

**Before the  
Federal Trade Commission  
Washington, DC**

In the Matter of )  
 )  
Real-time Targeting and )  
Auctioning, Data Profiling )  
Optimization, and Economic Loss )  
to Consumers and Privacy )  
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**Complaint, Request for Investigation, Injunction, and Other Relief:**

**Google, Yahoo, PubMatic, TARGUSinfo,  
MediaMath, eXelate, Rubicon Project, AppNexus, Rocket Fuel,  
and Others Named Below**

I. Introduction

1. Recent developments in online profiling and behavioral targeting—including the instantaneous sale and trading of individual users, which increasingly involve the compilation and use of greater amounts of personal data—have all contributed to what is now standard practice online. A vast ecosystem of online advertising and data auctions and exchanges, demand- and supply-side platforms, and the increasing use of third-party data providers that bring offline information to Internet profiling and targeting, operates without the awareness or consent of users. As explained by online marketer AppNexus, “...Internet ad exchanges... are basically markets for eyeballs on the Web. Advertisers bid against each other in real time for the ability to direct a message at a single Web surfer. The trades take 50 milliseconds to complete.”<sup>1</sup>
2. This massive and stealth data collection apparatus threatens user privacy. It also robs individual users of the ability to reap the financial benefits of their own data—while publishers, ad exchangers and information brokers (so-called “ad optimizers”) profitably cash in on this information. Beyond these concrete harms, we also believe the Federal Trade Commission (the “Commission”) must address the moral and ethical consequences to consumers and citizens when

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<sup>1</sup> Garrett Sloane, “amNY Special Report: New York City’s 10 Hottest Tech Startups,” *amNewYork*, 25 Jan. 2010, <http://www.amny.com/urbanite-1.812039/amny-special-report-new-york-city-s-10-hottest-tech-startups-1.1724369> (viewed 1 Apr. 2010).

they are subjected to an invisible system that sells access to them—wherever they go online—to third parties.

3. While advances in computational advertising and other forms of automation related to the behavioral targeting of individuals can provide positive benefits for publishers and advertisers, such technology must be deployed in a manner that both protects consumers and respects their dignity as human beings.<sup>2</sup>
4. There should not be a stealth digital “Scarlet Algorithm” imposed on a consumer that details an array of information and behavior that can be used by others to make decisions about that individual. Companies that undertake such invasive practices also stand logic on its head when they claim that such information is anonymous—when the truth is that *individuals* are being bought and sold.
5. These business practices, moreover, affect almost every Internet user:
  - Yahoo’s Right Media Exchange processes 9 billion transactions daily.<sup>3</sup>
  - According to Google/DoubleClick Ad Exchange, “Hundreds of thousands of AdSense publisher sites are now available on the Ad Exchange.”<sup>4</sup>
  - MediaMath serves more than “13 billion impressions a day.”<sup>5</sup>
  - TARGUSinfo “delivers more than 62 billion real-time attributes a year... on the Web, over the phone and at the point of sale.”<sup>6</sup>
  - Pubmatic “processes more than 100,000 data transactions per second through ads served for 6,000 publishing customers.”<sup>7</sup>

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<sup>2</sup> “Computational advertising is a new scientific sub-discipline, at the intersection of information retrieval, machine learning, optimization, and microeconomics. Its central challenge is to find the best ad to present to a user engaged in a given context, such as querying a search engine (‘sponsored search’), reading a web page (‘content match’), watching a movie, and IM-ing.” Yahoo Research, “Computational Advertising,” [http://research.yahoo.com/Computational\\_Advertising](http://research.yahoo.com/Computational_Advertising) (viewed 1 Apr. 2010).

<sup>3</sup> Rob Leathern, “The Real Costs of Real-Time Bidding (RTB),” *AdExchanger.com*, 10 Dec. 2009, <http://www.adexchanger.com/data-driven-thinking/real-costs-real-time-bidding-rtb/> (viewed 1 Apr. 2010).

<sup>4</sup> DoubleClick, “Announcing the New DoubleClick Ad Exchange,” <http://www.doubleclick.com/insight/blog/archives/doubleclick-advertising-exchange/announcing-the-new-doubleclick-ad-exchange.html> (viewed 3 Apr. 2010).

<sup>5</sup> “MediaMath, TARGUSinfo Team For Verified Audience Targeting,” 30 Mar. 2010, <http://www.mediamath.com/pressrelease-MediaMath-TargusInfo-Mar2010.html> (viewed 3 Apr. 2010).

<sup>6</sup> “MediaMath, TARGUSinfo Team For Verified Audience Targeting.”

- The Rubicon Project reaches “more than 500 million unique Internet users... across more than 400 top ad networks in the U.S. and abroad....”<sup>8</sup>
  - BlueKai provides “actionable data to marketers, ad networks, and publishers on over 200 million retail, travel, auto, education and financial product shoppers online.... The BlueKai Exchange gives marketers access to over 10,000+ combinations of intent, demographic, geographic, lifestyle, B2B data and additional segments.”<sup>9</sup>
  - eXelate recently “agreed to provide Nielsen with its data covering 150 million internet users.”<sup>10</sup>
6. CDD, U.S. PIRG, and the World Privacy Forum ask the Commission to investigate these practices, including the data and advertising exchanges operated by Microsoft, Google, and Yahoo, as well as the range of leading companies supporting the auctioning and data collection/targeting system, including BlueKai, Rubicon, and AppNexus. CDD, U.S.PIRG, and the World Privacy Forum urge the FTC to protect consumers by ensuring they have meaningful control over their information, and to seek injunctive and compensatory relief. These practices are Unfair and Deceptive Trade Practices, subject to review by the Commission under section 5 of the Federal Trade Commission Act.

## II. Parties

7. The Center for Digital Democracy (CDD) is a not-for-profit organization based in Washington, D.C. CDD works to protect the interests of both consumers and citizens in the online marketplace. Through a series of complaints and other actions at the FTC, CDD has played a leading role in encouraging the Commission to investigate and address the privacy and consumer protection issues related to digital marketing and advertising.<sup>11</sup>

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<sup>7</sup> Leena Rao, “PubMatic Launches Dynamic Ad Price Prediction Tool,” *TechCrunch*, 24 June 2009, <http://techcrunch.com/2009/06/24/pubmatic-launches-real-time-ad-price-prediction-tool/> (viewed 3 Apr. 2010).

<sup>8</sup> Rubicon Project, “We’re Hiring!,” <http://www.rubiconproject.com/about/hiring/> (viewed 3 Apr. 2010).

<sup>9</sup> “BlueKai’s Pulse Index Shows Online Travel Intent Actions Rose Sharply in January,” 11 Feb. 2010, <http://www.bluekai.com/press/20100211.html> (viewed 3 Apr. 2010).

<sup>10</sup> David Kaplan, “Nielsen Taps eXelate As Behavioral Targeting Ally,” *paidContent.org*, 15 Mar. 2010, <http://paidcontent.org/article/419-nielsen-taps-exalate-as-behavioral-targeting-ally/> (viewed 3 Apr. 2010).

<sup>11</sup> See, for example, Center for Digital Democracy and U.S. PIRG. Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Online Marketing Practices. Federal Trade

8. U.S. PIRG serves as the federation of non-profit, non-partisan state Public Interest Research Groups. PIRGs are public interest advocacy organizations that take on powerful interests on behalf of their members. For twenty years, U.S. PIRG has been concerned with privacy and compliance by governments and commercial firms with Fair Information Practices (FIPs). U.S. PIRG has published investigative reports, filed complaints, petitions and amicus briefs and testified before Congress, federal agencies and state legislatures on issues including compliance with FIPs by online and offline firms, credit bureau accuracy, identity theft, security breach notification, privacy disclosures and notices and other matters concerning the uses of consumer information.
9. The World Privacy Forum is a nonprofit, non-partisan public interest research group. The organization is focused on conducting in-depth research, analysis, and consumer education in the area of privacy. It is the only privacy-focused public interest research group conducting independent, longitudinal work. The World Privacy Forum has had notable successes with its research, which has been groundbreaking and consistently ahead of trends. World Privacy Forum reports have documented important new areas, including medical identity theft. Areas of focus for the World Privacy Forum include health care, technology, and the financial sector.

### III. Practices That Threaten Consumer Privacy

10. Real-Time Bidding [RTB] “is the fastest growing segment of U.S. online advertising.... With RTB, advertisers have the great level of transparency available on the individual user in real-time.... Having greater transparency

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Commission Filing. November 1, 2006, <http://www.democraticmedia.org/files/pdf/FTCadprivacy.pdf>. Center for Digital Democracy and U.S. PIRG, “Supplemental Statement In Support of Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Online Marketing Practices,” Federal Trade Commission Filing, 1 Nov. 2007, [http://www.democraticmedia.org/files/FTCsupplemental\\_statement1107.pdf](http://www.democraticmedia.org/files/FTCsupplemental_statement1107.pdf). Center for Digital Democracy and U.S. PIRG. Complaint and Request for Inquiry and Injunctive Relief Concerning Unfair and Deceptive Mobile Marketing Practices. Federal Trade Commission Filing. January 13, 2009, [http://www.democraticmedia.org/current\\_projects/privacy/analysis/mobile\\_marketing](http://www.democraticmedia.org/current_projects/privacy/analysis/mobile_marketing). EPIC, Center for Digital Democracy, and U.S. PIRG, “In the matter of Google, Inc. and DoubleClick, Inc., Complaint and Request for Injunction, Request for Investigation and for Other Relief, before the Federal Trade Commission,” 20 Apr. 2007, [http://www.epic.org/privacy/ftc/google/epic\\_complaint.pdf](http://www.epic.org/privacy/ftc/google/epic_complaint.pdf). EPIC, Center for Digital Democracy, and U.S. PIRG, “In the matter of Google, Inc. and DoubleClick, Inc., Second Filing of Supplemental Materials in Support of Pending Complaint and Request for Injunction, Request for Investigation and for Other Relief,” 17 Sept. 2007, [http://epic.org/privacy/ftc/google/supp2\\_091707.pdf](http://epic.org/privacy/ftc/google/supp2_091707.pdf) (all viewed 12 Oct. 2009).

about the user in real-time provides great insights to advertisers, but it is the difference in how media is bought and sold with real-time bidding is the game changer....” RTB “can buy impressions to reach specific users or reject them as the campaign is in progress.”<sup>12</sup> The recent developments in online profiling and targeting represent a significant shift in how media for advertising is bought and sold: individual users, via impression targeting, can be purchased. The expansion of user targeting dramatically brings new threats to consumer privacy.

