DATA USAGE & CONTROL PRIMER:
best practices & definitions

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This document has been developed by the IAB Data Council.

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Executive Summary

The first edition of the Data Usage & Control Primer, released in 2010, had its beginnings the previous year as the IAB assembled industry leaders from branded publisher sites, ad networks and data companies to explore the many commercial challenges arising from increasingly complex data usage in interactive advertising.

In early 2013, the IAB again gathered industry experts to thoroughly update the Data Primer to encompass the many extraordinary developments in this field in just the intervening few years—notably, the rise of ad exchanges, Data Management Platforms (DMPs) and, of course, "smart phones" and mobile devices. This document—the Data Usage & Control Primer 2.0—is the resulting much-needed update.

Advertising is a crucial part of online media. Interactive advertising, specifically, provides funds for content creation and distribution online, supporting a richer online experience for the Web user. Interactive advertising's basis is interactivity and engagement with creative—supported by data, increasingly vast flows of information ("Big Data") about online user activity and other preferences that help guide relevant messages and tailored content to specific audiences.

Current advertising techniques are creating new opportunities and corresponding challenges for advertisers, publishers and consumers. Consumer data has been collected offline for decades by catalog companies, marketers and others, for targeting purposes, but *online* user activity data offers a new and uniquely promising resource.

As the value of collecting, aggregating and analyzing the data grows, new questions arise: Who should collect consumer data? How should use of such data be compensated? How can consumer privacy be protected? *Consumer* concerns such as these, arising from the use of data, are paramount to the interactive advertising industry—and addressing these concerns is critical to the industry's future. These issues are not the focus of this document, which is instead aimed at clarifying terms and specifically *commercial*, contractual challenges surrounding data usage and collection. For the IAB's detailed exploration of consumer privacy issues, please see our Privacy Principles and our Self-Regulatory Program for Online Behavioral Advertising (http://www.iab.net/self-reg).

For the Data Primer, the IAB holds the following objectives:

- Create an up-to-date, comprehensive lexicon of interactive advertising data definitions
- Outline the mechanics of interactive advertising and data collection and identify the parties currently participating in the industry
- Establish the point of view for the selling community—the publishers, advertising networks, ad exchanges and others who sell interactive advertising—regarding usage, control and valuation of data
- Define and describe this point of view throughout the advertising ecosystem, which includes advertisers, agencies, data aggregators, publishers and advertising networks
- Update and clarify industry best practices for data usage and control

The ultimate goal of the IAB, in this project, is to define the data landscape as it exists today and to recommend industry best practices to guide the collection and use of data by all parties in the marketplace, consistent with the laws and regulations and the self-regulatory standards that apply. The IAB believes adoption of these best practices will greatly reduce the uncertainty and confusion that currently exist, and will help educate the marketplace on acceptable corporate behavior.

The Data Landscape Today

The following is a brief overview of the current data landscape and the challenges and questions that surround the collection and use of data.

Why Data Matters

Data is what makes interactive advertising work—not just for advertisers, agencies, ad networks and data aggregators, but also for publishers, consumers and the rest of the online ecosystem. Data collected online and through other digital platforms is routinely used by both advertisers and publishers for ad targeting, personalization, reporting, and ad and website optimization. Data is also used for reporting on virtually every level: visitor counts, ad-serving tallies, site visits and other visitor interactions. Data helps subsidize content and keeps sites interesting to consumers. Data also makes advertising more targeted, relevant and effective. Without the rich, detailed and actionable array of data it can provide, digital marketing would be just like every other media channel.

Marketplace Challenges and Questions

As technology makes it possible for data to be collected at deeper and more granular levels, and as more parties become involved with data collection, aggregation, analysis and storage, it has become critically important to answer questions around the safety, security and ethics of data usage and control in interactive advertising.

Among these important questions are: Who should collect data? For how long should data be kept and at what level of granularity? How will data be secured? When can data be shared? What limitations attach to the use and control of data?

What is the best way to inform and educate consumers regarding these data policies and practices?

Protecting consumer privacy is critical. The more sophisticated and detailed the data is, the more critical it becomes that principles and best practices are put into place to ensure the safety, security and privacy of user data. The IAB and other industry trade associations are committed to ensuring their members adhere to these important consumer protections through industry self-regulation.

In 2009 the interactive advertising industry addressed the challenge of how to ensure that interactive channels remain open and viable places to do business for the myriad parties involved in online advertising, while simultaneously ensuring the privacy and safety of consumers. The industry addressed the issue of consumer privacy and protection, and in July 2009, the Interactive Advertising Bureau (IAB), the American Association of Advertising Agencies (4A's), the Association of National Advertisers (ANA), the Direct Marketing Association (DMA), and the Council of Better Business Bureaus (BBB) released the industry's most comprehensive self-regulatory guidelines on privacy and the collection and use of user data (the "OBA Privacy Principles").

The OBA Privacy Principles helped to create trust and transparency between industry and consumer, and became the cornerstone of the IAB Self-Regulatory Program for Online Behavioral Advertising, codifying clear standards and best practices in corporate behavior for business-to-business ("B2B") transactions. All IAB members are required to participate in this program, as a condition of their membership. Taking this potentially enforceable code of conduct further, the IAB is looking into incorporating this program and other best practices into our Quality Assurance Guidelines program. (See www.iab.net/QAGinitiative.)

Online Behavioral Advertising

How Online Behavioral Advertising Works

A basic premise in marketing is the more you understand your customers' preferences, the more effectively you can advertise and ultimately sell your product or service. Marketers are constantly trying to answer questions such as: What do customers like to see? What do they want to hear? What do they like to do? What prompts them to buy?

Recommending relevant advertising based on past browsing activity is commonly referred to as "online behavioral advertising" (OBA). This practice is also called "behavioral targeting" or "interest-based advertising." Because online behavioral advertising is based on the users' inferred or declared interests from the cumulative browsing patterns across a variety of websites and pages, it differs from contextual advertising, which is based on the correlation between an advertisement and the content that directly surrounds it.

Let's look at an example of the distinction between online behavioral advertising and contextual advertising. Imagine you are an advertiser, trying to promote a French vacation package. Your best bet, then, is to advertise your vacation offer to users who display interest in travelling to France. You could try to reach them on a website that reviews and recommends vacations in France (contextual advertising). However, you may also want to display your vacation package to users who *previously* visited sites that involved travel to France, when they visit a subsequent, unrelated website, for instance one about their favorite baseball team (online behavioral advertising).

When a display ad or other online behavioral ad is served to match an interest—for instance, an interest inferred from a search, this practice is known as "targeting." If the user or visitor fails to click on, or convert, when first presented with the targeted ad, a cookie or pixel can be left on their browser (or other mobile data-driven technique used), resulting in "retargeting"—that is, the serving of still more ads offering the same or similar product or service. Retargeting, when done skillfully, can result in higher conversion rates than the initial targeted ad. (For more information, go to www.iab.net/data.)

OBA Uses Prior Browsing Activity to Determine Ad Placement.

What is a Segment?

Online behavioral advertising requires the creation of targetable "segments." Each segment represents a collection of users (identified by cookies or other anonymous means) that share one or more identified attributes or interests, based on data collected about prior and current online browsing activity. These attributes may be demographic, market-related or interest-related. Technology allows marketers to create segments without having to know any personally identifiable information about any particular individual user. Some segments are based largely on inferences regarding user interests, gleaned from cookies or other anonymized method. Other segments are made up of groups of users who have declared similar specific information about themselves or their interests.

Advertisers with specific messages target both kinds of segments: declared and inferred. Specifically, when a user actively discloses information the result is called "declared" data, and when a software program has to "guess" at a user's attributes (such as age or sex) the product is called "inferred" data. Frequently, use of both kinds of data is combined to optimize the effectiveness of a targeted ad campaign. (For more on segments, and the roles of declared and inferred data, see IAB Data Lexicon. http://www.iab.net/media/file/IAB_Data_Lexicon_Final_Release_11-11-11.pdf) (For more on declared and inferred data, see Social Data and Demystification & Best Practice, "observed [inferred] vs. declared consumer attributes," http://www.iab.net/media/file/Social_Data_Final.pdf.)

