proof is wrong or when the source describes a different service ◆. Ask what changed in the evidence before you conclude that the product itself changed.

> The corrections ledger has 1085 entries. The print edition leaves it out; it is listed in full in the web edition and in data/corrections-ledger.csv, with the original wording, the challenge, the evidence checked, the verdict, the change made, how it was implemented and how it was verified.

Take the records with you

The downloads include the source and claim registers, the score rules, the product rows and the data behind the figures ◆. Each stage of the full handoff has a counted self-check ◆. The final report names the sources that could be read only in part or could not be opened ◆.

Downloads

The data files are in the data/ folder beside this PDF, in the package and on the web page. Open the HTML edition to use these as links.

The two other editions, then the data as CSV and JSON, UTF-8. The data files are the canonical files every chart, matrix and count in the paper was built from.

1. advertising-identity-2026.pdf — the print edition: A4, with page numbers and chapter bookmarks
2. advertising-identity-2026.md — the reading edition in Markdown, with numbered references
3. data/source-register.csv — every source with publication, event and access dates, type, geography, funding, access limits and reliability notes
4. data/claim-ledger.csv — every material claim with sources, passage locator, scope, evidence class, review outcome, confidence and final wording
5. data/capability-matrix-wide.csv — vendors × dimensions, scores only (0–5, n/e, n/a)

6	data/capability-matrix-long.csv — one row per cell with availability, evidence grade, date, rationale and sources
7	data/capability-dimensions.csv — the dimension definitions and anchors
8	data/iq.csv — Identity Quotient per vendor: group means, coverage, band, the reweightings and every dimension score
9	data/iq-method.csv — IQ groups, weights, shrinkage, field mean, band thresholds, and the reweighting, shrinkage and missing-evidence tests
10	data/iq-missing-evidence.csv — every scored cell turned into n/e one at a time, with the IQ before and after
11	data/swot.csv — every SWOT line for the profiled vendors with its basis (record, vendor documentation, vendor claim, inference) and sources
12	data/deep-profiles.csv — the deep-profile summaries: what is sold, buyers, earnings, dependencies, fit, limits
13	data/deep-profile-records.csv — every profiled capability, performance claim, financial figure and timeline event with sources
14	data/study-evidence.csv — studies with design, sample, sponsor and limits
15	data/corrections-ledger.csv — every change made after verification and challenge passes, with implementation and verification
16	data/vendor-universe.csv — the reasoned vendor sample with scope group, owner, formats, routes and status
17	data/agentic-map.csv — AI and agentic capabilities with status labels and observability
18	data/rules.csv — rules and governance instruments by jurisdiction
19	data/estimates.csv — market-size estimates with inclusions, exclusions and combinability
20	data/decision-tool.csv — the decision tool rows
21	data/product-register.csv — the product register: every scored or listed product with its purchased service, operating entity, owner, cohort, inclusion reason, aliases and US availability
22	data/hypotheses.csv — the hypotheses registered before extraction, with the rules for supported, contradicted and unresolved
23	data/figure-data.json — the canonical dataset behind every data figure
24	data/derived-checks.json — every derived number with its formula and inputs
25	data/stats.json — every count the prose and figures quote about the research itself, computed from the ledgers
26	data/scoring-rules.json — dimension definitions, anchors, cell rules and the IQ definition, fixed before scoring

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Numbered sources

The 430 sources cited in this paper, numbered in order of first citation. The full register of 442 source records, with access dates, access limits and reliability notes, is in data/source-register.csv. Click any number in the text to open the same record.

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