11. As explained during PubMatic’s Ad Revenue 2009 conference, online marketers now can identify and target in “real-time” the “Right Impression, Right User, Right Time, and Right Buyer.”<sup>13</sup> In a paper on ad-price prediction, PubMatic explains that its “Machine Learning Approach.... includes data-mining that processes more than 100,000 data transactions per second....” These “Real-Time algorithms can use significantly more data points to make ad serving decision.... [and] can make a unique decision in real-time for each and every ad impression.” A detailed flow description is provided that explains when a “user on a publisher’s website makes a page request. The impression is then analyzed for dozens of different data points including context, frequency, geography, day part, browser, user demographics, and more.”<sup>14</sup> A key advantage for publishers in this process is PubMatic’s ability to determine ad pricing based on how many times the user has seen a particular ad.<sup>15</sup>
12. As Mark Zagorski, chief revenue officer at data exchange eXelate, told *ClickZ News*, “Who a user is is becoming more important than where they are.” Zagorski highlighted certain types of data as particularly valuable to advertisers, such as information on household income, interests, and purchase-intent.<sup>16</sup>
13. There is now a significant shift in how media operate. Users and audiences are actually *acquired*—no matter where they may happen to be or go online. Advertisers can now spend more money to acquire profiling data so they can

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<sup>12</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” Feb. 2010, [http://www.pubmatic.com/wp-content/uploads/2010/02/PubMatic\\_RTB\\_White\\_Paper.pdf](http://www.pubmatic.com/wp-content/uploads/2010/02/PubMatic_RTB_White_Paper.pdf) (viewed 1 Apr. 2010).

<sup>13</sup> Amar Goel, “Ad Revenue 2009 Opening Keynote,” 8 Oct. 2009, <http://www.slideshare.net/PubMatic/ad-revenue-2009-opening-keynote> (viewed 1 Apr. 2010).

<sup>14</sup> PubMatic, “Online Ad Revenue Optimization: Real-Time Price Prediction Offers New Opportunities,” 26 Apr. 2009, <http://www.masternewmedia.org/online-ad-revenue-optimization-real-time-price-prediction-offers-new-opportunities/> (viewed 1 Apr. 2010).

<sup>15</sup> PubMatic has “over 6,000 publishers” using this “optimization platform.” PubMatic, “Ad Price Prediction: 2nd Generation Ad Revenue Optimization for Publishers,” 2009, <http://www.pubmatic.com/wp-content/uploads/2009/07/PubMatic.AdPricePrediction.2009.pdf> (viewed 1 Apr. 2010).

<sup>16</sup> Quoted in Jack Marshall, “Data Costs Surpass Media Costs, Agencies Say,” *ClickZ*, 29 Mar. 2010, <http://www.clickz.com/3639894> (viewed 1 Apr. 2010).

target a consumer than the cost of running an ad, including for financial interactive marketing.<sup>17</sup> As Yahoo's online ad auction service Right Media explained in a "primer" for data providers: "Data providers are changing the advertising landscape by focusing on who sees ads rather than where ads appear. Here is how it works: When consumers go to certain web sites, the page places a tag (or 'cookie') within the browser—tracking that a particular browser visited a particular site. In some cases, a data provider (which can also be described as a data 'collector') pays the web site for the ability to do this. The cookie enables the data provider to follow consumers and track their online 'behavior.'"<sup>18</sup>

14. Recent press reports document these developments. As one article described, "Now, companies like Google, Yahoo and Microsoft let advertisers buy ads in the milliseconds between the time someone enters a site's Web address and the moment the page appears. The technology, called real-time bidding, allows advertisers to examine site visitors one by one and bid to serve them ads almost instantly.... Using data providers like BlueKai or eXelate, AppNexus can add information about what a person has been doing online. 'It's a lot about being able to get the right users, but it's also about passing on certain instances where we don't think you're in the market, based on what you've been doing in the past hour,' Mr. Ackley [vice president for Internet marketing and advertising at eBay] said.... Until the arrival of real-time bidding, said Mr. Mohan of Google, 'the technology hasn't really been there to deliver on the promise of precise optimization, delivering the right message to the right audience at the right time' in the display world."<sup>19</sup>
15. Another story describes how "Digital-marketing companies are rapidly moving to blend information about consumers' Web-surfing behavior with reams of other personal data available offline, seeking to make it easier for online advertisers to reach their target audiences.... eXelate will tie its data on more than 150 million Internet users to Nielsen's database, which includes information on 115 million American households, to provide more-detailed profiles of consumers. 'We can build [consumer] profiles from any building

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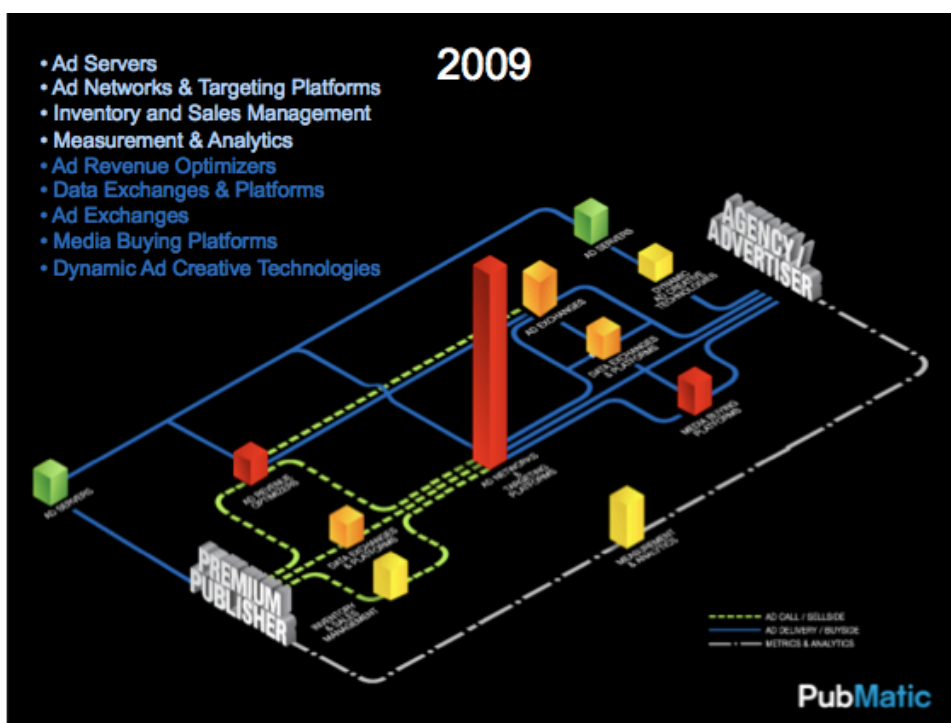
<sup>17</sup> Marshall, "Data Costs Surpass Media Costs, Agencies Say."

<sup>18</sup> Right Media, "Data Providers," <http://rightmedia.yahoo.com/data-providers> (viewed 1 Apr. 2010).

<sup>19</sup> Stephanie Clifford, "Instant Ads Set the Pace on the Web," *New York Times*, 11 Mar. 2010, <http://www.nytimes.com/2010/03/12/business/media/12adco.html> (viewed 1 Apr. 2010). Microsoft, which acquired ad exchange company ADECN in 2007, is now in the process of "ramping" up its capabilities. Emile Litvak, "AdECN delivers - RTB goes live!" *The Turn Blog*, 17 Feb. 2010, <http://blog.turn.com/2010/02/17/adecn-delivers---rtb-goes-live/> (viewed 4 Apr. 2010).

blocks,, says Meir Zohar, chief executive of eXelate... 'Age, gender, purchase intent, interests, parents, bargain shoppers—you can assemble anything.'"<sup>20</sup>

16. A recent report, “Real Time Bidding Changes Everything,” explained that “The implementation of true RTB changes the game. Because auctions and delivery are processed almost instantaneously and ad impressions can be bid on individually, the likelihood the buyer gets to address the audience they want to reach increases dramatically. The buyer has more scope to cherry-pick the ad impressions to bid on. With true RTB, marketers can bid on and buy individual impressions, or rapidly build custom block bids for impressions.”<sup>21</sup> Each impression is valued in real-time, using, as AppNexus explains, “hundreds of data points on a per impression basis.”<sup>22</sup>