How Segments Are Generated

Cookies and other segmenting data

Although there are a variety of mechanisms by which segments can be generated, collected and stored, segments typically are built around data about browser activity derived from "cookies"—unique identifiers that are placed on a user's Web browser or other Internet-enabled device, markers of having accessed and browsed specific sites online. Those cookies, in turn, enable servers and analysis software to recognize and report that browser's "visit" to a specific web page and/or the interaction with a particular piece of content, such as an ad—data compiled to create a segment and to trigger display of a relevant ad. (Cookies are also used to otherwise enhance a user's online experience, including remembering a user's country when browsing an international site or their specific locale when checking the weather.)

The most common central elements of interactive advertising and content delivery are the Internet Protocol (IP) address, the cookie and the web page—while on mobile devices, there are often additional, specifically mobile forms of tracking data that are used. On a typical stationary Web connection, a "user" (also called a "visitor") accesses content via an Internet-enabled device, and the user's device is assigned a dynamic IP address. But as the same IP address is often shared by multiple computers and is not unique to a single user, it is primarily used to identify the browser's geographic location rather than any other attributes about the user. With mobile devices, again the IP address is not key, but rather other mobile identifiers are assigned and more important in creating segments.

The sequence of events generated by the user and a website are defined as a "session" and may include activities such as online communication, information searches, navigation of web page(s), interacting with an ad

*Online Activity or Interaction Between User and Website = Data*

(ad clicks), and commercial transactions (eCommerce), whether completed or uncompleted. Through this data, publishers and advertisers can track pertinent information, and create segments—while as always without reference to Personally Identifiable Information (PII).

Each collection of a piece of information is called an "event." Data about raw events are often transmitted to servers and stored in databases in the form of HTML objects or code called "pixels," "beacons" or "tags." With mobile devices, cookies are often disabled—particularly on Apple mobile devices—and so alternate, mobile forms of unique identifier are exclusively utilized to create segments. (Definitions of relevant terms and others definitions may be found at the end of this document. See also Site Tagging Best Practices document, at www.iab.net/sitetagging.)

Cookies—and, on mobile devices, other unique identifiers—keep track of perceived interests; they are the mechanism that allows companies to create a segment—again, a collection of users with related attributes, such as tennis enthusiast, dog lover, soccer mom or wine connoisseur. A behavioral cookie contains segmentation information and may look something like this:

```
ID: KE2c0202509fs; -----------
----s/csa---Content Interests:
Sports: Tennis, Footba  ll
ac40t9va01,--052fci2, 0
Segments: Tennis, Local News
```

Often cookies, which capture interactions between a browser and a website, are collected by a third party (e.g., an ad network) and may be used by the third party to generate a segment. In the case of mobile web activity, segments are also created—though, as noted, often in a different manner, one way partially dependent on cookies and the other not. (See Mobile, below).
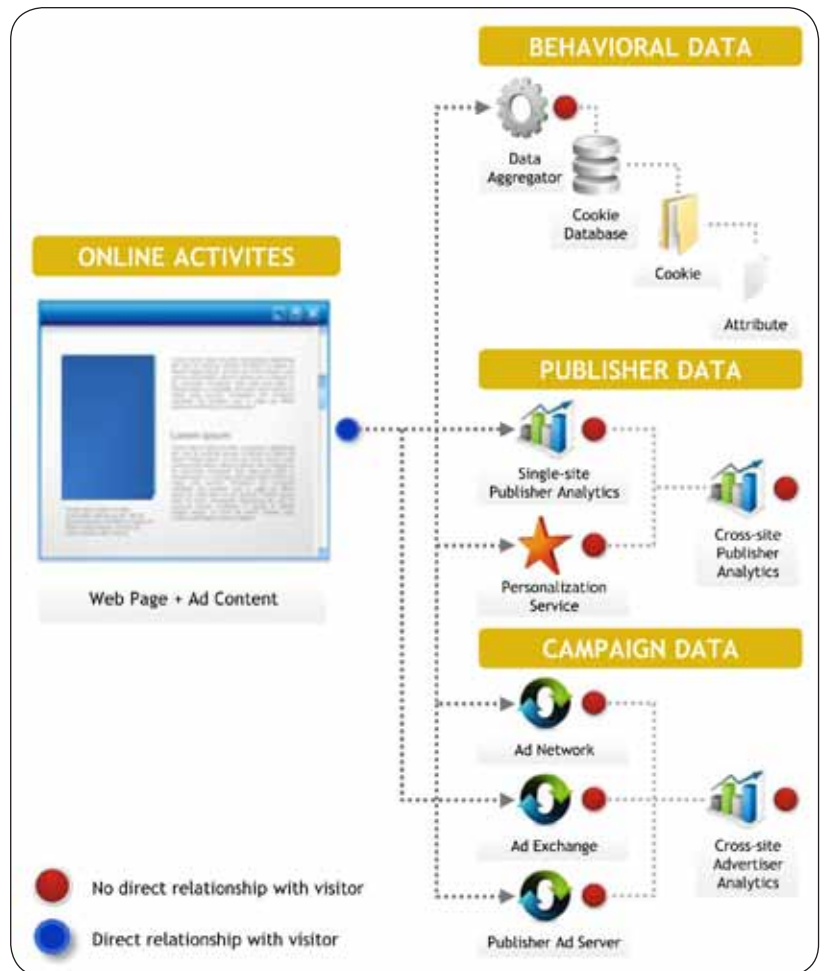
Players Collecting Online Activity

Mobile Web and Mobile Apps

Mobile, on the one hand, often utilizes cookie infrastructure to create segments and enable interactive ads just like PCs and other Web devices. For example, when a person uses a cookie-enabled mobile browser, cookie-based advertising capabilities are enabled. But on the other hand, frequently cookies are disabled or are not available on mobile devices, and the data used for mobile advertising in this case is therefore very different. Audience segments can instead be created based on a combination of device ID and mobile application, or "app," tags (data about a specific mobile device, and its location), providing by alternative means information about a user's interests, intentions, geographical movements and consumer behaviors. In general, Mobile web's various alternative means of creating segments and targeting ads often focus on server-to-server (or S2S) relationships, whereby a selected app's home server communicates relevant targeting data by direct contact with other trusted partner companies' servers.

For example, if a user visits a major news provider or a retail site, using an app instead of a browser, a segment can be created. When activated, the app normally executes two functions that can help create a segment. The app contacts its server, asking for and downloading the latest news or product promotion of interest. The app also issues data about the device via mobile app tags. Those app tags communicate a unique identity—a mobile device ID—or sometimes a device ID, username and password, as well as additional declared information and tracked geographical location. Mobile tag data also can be combined with other, more conventional data to create still richer data for segment creation, with the device ID and the app data having become critical identifiers and sources of information. So, mobile segments can be created in the usual way—using cookies—or via alternative, mobile-specific mean.

For the user, the online experience can "feel" very similar to a PC online experience. But mobile also can feel different. In terms of the data used to generate segments and serve ads, frequently mobile involves different information. And, while cookies do work in some mobile environments, their lifespan is shorter on mobile, which can affect some targeting efforts. For instance, certain mobile operating systems default to disabling cookies. Whichever data is used, mobile is increasingly important— represents an increasing share of total connected time consumers spend online.

How Data is Used

Data allows advertisers, agencies and web publishers to optimize ad delivery, evaluate advertising campaign results, improve site selection and personalization and retarget ads to other sites. Data also improves the value of media to marketers by delivering their advertising to better-qualified prospects.