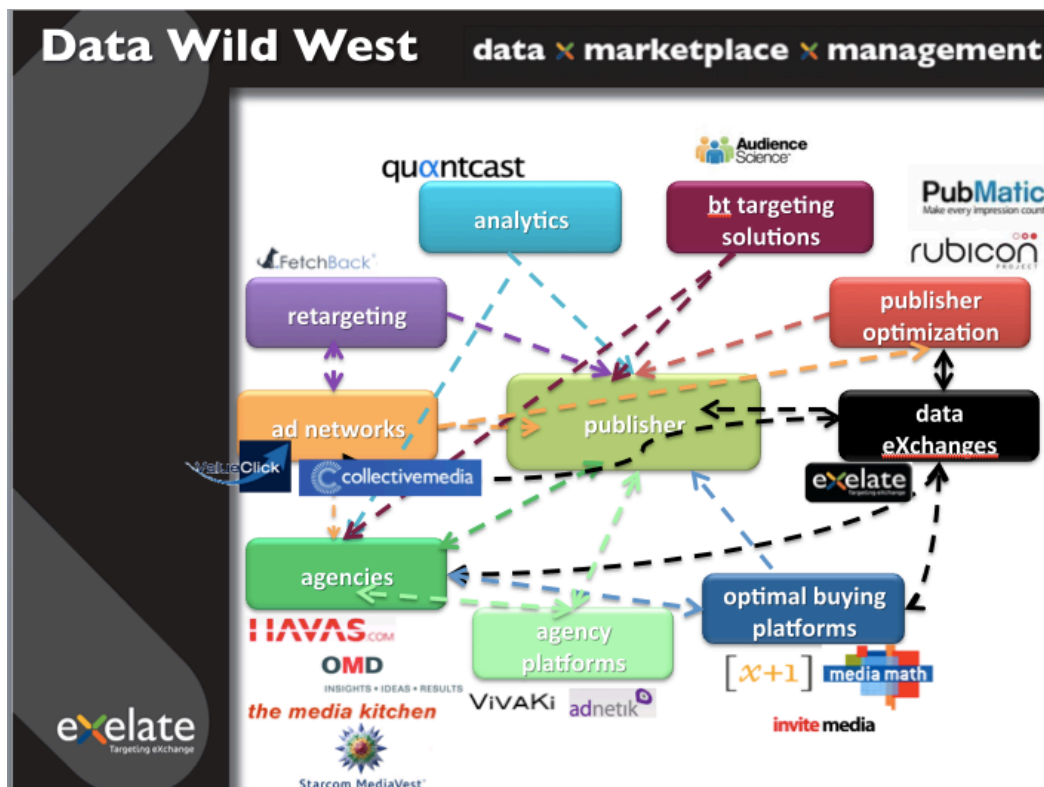
from PubMatic Chairman Amar Goel's "Ad Revenue 2009 Opening Keynote."

<sup>20</sup> Emily Steel, “Exploring Ways to Build a Better Consumer Profile,” *Wall Street Journal*, 15 Mar. 2010, <http://online.wsj.com/article/SB10001424052748703447104575117972284656374.html?KEYWORDS=exelate> (subscription required).

<sup>21</sup> DeSilva + Phillips, LLC, “Getting Real: Ad Exchanges, RTB, and the Future of Online Advertising,” Mar. 2010, <http://www.mediabankers.com/PDF/Getting%20Real%20White%20Paper.pdf> (viewed 1 Apr. 2010). The report explains the process this way as well: “The implementation of real-time bidding (RTB) on inventory-trading platforms or ad exchanges, letting advertisers or their agents buy at value prices and deliver individual ad impressions to audiences visiting a publisher site in real time.”

<sup>22</sup> Netezza Corporation, “Uniting Online Advertisers and Publisher Inventory Aggregators with a Real-Time Ad Buying Platform,” <http://www.netezza.com/documents/AppNexus-Case-Study.pdf> (viewed 1 Apr. 2010).

17. We are now faced with a veritable “Wild West” of data collection, with all sorts of practices that fail either to protect consumer privacy or to provide for reasonable understanding of the data collection process, including significant variations in how cookies are stored and the outside data sources used.<sup>23</sup> Ad agencies, publishers, and intermediaries are now focused on what they are calling “the holy grail of targeting”: capturing the individual consumer.<sup>24</sup> As PubMatic explains in one of its white papers, “Retargeting and Behavioral targeting uses information collected on an individual’s web-browsing behavior, such as the pages they have visited or the searches they have made, to select which advertisements to display to that individual.”<sup>25</sup>



from Mark Zagorski's DigiDay 2009 presentation

18. The emergence of demand-side platforms (DSPs), explains Yahoo, has enabled the greater use of data for the targeting of online users. As the company notes, “Historically, the only data an advertiser could use in a buy was that developed

<sup>23</sup> Rubicon Project, “2009 Online Advertising Marketing Report Q4: Emerging Trends and Outlook,” p. 21, <http://www.undertone.com/news/pdf/Rubicon-Q409-Market-Report.pdf> (viewed 1 Apr. 2010).

<sup>24</sup> “Demand-Side Ad Buying Platforms will Improve Customer Targeting,” Fresh Blog, 16 Mar. 2010, <http://blog.2fresh.com/2010/03/demand-side-ad-buying-platforms-will.html> (viewed 1 Apr. 2010).

<sup>25</sup> PubMatic, “Automating an End to Ad Network Defaulting,” 2009, <http://www.pubmatic.com/wp-content/uploads/2009/07/PubMatic.DefaultOptimization.2009.pdf> (viewed 1 Apr. 2010).



and owned by the publisher. Now, DSPs allow holding companies to leverage advertiser-side data, including purchase data, in their campaigns. This makes media-buy decision-making much more precise.” Yahoo also admits that online marketers are also able to use their data collection systems involving demand-side platforms to track users more closely to ensure “frequency control”: “If an advertiser uses a single DSP, the DSP can manage how many times a user receives an ad from that advertiser.”<sup>26</sup>

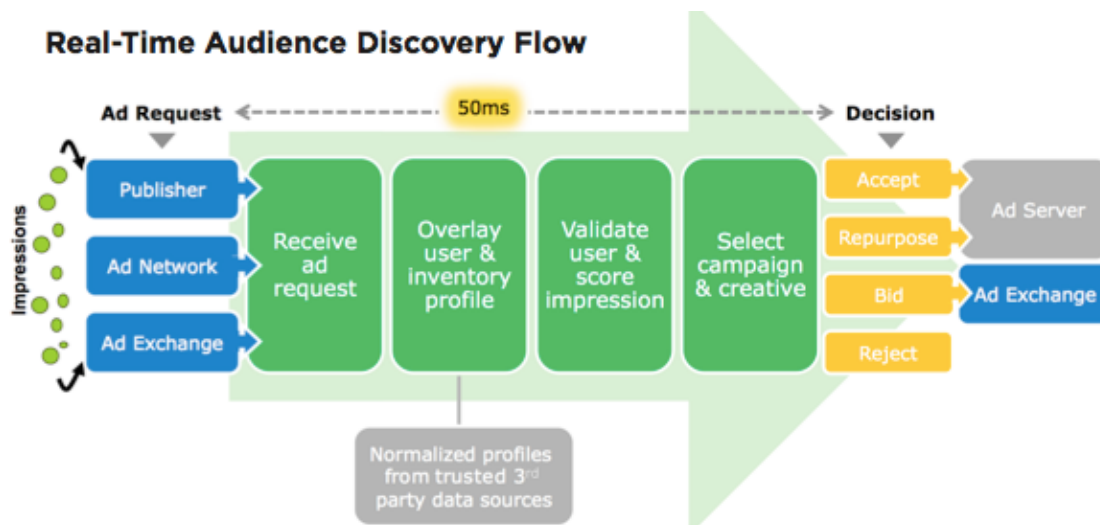
19. So-called “real-time optimization” is able to generate data and actionable insights on individual consumers. For example, Data Xu’s “platform analyzes over 100 data parameters, across context, consumer and creative. We predict which combinations are most likely to produce the actions you specify, whether it’s clicks, web site visits or specific conversion actions.... Your customized algorithms guide our system to scan the Web for pages being loaded, and decide how valuable each available ad impression could be to your campaign. Our real-time system picks and prices individual impressions as they become available, in less than 50 milliseconds. You pay only what each impression is worth to you—based on your specific goals. With this approach, campaign optimization becomes as dynamic as the web itself.”<sup>27</sup> Real-time bidding enables “Dynamic auction pricing per individual impression, enabled by bids entered in real-time, on an impression-by-impression basis.” Targeting is accomplished by the “Selection of individual impressions based on customized narrow targeting parameters.” Such a system, as Data Xu explains, provides for an online targeting environment that is “Enhanced by impression-by-impression pricing, precise targeting, and impression-by-impression valuation.”<sup>28</sup>

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<sup>26</sup> “Audiences on Demand, Part II,” Yahoo Advertising Blog,” 12 Mar. 2010, <http://www.yadvertisingblog.com/blog/2010/03/12/audiences-on-demand-part-ii/> (viewed 1 Apr. 2010).

<sup>27</sup> DataXu, “How it Works,” <http://www.dataxu.com/how-it-works.php> (viewed 1 Apr. 2010).

<sup>28</sup> DataXu, “Real-Time Bidding,” <http://www.dataxu.com/bidding.php> (viewed 1 Apr. 2010).



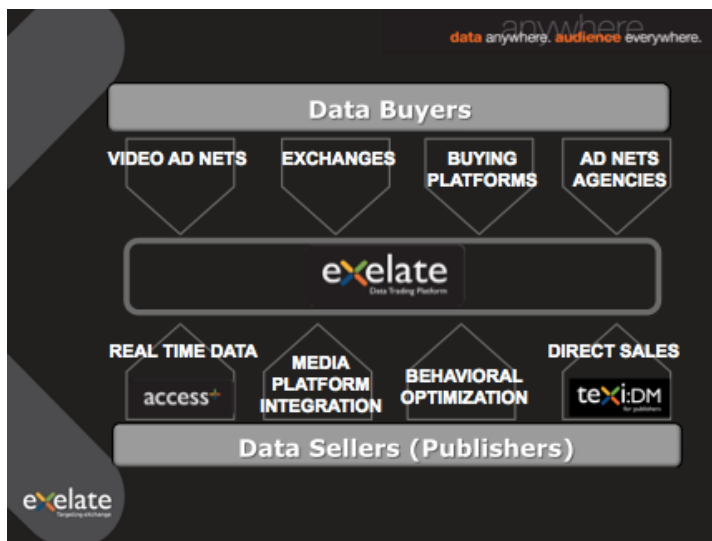
*from Aggregate Knowledge, "Take Control Over Your Audiences"*

20. The incorporation and use of an array of outside data sources for instantaneous online marketing profiling and targeting—so called third-party data—add to the privacy threat, as more information on a user is compiled, generated, and sold. For example, among the user-level data sources now being integrated with the already significant data collected on a user’s online behavior are eXelate and BlueKai. FTC inaction has contributed to decisions by the data collection and targeting industry that it can expand the use of consumer information for profiled targeting. For example, there is now an “open marketplace for behavioral targeting data [the eXelate exchange] which enables data buyers to build an instant behavioral targeting function and optimize their campaign delivery.” eXelate “gathers online consumer data through deals with hundreds of Web sites. The firm determines a consumer’s age, sex, ethnicity, marital status and profession by scouring Web-site registration data. It pinpoints, for example, which consumers are in the market to buy a car or are fitness buffs, based on their Internet searches and the sites they frequent. It gathers and stores the information using tracking cookies, or small strings of data that are placed on the hard drive of a consumer’s computer when that consumer visits a participating site. Advertisers, in turn, purchase cookie data from eXelate and use it to buy targeted online ads.” eXelate’s recent agreement with Nielsen will “will allow advertisers to go to eXelate to buy New York-based Nielsen’s trove of data converted to a cookie-based digital format. That data comes from sources including the Census Bureau, the firm’s own research and that of other consumer-research firms, such as Mediamark Research and Experian Simmons.”<sup>29</sup>

21. According to eXelate, its system of “behavioral optimization” involves what they call “120 million uniques,” making it “the largest data exchange.” As the company

<sup>29</sup> Steel, “Exploring Ways to Build a Better Consumer Profile.”

explains the process, “We are capturing billions of deep granular data points—what we call qualified targeting events—on multiple activity levels. We analyze the targeting events in our data lab and roll them into specific Targeting Segments based on three high level categorizations. These categorizations include Demographic data derived from user site registration information on top social nets (NOT inferred information), consumer Interest data gathered from specific site activity on relevant vertical sites (such as parenting and auto enthusiast sites), and deep purchase Intent data culled from relevant commerce activity on top transactional sites. We further segment and sub-segment this data into relevant buckets that in many cases drill down to the product and keyword level.”<sup>30</sup>



*from Mark Zagorski's DigiDay 2009 presentation*

22. Other third-party data services include such data providers as DataLogix, TargusInfo, Bizo, Nielsen Claritas, and Polk. Recently, eXelate joined with Invite Media, promising to provide “real time targeting data” that “will be able to access and leverage identity, interest and purchase intent targeting data on over 200M US eXelate Segment UV across multiple media exchanges allowing for instant audience building capability, massive reach and real time performance feedback.”<sup>31</sup>

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<sup>30</sup> “eXelate Announces Invite Media Partnership; CEO Zohar Offers Insights On Data Marketplace,” 26 Jan. 2010, <http://www.adexchanger.com/data-exchanges/exelate-invite-media/> (viewed 1 Apr. 2010).

<sup>31</sup> “eXelate and Invite Media Partner to Deliver Seamless Targeting Data Access and Performance Reporting Across Multiple Media Exchanges,” 26 Jan. 2010, <http://www.exelate.com/new/info-pressreleases-16.html>. See also Collective, “The Audience Engine,” <http://www.collective.com/data> (both viewed 1 Apr. 2010).

23. The merging of outside sources of data for targeting online users is a significant new threat to consumer privacy. Few users know such a system exists. For example, “data firm Aperture, a division of Datran Media, which pulls data from offline giants like Experian, Acxiom, and Nielsen’s Claritas to form detailed portraits of individuals on the web, and then combines that with Datran’s massive database of e-mail addresses. The difference between what Aperture is doing and others is that each cookie does represent a real consumer...”<sup>32</sup> Even industry lobbyists agree that “The line between merging online and offline data isn’t no-man’s land anymore; it’s becoming more of a common practice.”<sup>33</sup>
24. So-called “intent data” on users compiled and sold by BlueKai, for example, includes information on a user’s behavior—including when they have engaged in a financially related transaction. Blue Kai, in its media kit entitled “Take the Mystery Out of Targeting,” explains that it is “building the world’s largest database of true intenders... a repository of these intent signals.” This user data is obtained from “branded sites with access to purchase, shopping comparison, or auction behavior.” It can include user information such as “price search by make and model or destination city; activity on loan calculators and comparison sites.”<sup>34</sup> BlueKai is “tagging intent behaviors across the Internet. Data providers submit information into the exchange using BlueKai’s tagging technology. We then classify the data based on purchase intent categories such as travel, auto, retail shopping, and so on.”<sup>35</sup> BlueKai says that its data helps marketers both define their targets and also “target them across any ad network or portal.”<sup>36</sup>

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<sup>32</sup> Michael Learmonth, “Holy Grail of Targeting Is Fuel for Privacy Battle,” *Advertising Age*, 22 Mar. 2010, [http://adage.com/digital/article?article\\_id=142903](http://adage.com/digital/article?article_id=142903) (viewed 1 Apr. 2010).

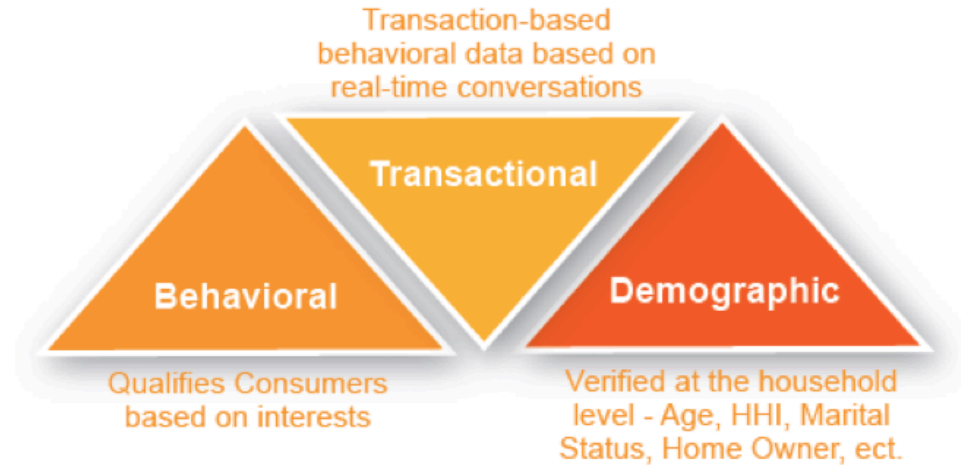
<sup>33</sup> Learmonth, “Holy Grail of Targeting Is Fuel for Privacy Battle.”

<sup>34</sup> BlueKai, “Take the Mystery Out of Targeting,” <http://www.bluekai.com/files/mediakitBlueKai.pdf> (viewed 1 Apr. 2010).

<sup>35</sup> BlueKai, “Data Sellers,” <http://www.bluekai.com/data-sellers.html> (viewed 1 Apr. 2010).

<sup>36</sup> BlueKai, “Agencies/Marketers,” <http://www.bluekai.com/data-buyers-agency.html> (viewed 1 Apr. 2010).