Delivering a specific ad to a specific segment makes the ad more effective, more valuable and provides a more compelling experience for the user. The following four examples provide additional details as to how data is used:

1. **Reporting:** Advertisers require reports that clearly show how well their campaigns are performing.

   Web publishers and ad networks serving as their agents gather information about site visits as well as interactions with the advertisers' specific ads. The data is analyzed and compiled and shared with the advertiser in aggregate form. PII about the user is not used for these reports.

2. **Explicit targeting:** Web publishers and ad networks serving as their agents determine rules that define which ads are delivered to which segments. For example, if a segment meets the criteria attributed to sports enthusiasts, the segment will be delivered a sporting goods ad. Specific types of data are commonly referred to as data elements. Data elements may include registration information, behavioral characteristics, geographic location, time of use and current context.

   Data elements determine which campaigns are served to any given user segment in a particular session.

3. **Ad Optimization:** Web publishers and ad networks serving as their agents use advanced technology that can identify browser activity with characteristics that match those of individuals who responded to a particular advertisement. Advertisers improve the effectiveness of a campaign by using this data to find segments more likely to be interested in their goods or services, a process known as advertising optimization.

4. **Site Optimization:** Analytics help publishers and advertisers better configure their sites to achieve a desired result and build a model of the types of users who visit their sites. This site optimization helps provide more relevant content to users, reducing the user's need to repetitively communicate individual preferences each time they visit. In the case of mobile, app optimization might also be effected (e.g., as a mobile app gets used, that app can also learn and constantly be improved.)

Who Benefits from This Data

Individual users benefit from the collection and analysis of behavioral data. In addition to the rich and diverse content subsidized by increasingly valuable and relevant advertising revenue, users benefit from online behavioral advertising by seeing more relevant offers. Studies support that users tend to prefer targeted advertising. Asked whether they would rather see online ads for random products and services or ads directed towards their interests, 40.5% of respondents said they preferred targeted ads, while a further 27.6% were content to targeted or untargeted ads, according to a 2013 study, conducted by Zogby Analytics on behalf of the Digital Advertising Alliance (DAA). The same study found that only 16.1% of those surveyed preferred to get random ads (with another 15.8% "unsure"). (See http://www.aboutads.info/resource/image/Poll/Zogby_DAA_Poll.pdf) An October 2012 study conducted by Ipsos found that almost 6 in 10 American adults surveyed online say they would like the ads on their social networking pages to be tailored to their specific needs.

In terms of business benefits, advertisers, agencies, web publishers, ad networks and data aggregators all have access to a certain amount of user data. Within the interactive advertising industry, all companies use data to enhance the services they provide. Advertisers and agencies want to ensure their ads reach the right audience. Web publishers want to ensure users have a good experience and need data to quantify the value of their inventory — the advertising space near the published content. Data aggregators offer both advertisers and publishers additional information to help achieve these goals.
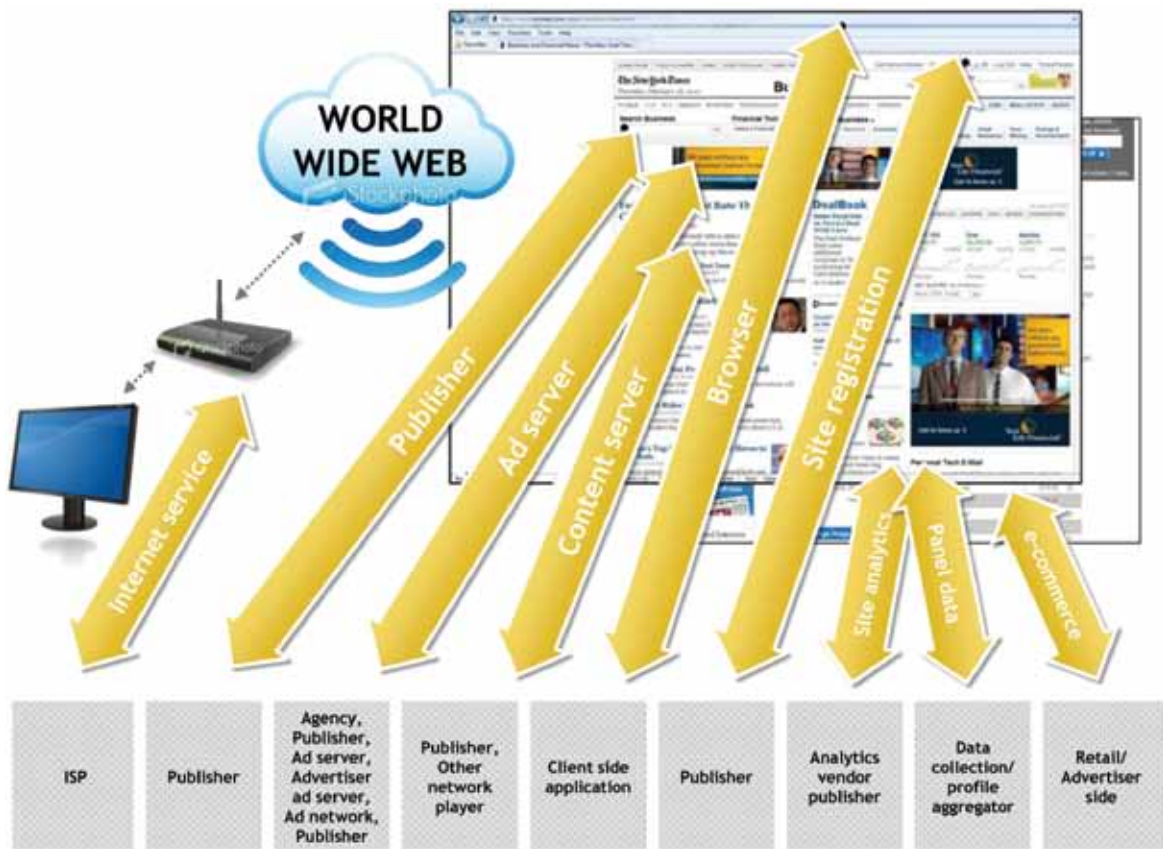
Examples of various sources of data that players in interactive advertising may glean from a single webpage can be seen in the simple diagram above. It is important to note that not all content on a website originates from a single publisher. Many websites embed content originating elsewhere, such as tools or widgets provided by third parties. These third parties may also collect data.

Data Management Platforms (DMPs)

In recent years, a centralized means of combining, integrating and leveraging all kinds of data on behavior and intent has emerged: the Data Management Platform (DMP). A DMP is a Big Data repository that can be used to pull in data from all levels—visitor, customer, company, and from online and offline—permitting an advertiser to execute far more deeply informed marketing decisions to better serve their customers and clients. The DMP combines the strengths of various data-driven online advertising techniques, permitting the most informed combination of online and offline data to coordinate all campaign activity across online channels (ad networks, exchanges and publishers)—including multiple-screen data as well. (For an overview of DMP techniques, see IAB's "Advertising Ecosystem" at www.iab.net/data/ecosystem.html.)

The purpose of the DMP is to integrate vast quantities and wide varieties of information through scalable infrastructure to provide actionable insights for advertisers and publishers. A DMP is an integrated system for handling and monetizing data of all kinds. A DMP can use this data to optimize advertising to suit customer or client interest—giving advertisers two key improved capabilities. First, the depth and freshness of the data used by a DMP helps to optimize display advertising. Second, the vast array of different data points—mined from so many sources and channels--pertinent to a particular audience of customers or prospects allows enhanced cross-channel planning, execution and attribution.

(For more on DMPs, see The Data Management Platform: Foundation for Right Time Customer Management, at http://www.iab.net/media/file/Winterberry_Group_White_Paper-Data_Management_Platforms-November_2012.pdf.)

Ad Exchanges and Ad Networks

Ad exchanges are another major innovation offering powerful improvements in the mechanics and economics of data usage in online advertising. The main distinction between an ad exchange and an ad network is that a network relies on more manual processes in managing ad inventory, while exchanges are more automated and data-driven. Importantly, an ad exchange unlike an ad network also acts as a single contact—a real-time auction house space between buyer and seller, with each website visit and visitor's anonymized data instantly transmitted, and the available ad space auctioned off in milliseconds at the instant the visit is made. Hence, an ad exchange simultaneously consolidates many functions for both parties—publishers get a single efficient and convenient channel for selling their available inventory, and advertisers gain one-entity access to ad space across all digital ad platforms. Since the ad-serving data is compiled just as the media is auctioned off and billed, in real time, the advertiser also gains the powerful advantage of collecting instant feedback—data that can be used, quickly, to improve a creative or optimize targeting in each ad campaign, based on empirical data about its ongoing effectiveness.

Ad exchanges therefore offer multiple advantages compared with traditional ad networks: for advertisers, the better use of data provides the ability to quickly react and run more effective campaigns; for publishers, that same faster and deeper data feedback about campaign effectiveness adds significant value to their ad inventory. In one drawback to the ad exchange model, advertisers and publishers must guard against the potential of a greater exposure of data to outside parties— which can and does occur. (For related information, see the IAB Site Tagging document with detail on "data leakage," at www.iab.net/sitetagging.) Finally, we should note that many entities still known as "ad networks" are incorporating aspects of the more sophisticated ad exchange model.

Data Collection Matrix

Detailed information on which entities are able to collect specific types of information from a session on the web may be found in the following table.

	Default Collection Capabilities												
Collection Technology	*Redirect or Tag*					*Tag*			*Client App*	*Client App or DPI*	*DPI*	*Content Serving*	*Mobile*
Role / Data Type	Content Delivery Network (CDN)	Single-site Publisher Ad Server/ Supply Side Platfrom (SSP)	Demand Side Platfrom (DSP)	Cross-site Advertiser Server/ Analytics	Ad Platform (Network/Exchange)	Data Aggregator	Digital Analytics	Audience Analytics	Web-enabled Application (desktop applications/ widgets + plugins)	Cross-site Analytics Panel	Internet Service Provider (ISP)	Online Publisher/ Retailer	Mobile App
Non-Session Audience Information*													
Demo			✓	✓									
Geo			✓	✓									✓
Behavior			✓	✓									✓
Page category			✓	✓									✓
HTTP data (Technographics)													
Header Information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP Address	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
User Agent	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Referrer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cookie	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Browsing Information (both sites)													
URL													
Page views	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Page context (incl. scraped page content)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Time on page	✓						✓		✓	✓	✓	✓	✓
Form data									✓	✓	✓	✓	✓
Advertisement data (publisher site) [Checks are dependent on serving the ad, not being a redirect in the chain]													
Advertiser name		✓	✓	✓	✓							✓	✓
Advertiser creative	✓	✓	✓	✓	✓				✓			✓	✓
Ad category		✓	✓	✓	✓							✓	✓
Ad size	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓
Ad location		✓	✓	✓	✓				✓	✓	✓	✓	✓
Advertisement data (publisher site) [Checks are dependent on *only* being a redirect in the chain]													
Advertiser name												✓	✓
Advertiser creative	✓								✓	✓	✓	✓	✓
Ad category													
Ad size	✓								✓	✓	✓	✓	✓
Ad location		✓	✓	✓	✓				✓	✓	✓	✓	✓
Advertisement interaction (publisher site) [Checks are dependent on serving the ad, not being a redirect in the chain]													
Ad impressions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Ad clicks/interaction		✓	✓	✓	✓				✓	✓	✓		✓
Ad form data		✓	✓	✓	✓				✓	✓	✓		✓
Advertisement interaction (publisher site) [Checks are dependent on only being a redirect in the chain]													
Ad impressions													
Ad clicks/interaction													
Ad form data													
Conversion information (advertiser site) [Checks are dependent on advertiser placing Tags where required]													
Site visits	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Purchases	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Purchase amount	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Purchase item	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Purchase date	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Buyer information	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Example(s)	*Akamai, Amazon,*	*DFP, AdMeld, OpenAds, Rubicon Project, YieldEx*	*Turn, MediaMath, X+1*	*Atlas, DFA, Mediaplex, Nielsen AdRelevance, Visible Measures*	*24/7, AOL, RightMedia,*	*axciom, BlueKai, eXelate*	*IBM, Google Analytics, Omniture, comScore, Webtrends*	*comScore, Quantcast, Nielsen*	*Browser (IE/FF), Google Toolbar, Panel Vendors*	*comScore, Nielsen*	*Comcast, Time-Warner, Verizon, AT&T*	*AOL, MSN*	*Any mobile app with built-in features to collect relevant data*
Google Example†	*n/a*	*DFP*	*n/a*	*n/a*		*n/a*	*Google Web Analytics*	*n/a*	*Google Toolbar*	*n/a*	*n/a*	*Google Properties*	

*E.g., demographic, geographic, and behavioral data that is used to define the audience segment targeted by a campaign. For more information, please see the Data Definition document.
† Google is an example of an organization that has products and services that use multiple collections technologies and can be represented in multiple roles.

| Key	
Data must be or is allowed to be collected	✓
Data not visible or not allowed to be collected	
Direct Relationship with Visitor	**Green**
No direct relationship with Visitor	**Orange**

Tensions in the Marketplace

The online advertising industry is consistently aligned with government and consumer groups in the belief that the protection of consumer privacy is a top priority. Specifics are addressed in this section and more comprehensively in forums dedicated to consumer privacy, including the IAB Privacy Principles, the OBA Privacy Principles, the IAB Self-Regulatory Program for Online Behavioral Advertising, the IAB Member Code of Conduct and the IAB's "Privacy Matters" campaign. Distinct from consumer privacy issues, this section additionally seeks to address intra-industry tensions that have emerged surrounding the contractual and competitive issues of data collection and usage.

As more organizations recognize the value of data, there has been a proliferation of companies involved in data usage. The emergence of new players, as well as the re-characterization or blending of roles of others, has increased the need for the industry to establish a new set of standards and best practices regarding use and control of user data.

Many of the current issues confronting the online advertising industry stem from a lack of transparency and a lack of clear understanding about each organization's role within the evolving ecosystem. Advertisers are concerned that website publishers and data aggregators are collecting brand-related data and selling it to their competitors. Simultaneously, website publishers are concerned that advertising agencies are collecting data to target their users on other publishers' websites.

Marketplace participants are most concerned about the use of their data by another party. The degree of concern relates to the nature and use of the data: whether the data identifies a brand, whether the data is disclosed to an unintended party, whether the data is proprietary and whether the data is collected at the user-level or in aggregate. The more specific the data: the greater the concern. The chart below shows the four independent axes that impact the degree of concern. Concern is greatest the furthest from the center.
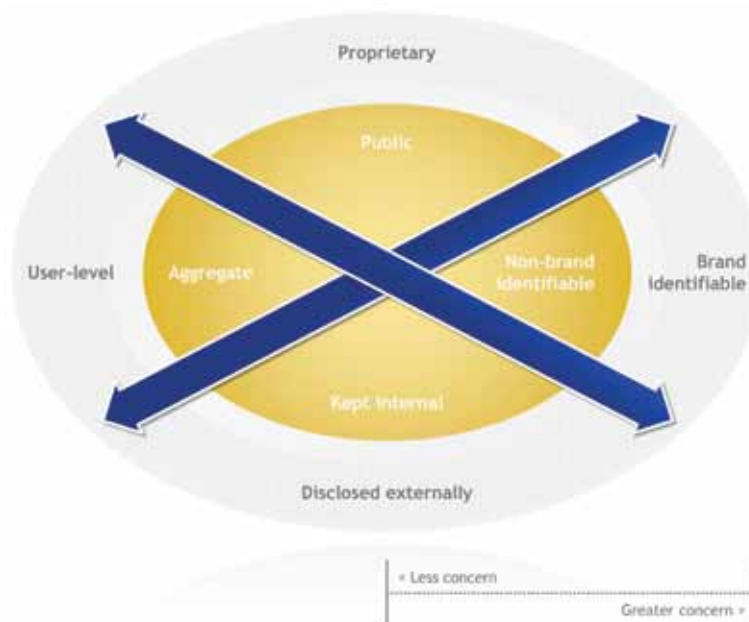
Degrees of Concern Regarding Data Use and Collection

Hey! That's My Brand – Identifiable vs. Non–Identifiable

Industry best practices suggest that brand-identifiable information should not be used for retargeting an advertisement without the express consent of all parties involved. For example, a brand advertiser (such as a car company) may be concerned that a web publisher or network may sell data regarding who responded to its advertisement to a competing car company.