## Aperture Leverages 3 Levels of Targeting Intelligence



from Aperture's DigiDay 2009 presentation

25. The web of relationships sharing and selling “integrated data” on a consumer and sets of consumers is expanding significantly. For example, MediaMath, which says it targets “11 billion biddable impressions” daily, partnered with BlueKai last December to generate “enhanced audience targeting.” Such fine-grained data for targeting is delivering results, explains BlueKai: “Using impression-level bidding against in-market auto shopping data from BlueKai, MediaMath was able to deliver five times the targeting accuracy at 20 percent of the cost of reaching those users.... That’s a 25x improvement to campaign efficiency...”<sup>37</sup>
26. The use of third-party data for instantaneous user targeting, explains TARGUSinfo, can “layer data on top of an ad impression prior to bidding on that impression. The systems are able to ingest data from third parties and associate it with the user. Rather than creating user profiles that combine data from multiple sources as the ad networks do, DSPs map an available impression to a user who has specific characteristics that align with an agency RFP.... Agencies are more frequently requesting that their campaign impressions be targeted utilizing specific data sets from named data providers.... Data exchanges sell these data points in real-time auctions; the winning bidder has the data transferred to them for use in ad targeting and optimization. There is an increasing trend in moving more branded data through these data exchanges, giving agencies and media buyers more power, visibility and transparency.... How is the data delivered? Be sure to ask how the data is connected to either

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<sup>37</sup> “MediaMath and BlueKai Partner to Deliver Enhanced Audience Targeting Across Ad Exchanges,” 3 Dec. 2009, <http://www.bluekai.com/press/20091203.html> (viewed 1 Apr. 2010).

cookies or a delivery platform. Is there a cookie-matching methodology that utilizes pixels and/or java script in the browser? Does the provider use unique IDs to match user's offline? Is there server-side delivery? ...How regularly is the data refreshed? Depending on the variety, data can go out of date almost before it goes into use. What's the point in targeting your campaign based on out-of-date data? Be sure to ask how often data is refreshed."<sup>38</sup>

27. TARGUSinfo's "AdAdvisor" expands the data used for behavioral targeting, placing additional identifiers for targeting a consumer. As of December 2009, the company said it has "Over 80 million unique cookies.... Over 40%" of online users (and was predicted to grow to 100 million unique cookies by the end of the First Quarter 2010." AdAdvisor "can accurately identify people who are likely to exhibit a certain behavior and help advertisers reach them online. A consumer AdAdvisor identifier can include "age, gender, zip code... [and] Thousands of profiles and attributes." "Financial, Food/Drug, Travel" are other markets targeting a consumer are identified. The company says it has a "proprietary relationships with over 200 authoritative data sources" used by some of the "largest media spenders." Its data points include "purchase behaviors," "risk factors," "urbanicity," and "travel preferences."<sup>39</sup>
28. DataLogix promises it can "can apply almost any 'real-world' or offline data set to the tens of millions" of what it calls its own brand of "anonymous cookies." Purchase and buying data involving 210 million U.S. consumers are for sale, along with "individual" demographics that include age, income and marital status.<sup>40</sup>
29. Yahoo and its Right Media Exchange have new relationships for user data-based targeting, including DataXu, Invite Media, MediaMath, Turn, and X+1. "Yahoo will allow the DSPs [demand-side platforms] to access inventory in its ad network and Right Media Exchange in real time, meaning they can match users to targeted ads based on the attributes of each ad impression."<sup>41</sup>

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<sup>38</sup> TARGUSinfo, "What to Know, What to Ask: The Definitive Guide to Exploring Data Providers for Online Targeting," 2010, pp. 5-6.

<sup>39</sup> TARGUSinfo AdAdvisor presentation at "digiday: TARGET," 8 Dec. 2009; Dave Helmreich, "TARGUSinfo Integrates Data Into Demdex Behavioral Bank, Discusses The Data Biz," AdExchanger.com, 10 Mar. 2010, <http://www.adexchanger.com/data-exchanges/targusinfo-integrates-data-into-demdex-behavioral-bank-discusses-the-data-biz/> (viewed 1 Apr. 2010).

<sup>40</sup> DataLogix, "DLX Platform," <http://affiniti.datalogix.com/index.php?id=6> (viewed 1 Apr. 2010).

<sup>41</sup> Joe Mandese, "GroupM Revises Terms for All Online Ad Buys, Claims Data is 'Confidential'" *MediaPost*, 2 Feb. 2009, [http://www.mediapost.com/publications/?fa=Articles.showArticle&art\\_aid=99481](http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=99481) (viewed 1 Apr. 2010).

30. Datran's Aperture "will leverage its universe of 100+ million audience profiles to identify who is visiting your Web site, who is being exposed to your advertisers' campaigns, and who is responding to specific ads. Real-time reports paint an accurate picture of whom your audience really is and who is responding to your communications—at the household level!"<sup>42</sup> Datran Media says it can enhance targeting by providing "key demographic attributes including age, income, gender, etc., and identifies your customer's interests and affinities by leveraging a proprietary online behavioral database."<sup>43</sup> Through merging of online and offline information on a consumer, Datran says that "we have found that when used together they yield the best results...."<sup>44</sup>
31. Rubicon's "Targeted Audience Program" (TAP) "allows publishers to deliver on the long-promised goal of Internet advertising.... Target specific users on a publishers site." "The Data Intelligence layer of REVV™, upon which TAP is built, ...aggregates data from a full spectrum of third-party data providers as well as site user and page data to create a holistic view of audience; Affinity Scoring drives insight into visitors' real interests and behavior, applying proprietary data mining algorithms to extract patterns and reveal audience insight...."<sup>45</sup>

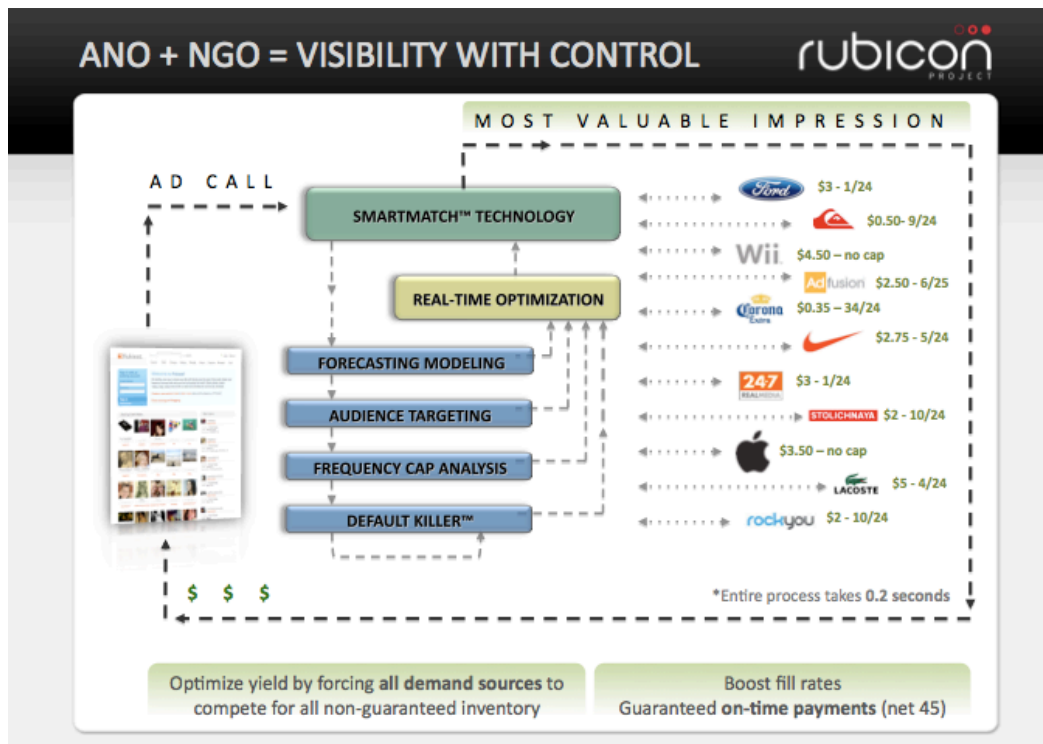
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<sup>42</sup> Aperture, "Audience Measurement," <http://www.datranmedia.com/aperture/audience-measurement/index.php?showtype=for-publishers> (viewed 1 Apr. 2010).

<sup>43</sup> Datran Media, "Data Appends," <http://www.datranmedia.com/data-appends/> (viewed 1 Apr. 2010).

<sup>44</sup> Scott Knoll, "Online and Offline Data Used Together Yield Best Results Says Datran Media SVP Of Display Knoll," AdExchanger.com, 27 July 2009, <http://www.adexchanger.com/data-exchanges/online-offline-data-svp-of-display-knoll/> (viewed 1 Apr. 2010).

<sup>45</sup> "Audience-based Sales Now Drive 10% of Online Advertising Revenue For Web's Premium Publishers," 9 Dec. 2009, <http://www.rubiconproject.com/about/press/audience-based-sales-now-drive-10-of-online-advertising-revenue-for-webs-pr/> (viewed 1 Apr. 2010).



*from Rubicon Project presentation, "The Future of Yield Management Optimization"*

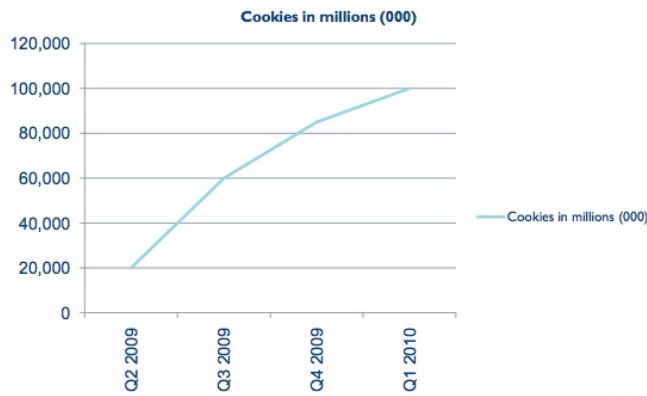
32. Companies are increasingly integrating all this third-party data as they track a user. For example, "[x+1]'s Smart Tagging System allows the synchronization of data... —either a company's customer data or third-party data from providers like Targus Info, Datalogix, and eXelate, or both—allowing for more precise and effective targeting."<sup>46</sup>

<sup>46</sup> "[x+1]'s New Audience Targeting Platform with a Smart Tagging System Transforms the Entire Internet into a Company's Website," 18 Mar. 2010, [http://eon.businesswire.com/portal/site/eon/permalink/?ndmViewId=news\\_view&newsId=20100318005816&newsLang=en](http://eon.businesswire.com/portal/site/eon/permalink/?ndmViewId=news_view&newsId=20100318005816&newsLang=en). For a description of how online ad exchanges engage in cookie syncing, see Vivek Vaidya, "Cookie Syncing," The Official Krux Digital Blog, 24 Feb. 2010, <http://blog.kruxdigital.com/2010/02/24/cookie-syncing/> (both viewed 1 Apr. 2010).