Conversely, a publisher (of a sports page, for example) may be concerned that an advertiser or an advertiser's agent will target its sports-enthusiast audience on a lower-cost publisher's website. Historically, both advertisers and publishers have aggregated the ad-interaction and site visitation data into general categories such as "in-market auto" or "sports enthusiast."

Using data in a non-brand-identifiable manner is generally far more acceptable to both parties in this case.

Hey! That's My Audience – Aggregate vs. User–Level

Web publishers or ad networks serving as their agents spend time and resources developing various audiences. Their business model depends on their ability to sell advertising units to prospective advertisers who want to reach these audiences. Many publishers are concerned that advertisers or advertising agencies will buy a campaign targeting a specific audience and will then append this data to cookies in order to retarget that audience on another publisher's website. As a general rule, most publishers and their agents are not opposed to this practice if they are compensated appropriately as data providers, not just as media providers. Historically, advertisers and their agents have enjoyed the right to use information about users exposed to multiple campaigns on multiple publishers' sites, to build profiles for use in future campaigns. Using data in an aggregated manner is generally far more acceptable to both parties. (See IAB Data Segments and Techniques Lexicon, at http://www.iab.net/guidelines/508676/data/data_lexicon.)

Hey! That's My Data – Internal vs. Public Disclosure Of Proprietary Data

Just as advertisers and publishers do not wish their brands exploited by competitors, they are also concerned about the possibility that performance and pricing data could be disclosed to unintended parties. When data is used primarily for internal purposes (e.g., measuring campaign effectiveness), companies have far fewer concerns. The industry is still clarifying the delineation between data that is considered proprietary and data that is publicly available.

Hey! That's My Profile – Privacy

Protecting consumer privacy is of great importance to the online advertising industry and a critical issue to privacy and consumer advocacy groups. Industry concern for the protection of consumer privacy is expressed through two central channels: education and self-regulation.

The comprehensive Self-Regulatory Program for Online Behavioral Advertising will help protect consumers' privacy rights and expectations in ad-supported online media. This is the first time the entire advertising ecosystem has joined forces to implement a program empowering consumers to manage their data.

The unprecedented collaboration has been three years in the making, and represents the entire marketing-media industry. This self-regulatory initiative includes the American Association of Advertising Agencies (4A's), the Association of National Advertisers (ANA), the Direct Marketing Association (DMA) and the Interactive Advertising Bureau (IAB) in conjunction with the Council of Better Business Bureaus (CBBB). The participating associations represent more than 5,000 leading U.S. companies across all of the key businesses that have played a role in the transformation of the way consumers experience media.

The Internet itself has become a vital link in the supply chain and communications chain for all businesses, and is a lifeline for hundreds of thousands of small businesses and publishers that have no equivalently cost-effective means of reaching so wide an audience. The ecosystem includes advertisers, advertising agencies, Web publishers, Internet access services providers, providers of application software such as Web toolbars and Internet Web browsers, search engines and online advertising networks. This interdependency and the program will enhance industry self-regulation in ways that will foster transparency, knowledge and choice for consumers—ultimately protecting this most vital segment of our economy.

Because of this cross-industry initiative, consumers will gain enhanced notice and control over the collection and use of Web-viewing data for online behavioral advertising purposes. The program provides specific implementation practices in support of the Self-Regulatory Principles for Online Behavioral Advertising, which the industry released in July 2009. Together, the principles and program respond to the Federal Trade Commission's call for more robust and effective self-regulation of online behavioral advertising practices. The program includes several important components:

- **Advertising Option Icon:** The Program promotes the use of an icon and accompanying language, to be displayed in or near online advertisements or on Web pages where data is collected and used for behavioral advertising. The Advertising Option Icon indicates that the advertising is covered by the self-regulatory program, and by clicking on it consumers will be able to link to a clear disclosure statement regarding the data collection and use practices associated with the ad, as well as an easy-to-use opt-out mechanism.

- **AboutAds.info:** Starting today, companies collecting or using information for behavioral advertising are encouraged to visit www.AboutAds.info to acquire and begin displaying the Advertising Option Icon, signaling their utilization of behavioral advertising and adherence to the Principles. Interested companies engaged in behavioral advertising can also register to participate in the easy-to-use consumer opt-out mechanism on the www.AboutAds.info site.

- **Consumer Choice Mechanism:** As business registration and use of the Advertising Option Icon expand, consumers will have an opportunity later this fall to visit www.AboutAds.info for information about online behavioral advertising and to conveniently opt out of all or some participating companies' online behavioral ads, if they choose.

- **Accountability and Enforcement:** In 2011, the CBBB and the Direct Marketing Association (DMA) began monitoring and enforcing compliance, as well as managing consumer complaint resolution. DMA and CBBB will continue to employ monitoring technology to report on companies' adherence to the transparency and control provisions of the Program.

- **Educational Campaign:** To build awareness of the program among the business community and consumers, the trade associations conduct broad-based educational campaigns, such as the Privacy Matters campaign (www.iab.net/privacymatters), which offers consumers the resources to help them manage their privacy online.

Buyer and Seller Beware

Given the varying capabilities of online behavioral advertisers, the only set of definitive practices governing use and control appears in the Standard Terms and Conditions Version 3.0 released by the 4A's and IAB in December 2009 (see Section XII of the Terms and Conditions regarding Non-Disclosure, Data Usage And Ownership, Privacy and Laws, at http://www.iab.net/guidelines/508676/tscs3.) Participants in online behavioral advertising should be aware that, in the absence of a contract or specific legal restrictions such as those outlined in the Standard Terms and Conditions Version 3.0, other parties may be collecting and using data. General industry practices have emerged that govern what players should and should not do. To summarize: even if you can collect it, you should not always use it.

The following are considered improper practices. One should not:

- Disclose buyer/seller's brand without explicit consent

- Re-use or display a buyer/sellers' brand without explicit consent (e.g., practices that may infringe a trademark)

- Re-use seller's out-of-session data without explicit consent

- Re-use buyer's site-collected data for a purpose other than for the sole benefit of the buyer (e.g., retargeting pixel) without explicit consent

B2B Data Usage and Control Best Practices

While the OBA Privacy Principles seek to foster an environment of trust and transparency between industry and consumer, establishing business-to-business best practices regarding data usage and control is also necessary to build trust throughout the ecosystem. The IAB and the Data Council believe clarifying industry best practices, as well as proposing a potential enforceable set of guidelines, will greatly reduce the uncertainty that currently exists and help create a sense of faith and transparency throughout the marketplace. In this regard, the IAB plans to use the Quality Assurance Guidelines program as a framework to institutionalize best practices. A Working Group on the QAG initiative plans to define data transparency in more detail in an update to follow the release of QAG 2.0 in July 2013.

The following list summarizes the set of best practices that the IAB has developed regarding B2B best practices for data usage and control. The overarching principle is that data collection, subsequent use, and appropriate compensation should be transparent and agreed to by all business parties. It is the IAB's goal to have all parties (publishers, advertisers, advertising agencies, advertising networks and data aggregators) adhere to these basic best practices, not only for the benefit of the industry, but also for consumers.