- Over 80 million unique cookies today – stable, persistent, and growing
- Over 40% of online US population represented
- Continue to add coverage partners and offline data assets

### Current Growth & Forecast



TARGUSinfo

from TARGUSinfo's DigiDay 2009 presentation

33. Ad exchange targeting involves many sensitive areas that require scrutiny by the Commission. For example, Google's DoubleClick Ad Exchange permits the targeting of a wide range of health and financial behaviors. These include arthritis, diabetes, GERD and digestive disorders, migraines, sleep disorders, pain management, credit cards, loans and insurance.<sup>47</sup> Among the "certified" ad networks working with Google are Turn, X+1, Data Xu, Datran Media, MediaMath, RocketFuel, and Appnexus.<sup>48</sup>
34. According to Privacy Choice, "Any site in the vast AdSense network may now carry ads placed by third-party ad companies, which Google calls 'certified ad networks.' This is an important privacy development, as it means that more than 80 new companies may now use or collect user behavioral information through Google ad tags that are already installed on millions of web pages."<sup>49</sup>
35. Rocket Fuel, which engages in data optimization, "is integrated with all of the leading ad exchanges.... We build designer audiences for your campaign by buying individual impressions of the users.... The Rocket Fuel Platform is

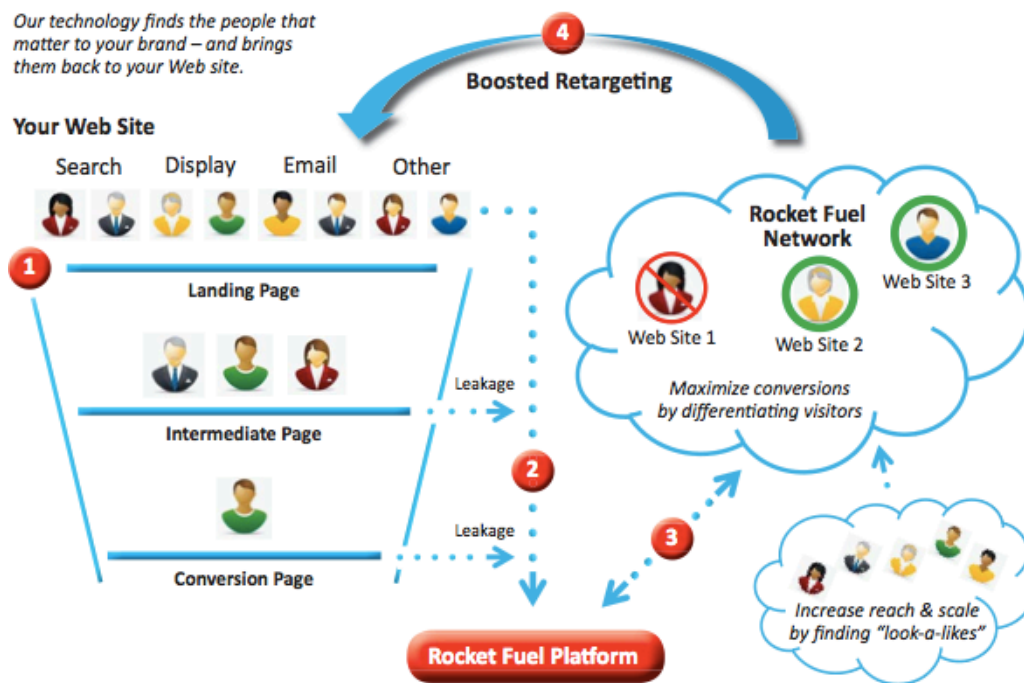
<sup>47</sup> DoubleClick, "Category Targeting Codes," <http://www.google.com/support/adxbuyer/bin/answer.py?answer=156178> (viewed 1 Apr. 2010).

<sup>48</sup> "Google's Certified Ad Networks," privacychoice, 18 Mar. 2010, <http://privacychoice.wordpress.com/googles-certified-ad-networks-as-of-31810/> (viewed 3 Apr. 2010).

<sup>49</sup> "AdSense Opens Up to 'Certified Ad Networks': Three Questions for Google," privacychoice, 22 Mar. 2010, <http://privacychoice.wordpress.com/2010/03/22/adsense-opens-up-to-certified-ad-networks-three-questions-for-google/> (viewed 3 Apr. 2010).

integrated with many of the leading third-party data providers—allowing us to leverage demographic, interest, lifestyle, past purchase, behavioral, in-market, social, purchase intent and search data.... We go beyond other audience targeting technologies by layering multiple unique data sources....”<sup>50</sup>

36. According to Rocket Fuel CEO George John, his company’s “...purpose-built technology drives results for advertisers by automatically leveraging massive amounts of internal and third-party external data and serving only the best impressions in the context of each advertiser’s unique marketing objectives.... Rocket Fuel is able to use rapid automated testing and user-level targeting to adjust campaigns around the clock....”<sup>51</sup>



from Rocket Fuel’s description of its Retargeting Booster platform

37. While the goals of the online ad/user trading system, including promoting greater “transparency and efficiency [and] reduced transaction costs,” are important, the system is also dependent on harvesting “deeper audience-insight and intent data... enabling advanced audience targeting.”<sup>52</sup>

<sup>50</sup> Rocket Fuel, “Rocket Fuel Demand-Side Platform,” [http://rocketfuelinc.com/html/technology/demandside\\_platform.html](http://rocketfuelinc.com/html/technology/demandside_platform.html) (viewed 1 Apr. 2010).

<sup>51</sup> “Rocket Fuel CEO John Says Ad Exchanges More Like A Technology Platform Than Media Source,” AdExchanger.com, 24 Aug. 2009, <http://www.adexchanger.com/ad-networks/rocket-fuel-ad-exchanges/> (viewed 1 Apr. 2010).

<sup>52</sup> DeSilva + Phillips, LLC, “Getting Real: Ad Exchanges, RTB, and the Future of Online Advertising.”

38. AppNexus, is an “advanced ad platform for real-time advertising” that integrates “leading third-party data providers.” It explains that by “[s]ynching profile information to target your most profitable users... [advertisers can] avoid spending money on your least-profitable users.”<sup>53</sup>
39. The compilation and analysis of data on users in real-time involve highly sophisticated data mining technologies that few users—and likely regulators!—understand. For example, both AppNexus and MediaMath demand-side platforms use the “TwinFin Data warehouse and analytics appliance,” designed to “analyze truly massive data volumes.”<sup>54</sup> MediaMath explained that “[w]ith the Netezza TwinFin appliance supporting our system, we’re able to analyze ever larger amounts of data to deliver better campaign results, precision audience targeting against a deeper array of profiling characteristics, powerful insights into campaign success drivers, and important innovations like cross channel attribution.”<sup>55</sup>
40. AppNexus explained that its ad buying platform was serving “tens of billions of advertising impressions per month (over 30,000 ad requests per second),” and that “[W]hen AppNexus initially deployed Netezza as its data warehouse platform, the company was processing 1.5 million requests each day. After one month, that number grew to five million, and by its third month requests grew to 400 million requests each day.”<sup>56</sup>

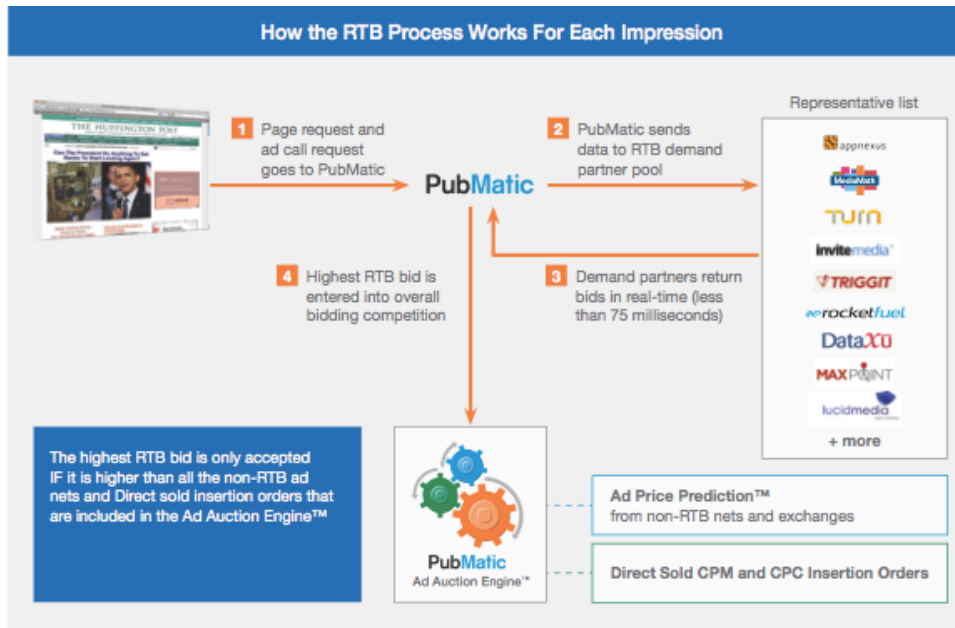
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<sup>53</sup> AppNexus, “Introducing the AppNexus Real-Time Ad Platform,” <http://www.appnexus.com/> (viewed 1 Apr. 2010).