Publisher/Ad Network/Ad Exchange

- Disclosure
  - Publishers and their agents should disclose to buyers what brand-identifiable[1] advertiser data is being collected by them or their agents, what other organizations have access to the data, and how the data will be used. If changes occur (or are proposed), they should be disclosed in the same manner and with the same transparency as when first disclosures were made.

- Use
  - Publishers and their agents should not use brand-identifiable advertiser data to retarget advertisements without permission from the advertiser.
  - Publishers and their agents should not disclose externally any brand-identifiable advertiser data collected during the delivery of an advertising campaign for analytical purposes without permission from the advertiser.
  - Publishers and their agents should aggregate brand-identifiable information across multiple campaigns and multiple advertisers to ensure that brands cannot, directly or indirectly, be identified.

There are additional data disclosure requirements for ad networks and ad exchanges that certify against the IAB Networks & Exchanges Quality Assurance Guidelines, which can be found at www.iab.net/ne_guidelines.

The IAB and the Data Council as well as the Publishers can create segments that do not identify advertisers.

Advertiser/Advertising Agency

Although representatives of advertisers and advertising agencies were not directly involved with the creation of this document, the following section reflects the best practices created jointly by the IAB and the 4A's and released in the 4A's/IAB Standard Terms and Conditions for Interactive Advertising. It is highly recommended that publishers and ad networks urge data practices similar to those below on the part of any advertiser or agency partners.

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[1] Data that identifies or allows identification of advertisers or their agents by combining data from several different advertisers' campaigns to create a segment.

- Disclosure
  - Advertisers and their agents should disclose to publishers what brand-identifiable publisher data is being collected by them or their agents, what other organizations have access to the data, and how the data will be used.
- Use
  - Advertisers should not allow their agents to disclose to other parties (not included in the ad serving chain) any brand-identifiable publisher data collected from their media placement for analytical purposes without permission from the publisher.
  - Advertisers and their agents should not use brand-identifiable publisher data to retarget advertisements without permission from the publisher.
  - Advertisers and their agents should not use publisher provided data (i.e. out-of-session data such as registration or BT) to retarget customers in a subsequent campaign, without a separate compensation agreement.
  - Advertisers and their agents should ensure that all parties collecting data from technology placed within their own media placements adhere to the same usage and control restrictions to which they are held.

The newly revised 4A's/IAB Standard Terms and Conditions for Interactive Advertising Version 3.0 can be found at http://www.iab.net/tscs3.

Advertisers and Publishers

- Advertisers and publishers should have an up-to-date written data retention, disposal policy and procedure document.
- Advertisers and publishers should consider market regulations specific to their industry

Code of Conduct

In the previous release of this document, the Data Taskforce considered the merits of establishing an industry-funded body to ensure members of the ecosystem abide by the B2B Data Usage and Control Best Practices. But the Data Council concluded that the most recent Quality Assurance Guidelines will provide an adequate framework to support an independent organization that will act as a clearinghouse for reported problems and will monitor industry members' adherence to an agreed code of conduct. This organization would investigate claims of reported infringements and violations from industry participants. If a claim is valid, it is the intention to have mechanisms in place to alert the interactive advertising community and take measures to correct and remediate the issue. To create this body it will be critical to have the support of buyers, sellers and aggregators because the proposed organization's credibility and effectiveness will depend upon widespread support and meaningful governmental recognition. The traditional advertising industry already has a significant record of achievement in this regard and emulating such a model could achieve similar results.

Conclusions

Interactive online advertising is a dynamic and rapidly evolving industry. The Data Usage and Control Taskforce, and subsequently the Data Council, were formed in recognition of the need to clarify definitions, educate legislators, industry players and consumers, and help establish a set of accepted business-to-business best practices. It is the hope of the IAB and the Data Council that this document will lend clarity to pressing industry issues and that it will serve as a platform for future discussions regarding the needs and concerns of publishers, advertisers, agents and consumers as interactive advertising continues to develop and expand.

Having provided a brief overview of the data collection and usage ecosystem, the following appendix lists definitions of terms that are commonly used in the interactive advertising industry.

Appendix I – Data Definitions

The following definitions provide a standard list of commonly used terms. The data definitions were developed in conjunction with the IAB's Network and Exchange Committee.

Ad Click – The user activity of pressing a navigation button or hitting the enter key on the keyboard on an advertisement unit on a website (banner, button or text link). (See Click-through)

Ad Creative Pixel – (See Pixel)

Ad Exchange – Ad exchanges provide a sales channel to publishers and ad networks, as well as aggregated inventory to advertisers. They bring a technology platform that facilitates automated auction-based pricing and buying in real-time. Ad exchanges' business models and practices may include features that are similar to those offered by ad networks. See also "Ad network."

Ad Interaction – Users interacting with an ad not necessarily in the form of a click-through (e.g. hover, un-mute, start video, etc.).

Ad Network – Ad networks provide an outsourced sales capability for publishers and a means to aggregate inventory and audiences from numerous sources in a single buying opportunity for media buyers. Ad networks may provide specific technologies to enhance value to both publishers and advertisers, including unique targeting capabilities, creative generation, and optimization. Ad networks' business models and practices may include features that are similar to those offered by ad exchanges.

Ad Server – A computer application that enables the delivery, tracking and management of advertising content on publisher inventory.

- *Single-site Publisher Ad Server - Single-site Publisher Ad Servers focus on maximizing the yield to the publisher.*

Add to Cart – The user activity of storing merchandise in a virtual shopping cart that the user intends to later purchase from an online e-commerce website or mobile app. This enables users to continue browsing and "check-out" later or alternately delete these items from the cart.

Advertiser Ad Tag – Software code that an advertiser provides to a publisher or ad network that calls the advertisers ad server for the purposes of displaying an advertisement.

Advertising Banner (also called Ad Banner, Banner or Display Banner) – A static graphical image (GIF or JPEG fi les) or interactive content (Flash fi les) used to display an advertising unit on a website. Most banners enable users to click on ad to be redirected to another website.

Adware – Computer software provided to the user free of charge or at a discounted price that downloads and displays advertising to support its continued development and maintenance. This software often tracks what Internet sites the user visits.

Affiliate Conversion Data – Data that is collected by an affiliate marketing system when a user completes a transaction or manifests certain behaviors on a web page. The system typically collects this data by means of a conversion pixel that is placed on the merchant's site.

Affiliate Marketing – Affiliate Marketing is a method of generating leads or sales, whereby an online publisher is paid for referring users to an online e-commerce merchant. Referrals are measured by clicks, registrations or sales.

Aggregate Campaign Data – Data combined from several advertising campaigns to create a segment where campaign level data is not identifiable.

Agency – An organization that, on behalf of clients, plans marketing and advertising campaigns, drafts and produces advertisements, places advertisements in the media. In interactive advertising, agencies often use third party technology and may place advertisements with publishers, ad networks and other industry participants.

App – Application or program; most typically refers to one used on mobile devices or smartphones. See also "Mobile app."

Attribute – A single piece of information known about a user and stored in a behavioral profile which may be used to match ad content to users. Attributes consist of demographic information (e.g., age, gender, geographical location), interest or intent (e.g., auto enthusiast), and retargeting information (e.g., visited Site X two days ago). Segment or cluster information is derived from the user's prior online activities (e.g., pages visited, content viewed, searches made and clicking and purchasing behaviors). Generally, this is non-PII data.

Audience Measurement – The counting of unique users (i.e. audience) and their interaction with online content. At a campaign level, this service is conducted by a third party to validate that a publisher delivered what an advertiser had requested. At the industry level, this service enables media buyers to understand which brokers of online content to negotiate with to reach a specific audience.