<sup>54</sup> Netezza, “Netezza TwinFin i-Class Advanced Analytic Appliance,” <http://www.netezza.com/data-warehouse-appliance-products/twinfin-i.aspx> (viewed 1 Apr. 2010).

<sup>55</sup> “MediaMath Adopts Netezza’s Twinfin to Support Market-Leading Media Trading Platform,” 17 Dec. 2009, <http://www.netezza.com/releases/2009/release121709.htm> (viewed 1 Apr. 2010).

<sup>56</sup> AppNexus, “Netezza in Action,” <http://information-technology.converanet.com/CVN01/cachedhtml?hl=keywords&kw=s%3Acpr%5C.CBLT2+d%3Anetezza.com&cacheid=ds1-va:p:1001t:8626261830056:cdaacaf52af38263:4b054309&scopeid=defLink> (viewed 1 Apr. 2010).



from PubMatic's "Understanding Real-Time Bidding (RTB) From the Publisher Perspective"

41. The ad exchange system discussed above has also migrated to the mobile platform—posing new and ever-expanding privacy risks. As mobile marketer Mobclix explains under the boast "Target Acquired," "We have the largest pool of aggregate mobile data available. Our audience segments allow you to target exactly who you want and when you want. Baby boomers, or maybe soccer moms and outdoor enthusiasts? We'll deliver, you'll get results. Target based on geography, behavior, vertical, and demographics. Maximize performance through goal-based targeting, bidding, defined budgets, and frequency caps so your ads don't go stale."<sup>57</sup> Mobclix incorporates Nielsen PRIZM and ConneXions data.<sup>58</sup>
42. The Rubicon Project now offers its services for mobile targeting of consumers, including "Integration with all major third party mobile ad networks" and "real-time reporting."<sup>59</sup>
43. "Real-time bidding," according to a PubMatic report, "allows advertisers to reach the right user, in the right place, at the right time—and assign an individual value to a particular ad impression. Leveraging advanced technology offered by a relatively small but quickly growing number of companies, advertisers place

<sup>57</sup> Mobclix, "Amazing Engagement for Advertisers: Audience Segments & Rich Media Ads..." <http://www.mobclix.com/advertiser> (viewed 3 Apr. 2010).

<sup>58</sup> Mobclix, "The Future of Mobile Precision Marketing is Here," <http://www.mobclix.com/nielsen/> (viewed 3 Apr. 2010).

<sup>59</sup> Rubicon Project, "REVV for Mobile," <http://www.rubiconproject.com/REVV/revv-product-suite/revv-for-mobile> (viewed 3 Apr. 2010).

bids on reaching specific users dynamically, and on an impression-by-impression basis.... With RTB, advertisers have the greatest level of transparency available on the individual user in real-time, which can significantly increase the value of each ad impression and the corresponding publisher CPM.”<sup>60</sup>

44. PubMatic also explains that “Transparency increases the value of the Impression.” What they mean is transparency into a consumer’s behavior so that “real-time individual attributes” can be targeted.”<sup>61</sup>
45. Real-time bidding and tracking is different from traditional behavioral targeting via an ad network. As PubMatic explains, “Having greater transparency about the user in real-time provides great insight to advertisers, but it is the difference in how media is bought and sold with real-time bidding that is the true game changer.”<sup>62</sup>
46. Major advertising agencies are also engaged in buying and using a consumer's data, including WPP, Havas, Omnicom, and Publicis.<sup>63</sup>
47. Personal data gleaned from users of various social media platforms is also for sale and incorporated into demand-side platforms and ad networks. Rapleaf, which says it has “data on 900+ million records, 400+ million consumers, [and] 52+ billion friend connections” provides such “targeted audience data.”<sup>64</sup> Rapleaf makes it clear that its “data is about individuals,” collected via “blogs, forums, social networks, discussion boards, etc.”<sup>65</sup>

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<sup>60</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” pp. 4, 6.

<sup>61</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” pp. 6-7.

<sup>62</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” p. 8.

<sup>63</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” p. 15.

<sup>64</sup> Rapleaf, “Marketing to Your Influencers,” <http://www.slideshare.net/Rapleaf/how-to-market-to-your-influencers-3530390> (viewed 2 Apr. 2010).

<sup>65</sup> “Thrift and Pseudo-RDF [sic] Schemas,” RapLeaf Blog, 10 Mar. 2010, <http://blog.rapleaf.com/dev/?p=441> ; “Rapleaf Focusing On Social Data And Enabling Advertisers To Buy Audiences That Have Affinities With Their Brand Says CEO Hoffman,” AdExchanger.com, 1 Feb. 2010, <http://www.adexchanger.com/data-exchanges/rapleaf-focusing-on-social-data-and-enabling-advertisers-to-buy-audiences-that-have-affinities-with-their-brand-says-ceo-hoffman/> (both viewed 5 Apr. 2010).

### Real Results in Real Time

Rapleaf's API gives you access to the most up-to-date and complete online consumer data available today – right when you need it. Rapleaf's API lets you integrate Rapleaf data into existing platforms to help you do the following instantly:

- Make real-time decisions
- Understand the online social characteristics of your audience
- Verify customer information
- Qualify web leads
- Append information to customer databases
- And much more

### Fresh, Accurate Intelligence

Rapleaf's data is collected from public information across social media. Unlike traditional data vendors, we constantly search for the latest information so you always have up-to-date intel.

### Unmatched Scale and Reach

We pride ourselves on enterprise-level data capabilities. Today, Rapleaf:

- Has insight into **625+ million** email addresses
- Indexes over **2 million** new emails every day
- Processes **5 million** transactions daily
- Averages **30 ms** response times for API queries

### Instant Customer Profiles

Email	Name	Age	Gender	Location	Friends
john@rapleaf.com	John Doe	28	M	Covington, GA	117
john@rapleaf.com	Melissa Arke	29	F	New York, NY	89
john@rapleaf.com	John Ramirez	37	M	Fayetteville, NC	303
anna@rapleaf.com	Anna Collins	25	F	VA	251
patrick@rapleaf.com	Patrick Sene	43	F	Tulsa, OK	37
steven@rapleaf.com	Steven Lee	32	M	Richmond, VA	237
mary@rapleaf.com	Mary Blisk	46	F	Ottawa, Canada	54
danielle@rapleaf.com	Danielle Day	32	F	Vallejo, CA	91

From an email address, you can discover the following information instantly:

- Social network memberships and profiles
- Demographics – name, age, gender, location, occupation, and more
- Email activity history and recency
- Friend counts and relationships
- And much more

### Pricing: Pennies Per Query

Pricing for Rapleaf's API starts at just a few cents per email query with discounts available for high-volume users.

### Want More Information?

For more information on Rapleaf's API and how other clients are using it, please contact [sales@rapleaf.com](mailto:sales@rapleaf.com).

*from RapLeaf's description of its online marketing API*

## Cloud Computing

48. The FTC should also investigate the security and safety of such massive amounts of user data that are made available via the “cloud.” For example, “With the AppNexus cloud, clients have the capability to stream AppNexus’ data to their own data centers using AppNexus’ custom Pack and Rat tool and/or they can outsource their entire data center operations to the cloud.... With the cloud offering, buyers can now add their own website-specific data to the Netezza-powered environment and AppNexus will host the data....”<sup>66</sup> This apparatus is now incorporating mobile and likely location data as well.

49. Mobclix’s AD Exchange “...offers developers complete transparency and performance, connecting them with the leading ad networks in the space—including Quattro Wireless, Videoegg, Millennial Media, Jumptap, Smaato, mDOTm, and others.”<sup>67</sup> It is now using a cloud-based advanced data mining

<sup>66</sup> AppNexus, “Netezza in Action.”

<sup>67</sup> “Mobclix: A Truly Open Ad Exchange,” Mobclix Blog, 28 Aug. 2009, <http://blog.mobclix.com/2009/08/28/mobclix-a-truly-open-ad-exchange/> (viewed 3 Apr. 2010).

system: “As the first open marketplace for mobile advertising, Mobclix needed a database with unlimited scalability and the horsepower for real-time predictive analysis and behavioral targeting to ensure we serve ads from the highest paying network at any given moment,” said Shankar Radhakrishnan, Mobclix data architect. “Aster nCluster Cloud Edition is the only data warehouse on AWS that allowed us to update our analytics environment for the next stage of our business—letting us store, scale, and process terabytes of complex data in the Cloud, quickly and at a low cost.”<sup>68</sup>

#### IV. Economic Loss to Users, While Others Gain Financially

50. The so-called “Second Channel” is advertising inventory sold by intermediaries, such as ad exchanges. According to ThinkEquity, the Second Channel will generate 34% of all publisher revenue by 2013, some \$11.4 billion.<sup>69</sup> This system, which involves what is called “yield optimization,” takes advantage of a user’s data to increase the revenue that publishers and other marketers generate by each impression. Instead of acknowledging that the user has a proprietary right in his or her data, companies are trading such information as if it were private commodities. BlueKai, for example, as it builds “the world’s largest database of intentions,” explains to sellers of user and other information that their “data will be auctioned to the highest bidders, resulting in maximum yield and revenue.... Reap the benefits of maximum yield when hundreds of buyers compete and bid for your data.”<sup>70</sup>
51. PubMatic’s “Understanding Real-time Bidding from the Publisher’s Perspective” provides further support for the economic benefits publishers and advertisers derive from consumer data. It is evident from the report that “having more information about each individual user” via “impression level buying” (including those they determine aren’t the correct prospect) increases the value of the impression for both the publisher and advertiser.<sup>71</sup>
52. As PubMatic notes, the ability to closely track a user’s direct connection with a digital marketing message enables companies to “allocate the highest paying campaigns to the first user impression, followed by the next highest paying ad campaign and so on. The algorithms take this frequency pricing into

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<sup>68</sup> “Mobclix Selects Aster Data to Move Analytics to the Cloud,” 17 Dec. 2009, <http://www.asterdata.com/news/091217-Aster-Data-Mobclix.php> (viewed 3 Apr. 2010).