Beacon – (See Pixel)

Behavioral Event – A user-initiated action that may include, but is not limited to: searches, content views, clicks, purchases, form-based information and other interactions.

Business Visitor – A user that accesses online content in furtherance of their employment.

Click-through – The measurement of a user clicking on a link that re-directs the user's web-enabled device to another web destination.

Clickstream Data – A clickstream is the recording of what a computer user clicks on or otherwise interacts with while web browsing. As the user clicks anywhere in the web page or application, the action is logged on a client server or inside the web server, as well as possibly the web browser and ad servers. Other kinds of information that can be recorded as clickstream data include mouse movements (e.g. hovering), form completion, and interactions with certain segments of the page like a media player's controls. Clickstream data analysis can be used to create a user profile that aids in understanding the types of people that visit a company's website or otherwise interact with its digital property, or to predict whether a customer is likely to purchase from an e-commerce website.

Client-to-Clien – Also called "C2C," is a data connection or relationship in which only one party need be an active part of the exchange. See also contrasting form of connection, "Server-to-server" (S2S).

Communication – The activity of conveying information by or to people or groups. Examples of online communication include email, instant messaging, text-messaging, group-messaging, video calling or using social media.

Connected Device – Any internet-enabled device that can display digital content (and digital advertising). Examples include smartphones, tablets, consoles, or connected vehicles.

Content (Site/Page) – Site content is the textual, visual or aural content that is encountered as part of the user experience on a website. It may include, among other things: text, images, sounds, animations and videos. Web content is dominated by the "page" concept, with multiple pages of related content typically forming a site.

Content Delivery Network (alternately Content Distribution Network) (CDN) – A service that hosts online assets and provides content management via servers located around the globe to reduce the latency of downloads to users.

Conversion Pixel – (See Pixel)

Conversion rate – The percentage of users who complete a desired action (e.g., purchase or registration) compared to all users who were exposed to an online ad.

Cookie – A small text fi le sent by a website's server to be stored on the user's web-enabled device that is returned unchanged by the user's device to the server on subsequent interactions. The cookie enables the website domain to associate data with that device and distinguish requests from different devices. Cookies often store behavioral information. A "first-party" cookie is code deposited on a user's browser by a site a user visited. A "third-party" cookie is code placed on a browser by a trusted partner of a site a user visits, but not by the site itself.

Cookie Matching – A method of enabling data appending by linking one company's user identifier to another company's user identifier, to create a richer user profile at the cookie level.

Creative Retargeting – A method that enables advertisers to display information (typically an ad) specifically to visitors that previously were exposed to or interacted with the advertisers' creative.

Cross-site Publisher Analytics – Services that provide normative metrics about and estimates of multiple publishers' inventory.

Cross-site Advertiser Analytics – Software or services that allow an advertiser to optimize and audit the delivery of creative content on pre-bought publisher inventory. Data can range from numbers of pages visited, to content visited, to purchases made by a particular user. Such data is used to surmise future habits of user or best placement for a particular advertiser based on success.

Data – Any information collected.

Data Aggregator – An organization that compiles data (collecting, refining and merchandising it) from individual sites to sell to others.

Data Append – User data from one source is linked to a user's profile from another source.

Data Collection / Data Capture – A way of collecting information from a web page, whereby a remote computer program copies information from a website that is designed to display information to a user.

Data, first-party (or "1st-party") – Data used to better target an audience segment, placed on a user's browser by a website that the user visited. Both publisher and advertisers consider first-party data to be any data provided to them by users either directly (e.g., a "first-party" cookie through a log-in experience or purchase history) or indirectly. See "Cookie."

Data, third-party (or "3rd-party") – Data used by online advertisers to better target an audience segment, placed on a user's browser—and originating from a trusted partner of a website a user visited, but not by the visited site itself. For example, demographic data from a third party might be used to enhance targeting by determining which auto ad (make or model) is best to display on an auto site. (Some examples of third-party data collectors and users include data aggregators, data management platforms (DMPs), and analytics firms, as well as ad networks and exchanges, which use 3rd party data to advertise to potentially interested users.) See also "Cookie."

Data Quality / Data Score / Data Scoring – A quantifiable indicator of how relevant a particular data point is. Quality scores are often derived algorithmically. For example, filling out a 'contact me' form for a car dealership with detailed information on the type of car a user is interested in would be valued higher than a user browsing a single car listing (although both activities may result in the user being qualified as an auto-intender, the first behavior is indicative of a higher level of intent by the user).

Data Management Platform (DMP) – a big data platform that ingests 1st-, 2nd- and 3rd-party data in order to drive well-informed marketing decisions and actions.

Data Segment – (See Segment)

Demand Side Platform (also called DSP, buy side optimizers, and buy side platforms) – Demand Side Platforms provide centralized (aggregated) media buying from multiple sources including ad exchanges, ad networks and sell-side platforms, often leveraging real time bidding capabilities of said sources. While there is some similarity between a DSP and an ad network, DSP's are differentiated from ad networks in that they do not provide standard campaign management services, publisher services nor direct publisher relationships.

Desktop Application – Software that is installed on a computer.

Deep Packet Inspection – A form of computer network packet filtering that examines the data and/or header part of a packet as it passes an inspection point. In the context of online advertising, it is used to collect data, typically through an Internet Service Provider, which can be used to display targeted advertising to users based on previous web activity.

Frequency Capping – The limit of how many times a given ad will be shown to a unique cookie during a session or within a specified time period.

Hit – The record of a single online transaction event stored in a log file. One page view may contain multiple hits, one for each image on a web page.

Home Visitor – A user that access online content from their residence.

Impression (also called a View) – A single display of online content to a user's web-enabled device. Many websites sell advertising space by the number of impressions displayed to users. An online advertisement impression is a single appearance of an advertisement on a web page. Each time an advertisement loads onto a user's screen, the ad server may count that loading as one impression. However, the ad server may be programmed to exclude from the count certain non-qualifying activity such as a reload, internal user actions, and other events that the advertiser and ad serving company agreed to not count.

Inventory – The aggregate number of opportunities near publisher content to display advertisement to visitors.

Internet Service Provider (ISP) (also called Online Service Provider) – A company that enables its customers to access the Internet.

Link (short for Hyperlink) – A text of graphical portion of a web page that, when selected, redirects the user's web-enabled device to another web page.

Lookalike modeling – Use of advanced statistical modeling techniques to discover audiences with favorable characteristics and exhibiting desired behaviors (e.g. high propensity to purchase a company's products over the next 30 days).

Metadata – Data that provides information about other data. This includes descriptions of the characteristics of information, such as quality, origin, context, content and structure.

Mobile App – software or program that is installed on a mobile device (for example, a smartphone or tablet); does not refer to the mobile operating system (OS).

Mobile App Tag – software or code found on Mobile devices that advertisers can use along with— or in place of—conventional (3rd-party) cookies to help segment and target a particular audience.

Multi-site company – A single entity that owns and operates multiple websites, each under a separate domain.

Non-Session data (also called out-of-session data) – Information that cannot be gleaned from a current, single event of a visitor.

Online Publisher – A creator and/or aggregator of online content, which often monetizes user visits by displaying advertisements.

Out-of-session data – (See Non-Session data)

Pass Back – An impression offered to a media buyer with the right of first refusal, such that when this right is exercised the impression is offered to another media buyer.

Personalization – Aggregating previous online activity to match non-ad related information to users.

Personalization Service – Software or service that enables websites to match non-ad related information to user.

Personally Identifiable Information (PII) – User data that could be used to uniquely identify the consumer. Examples include name, social security number, postal address, and email address.

Piggyback Pixel – (See Pixel)

Pixel (also called Beacon or Web Beacon) – An HTML object or code that transmits information to a third-party server, where the user is the first party and the site they are interacting with is the second party. Pixels are used to track online user activity, such as viewing a particular web page or completing a conversion process. See Ad Creative Pixel, Conversion Pixel, Publisher Pixel.

- **Ad Creative Pixel –** A pixel request embedded in an ad tag that calls a web server for the purpose of tracking that a user has viewed a particular ad.
- **Conversion Pixel –** An image tag or code that transmits to a third-party server that a user has successfully completed a process (such as purchase or registration).
- **Piggyback Pixel –** An image tag or code that redirects a user browser to another pixel not directly placed on the publisher page.

Profile – Profile is the collection of attributes describing segments, clusters or aggregated data, including prior online activity of a user.

Profile Aggregator – A profile aggregator collects data from various third-party sources to generate behavioral profiles.

Profile Database – Profile Database a server-side store of behavioral profiles.

Publisher Pixel – An object embedded in a web page (typically a 1x1 image pixel) that calls a web server for purposes of tracking some kind of user activity.

Publisher Ad Tag – Code that is placed on a publisher's web page that calls an ad server for the purposes of displaying an advertisement.

Purchase – The user activity of completing an e-commerce transaction.

Referring URL – The address of the web page that a user previously visited prior to following a link.

Registration – The user activity of subscribing to a website or requesting additional information by filling in personally identifying contact details.

Retargeting (or re-targeting) – The use of a pixel tag or other code to enable a third-party to recognize particular users outside of the domain from which the activity was collected. See Creative Retargeting, Site Retargeting.

Really Simple Syndication (RSS) – Metadata about content that enables a website to distribute new content with identical metadata to a subscriber of this feed.

RSS Reader – Software or website that aggregates syndicated content (e.g., news headlines, blogs, and podcasts) into a single location for easy viewing.

Screen Scraping – See Data Collection / Data Capture.

Software development kit – A software development kit, or "SDK," allows for the creation of applications for a development platform. A mobile SDK is a set of software development tools for developers to create applications specifically for mobile operating systems. Mobile developers may utilize certain mobile SDKs created by advertising platforms to display ads within their mobile applications.

Search – The act of entering a query at a search engine by entering in a series of keywords describing their desired content.

Search Click – A click originating from a list of links returned by a query to a search engine.

Search Engine – A website that provides a searchable index of online content, whereby users enter keywords describing what they are seeking and the website returns links related to this search query.

Segment (also called Data Segment or audience) – A set of users who share one or more similar attributes.

"Server to server" – Also called "S2S," is a connection or relationship involving a direct form of electronic communication between two parties in which both have to be an active party to the exchange. This is in contrast to a Client-to-Client or "C2C" electronic connection, in which only one party need be an active part of the exchange.

Sell Side Platform (also called sell side optimizers, inventory aggregators, and yield optimizers) – Sell Side Platforms provide outsourced media selling and ad network management services for publishers. Sell-side platform and ad networks business models and practices are similar. Sell-side platforms are typically differentiated from ad networks in not providing services for advertisers. Demand Side Platforms and Ad Networks often buy from Sell Side Platforms.

Single-site Publisher Analytics – Software or services that analyze information about users, including metrics such as unique visitors and site usage. The collected data is used only on behalf of the site from which the data is collected.

Site/Page/Position Transparency – Ability for the buyer of media (typically an advertisement) to understand the location and context within which the media will be displayed. Transparency can be

at the level of web property (site), page content (page) or position (specific location within page). Site transparency, in the context of a network or an exchange, refers to the ability of a buyer of inventory to know the exact identity of the website domain or page on which they have shown advertisements.

Spyware – Computer software that is installed surreptitiously to intercept or take partial control over the user's interaction with a computer, without the user's informed consent. Spyware programs can collect various types of information, such as Internet surfing habits, but can also interfere with user control of the computer in other ways, such as installing additional software, and redirecting web browser activity. The software usually does not contain generally accepted standards of notice describing what the purpose and/or behavior of the software is nor does is usually contain visible or functioning choice mechanisms for complete uninstall. The programs are typically characterized by behaviors that can be considered deceptive if not harmful to the user and/or his computer.

Targeted Advertisement – An advertisement that is shown only to users exhibiting specific attributes or in a specific context or at a particular time of day.

Targeting –

Type	Definition
Audience Targeting	A method that enables advertisers to show an ad specifically to visitors based on their shared behavioral, demographic, geographic and/or technographic attributes.
Behavioral Targeting	Using previous online user activity (e.g., pages visited, content viewed, searches, clicks and purchases) to generate a segment that is used to match advertising creative to users (sometimes also called **Behavioral Profiling, Interest-based Advertising**, or online behavioral advertising).
Contextual Targeting	Targeting content that deals with specific topics, as determined by a contextual scanning technology.
Creative Retargeting	A method that enables advertisers to show an ad specifically to visitors that previously were exposed to or interacted with the advertisers' creative.
Demographic Targeting	A method that enables advertisers to show an ad specifically to visitors based on demographic information such as age, gender and income which may come from, site registration data or an inference-based mechanism.
Geographic Targeting	A method that enables advertisers to show an ad specifically to visitors based on zip code, area code, city, DMA, state, and/or country derived from user-declared registration information or inference-based mechanism.
Keyword Targeting	Targeting content that contains specific keywords.
Search Retargeting	A method that enables advertisers to show an ad specifically to visitors based on one or more searches or search click events.
Semantic Targeting	A type of contextual targeting that also incorporates semantic techniques to understand page meaning and/or sentiment.
Site Retargeting	A method that enables advertisers to show an ad specifically to previous site visitors when they are on third-party websites.
Time-based Targeting	A method that enables advertisers to show an ad specifically to visitors only on certain days of the week or times of the day (also known as Day Parting).

Third-party Data – See "Data, third-party."

Toolbars – A strip of icons installed in a software application or web page providing quick access to certain functions.

Uniform Resource Locator (URL) (also known as Uniform Resource Identifier (URI)) – An Internet address composed of the protocol type (such as http:, ftp:, or gopher:) and the name of the server to be contacted (e.g., www.site.com).

Unique User – An individual user that has interacted with online content, which is smaller than or equal to the number of cookies observed. The number of unique users to a website is usually an estimate.

User Agent – Text sent as part of the HTTP protocol that identifies aspects of the software accessing the Internet and the web-enabled device on which it is running. This information typically includes the application name, its version, the host operating system, and the user-preferred language.

User Registration Data – Information gathered as part of a registration process. User registration data is used for many purposes including, but not limited to, establishing an identity to be used to access the same website in the future. User registration data may be as simple as a username and password, or may be as extensive as the user's name, address, phone number, gender, income, education and other demographic information.

Visit – The set of interactions between a user and a website. Because the Internet is a stateless environment there is no end of-visit event to signal to the website when the visit is finished. Thus, the visit is measured by the set of interactions with less than a set duration of minutes between these interactions (e.g., 30-minutes of inactivity ends the visit).

Web Beacon – (See Pixel)

Web-enabled Application – A user-facing program installed on a device that enables users to access the Internet. Examples include browsers, widgets and toolbars.

Web Page – A set of online content identified by a URL.

Website – A set of web pages that are designed and presented to be linked together by a single owner.

Widgets (also known as Plug-in or Applet) – A program or tool that allows a user to view, search, play, or do some other action separate from a typical web page. Widgets can be defined by a variety of new digital tools available to marketers when such widgets have space within which marketers can advertise.

Appendix II—Data Definitions / Digital Term Equivalents for Radio Broadcast Terms

CPM ("Cost per mille") – CPP (Cost Per Point);

Daily uniques – AQH Persons; average number of persons that hear a radio spot

DMA (designated market area) MSA (metro service area)

Gross Impressions (GI) – GRPs (gross rating points)

Impressions (AUDIO) – Spots (typically:15's or :30's)

Monthly Unique Visitors – "Unduplicated listeners (Audience)"

RFP ("Request for Proposal") – Avail Request

Weekly Unique Visitors – "Weekly (unduplicated) Cume"