<sup>69</sup> “ThinkEquity: The Growth Of Non-Premium Display Advertising,” ExchangeWire.com, 1 July 2009, <http://www.exchangewire.com/2009/07/01/thinkequity-the-growth-of-non-premium-display-advertising/> (viewed 2 Apr. 2010).

<sup>70</sup> BlueKai, “Data Sellers.”

<sup>71</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective.”

consideration and will choose not to show an ad if the user has seen it enough times that the value is too low.... [T]his technology is incredibly valuable and provides significant and long-term revenue lift.”<sup>72</sup>

53. “PubMatic has found that publishers monetizing ad inventory via RTB can receive an increased eCPM because of the improved campaign performance that RTB offers. In the case of one particular US Entertainment publisher, the publisher was able to achieve a 106% increase in eCPM over a six-month period.”<sup>73</sup>
54. PubMatic also describes the process where marketers and publishers have more data on a user. With so-called “impression level buying” they are able to generate greater revenue because they know more about that individual user.<sup>74</sup>



from Pubmatic’s “Understanding Real-Time Bidding (RTB) From the Publisher Perspective.”

55. The value of user data harnessed by these platforms and services is generating higher returns for marketers.<sup>75</sup> Publishers, ad agencies, and marketers are all trying to capitalize on the data of each consumer—thereby causing that consumer a financial loss. None of the so-called consumer benefits of real-time targeting—the “faster loading times” for an ad and whether they provide a “better user experience” make up for this financial loss.<sup>76</sup> The availability of so-called free content is an insufficient return to a consumer for their loss of privacy, including their autonomy.

<sup>72</sup> PubMatic, “Ad Price Prediction: 2nd Generation Ad Revenue Optimization for Publishers.”

<sup>73</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” p. 4.

<sup>74</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective,” pp. 9-11.

<sup>75</sup> “Turn Releases Next Generation of its Media Buying and Optimization Platform,” 26 Jan. 2010, <http://www.turn.com/corp/about/press/press-100126.jsp> (viewed 2 Apr. 2010).

<sup>76</sup> Pubmatic, “Understanding Real-Time Bidding (RTB) From the Publisher Perspective.” See also IAB, “Networks & Exchanges Quality Assurance Guidelines,” Feb. 2010, [http://www.iab.net/ne\\_guidelines](http://www.iab.net/ne_guidelines) (viewed 2 Apr. 2010).



## V. The Privacy “Opt-outs” Established are Ineffective

56. Across this new data collection and targeting system are flimsy promises of protecting user privacy. Cookies placed on a unique browser are still described as “anonymous,” according to these privacy policies. Users are told that if they want to change their settings, they can go to a “registry” or some other form of cumbersome opt-out. Companies named in this complaint have varying times for retaining and storing user data, thereby failing to provide consumers with a clear and understandable expectation of the process. Membership in the Network Advertising Initiative (NAI) is frequently cited, as if that involves some magical privacy voodoo cure that meaningfully protects consumers. The system of collection and use is purposefully ambiguous and not an honest reflection of data collection and use practices, further underscoring why the commission must abandon reliance on privacy policy notices as a meaningful consumer safeguard.<sup>77</sup>

57. eXelate also claims it is concerned about privacy because it “clearly allows for consumer opt-out from any targeting as well as engage[s] and support[s] groups such as the NAI.”<sup>78</sup> As an example of how distorted the debate on privacy is, marketers still claim that cookies and outside data attached to them aren’t so called PI. For example, in a statement about its new arrangement to use Nielsen PRIZM data, the companies claim that “neither eXelate nor Nielsen have access to any PII data in the process that we have set up in which no individually identifiable information is included in the cookie that is delivered to the user. Only the general PRIZM cluster that they belong to is ever delivered by Nielsen and identified by eXelate in its targeting cookie.”<sup>79</sup> Yet the combination of eXelate and Nielsen data now align “household-level offline data” into a “behavioral targeting” exchange.”<sup>80</sup>

58. Another example of an inadequate privacy policy approach is an illogical explanation from Datalogix. Once again, users are given a take-it-or-leave-it

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<sup>77</sup> See, for example, BlueKai, “How Does it Work?” <http://www.bluekai.com/howitworks.html>; BlueKai, “BlueKai Privacy Guidelines,” <http://www.bluekai.com/privacyoverview.html> (both viewed 2 Apr. 2010).

<sup>78</sup> “eXelate’s Zagorski Discusses Nielsen PRIZM Offline Data Integration, Looks At Impact,” AdExchanger.com, 15 Mar. 2010, <http://www.adexchanger.com/data-exchanges/exelates-nielsen-prizm/> (viewed 2 Apr. 2010).

<sup>79</sup> “eXelate’s Zagorski Discusses Nielsen PRIZM Offline Data Integration, Looks At Impact.”

<sup>80</sup> “eXelate and Nielsen Align to Bring Offline Household Level Data Into eXelate's Targeting Exchange,” 15 Mar. 2010, <http://www.prnewswire.com/news-releases/exelate-and-nielsen-align-to-bring-offline-household-level-data-into-exelates-targeting-exchange-87644852.html> (viewed 5 Apr. 2010).

policy, sending people without providing context to the NAI site. But more disturbing is the company's explanation, effectively buried, asking "When do consumers get notice that they are participating in DataLogix online ad targeting?"<sup>81</sup> They explain, in part, that "Each of our partners is required to provide you notice and choice at the time you register or purchase a product online that the registration or purchase information you voluntarily submit and other information may be shared with third parties for online ad tailoring. Registration with our partners can occur, for example, when you sign up for a sweepstakes offer, request information on a product or service, sign-in to a social networking portal, make a purchase, or respond to an email promotion." Datalogix cookies, meanwhile, expire after 24 months."<sup>82</sup>

59. MediaMath illustrates the online marketing industry's illogical persistence that cookies for individual targeting via a per-impression auction is not considered personally identifiable, and fails to trigger consumer privacy concerns. "In the course of delivering an ad to you," the company claims, "MediaMath does not collect personally identifiable information about you. In other words, we do not collect information, such as your name, address, phone number, or email address. However, MediaMath does collect certain non-personally identifiable information about you.... The non-personally identifiable information that we collect is used for the purpose of targeting ads and measuring the effectiveness of ads on behalf of MediaMath's advertisers.... MediaMath may receive non-personally identifiable data, such as behavioral, contextual or demographics, through partnerships with online and offline 3rd party data providers." MediaMath also makes it clear that the cookie is a "unique" number that benefits advertisers and online marketing companies: "A MediaMath cookie is a unique number that is assigned to you the first time MediaMath serves you an ad or identifies you on a client's website.... [C]ookies help MediaMath ensure that you don't repeatedly see the same advertisement." In another example of maintaining user data for long periods of time, MediaMath says it "sets our cookies to expire after five years and the expiration date updates every time you encounter our server. MediaMath retains the web log data for ninety days and aggregations and reports for up to three years."<sup>83</sup>

60. Turn, a demand-side platform, also claims that the data it collects is non-PII, and that it's "in compliance with the NAI's Self-Regulatory Principles." Its privacy policy states that it "does collect and use Non-PII, including: the IP address used to access the Internet... how many Business Partner web pages have been viewed, search terms entered on Business Partner websites, referring/exit pages, and the date and time a Turn Ad was viewed.... Turn uses cookies and web

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<sup>81</sup> DataLogix, "Privacy," <http://www.datalogix.com/index.php?id=19> (viewed 2 Apr. 2010).

<sup>82</sup> DataLogix, "Privacy."

<sup>83</sup> MediaMath, "Privacy Policy," <http://www.mediamath.com/privacy.html> (viewed 2 Apr. 2010).

beacons.... by tracking the way in which you may respond to, select and interact with a Turn Ad or any content provided therein, or the location and context in which you view a Turn Ad). Turn’s cookies also help control the number of times you view a Turn Ad.... Turn also uses web beacons, in combination with cookies, to analyze usage patterns. The use of a web beacon allows Turn to record that someone has visited a particular webpage, along with additional Non-PII that the website may choose to include with the beacon.... We retain the Non-PII collected via our Technology for up to 180 days in order to ensure that our Technology is functioning properly. After 180 days, we render this information anonymous and store it for up to three years....”<sup>84</sup> Yet TURN explains to clients that its system “[w]hen used in combination with demographic and behavioral data from leading 3rd party providers... can target users within seconds of them exhibiting a desired behavior.”<sup>85</sup>

61. Information on collection and opt-out isn’t made clear on these sites, and includes statements that clickstream information is not personally identifiable, even if it includes that a company can “infer how you use sites and pages on the Internet.” For example, [x+1]’s privacy page, in a series of questions, asks and answers “What choices do I have about [x+1] collecting and using my information? It is possible for you to use much of [x+1] without giving us any personally identifiable information. You can request at any time that [x+1] not send future emails to you by contacting us. You may also correct or update any personally identifiable information provided by contacting [x+1] by email, facsimile or mail.... For more information on the types of non-personally identifiable information collected by [x+1], please email us....”<sup>86</sup>
62. The incorporation of outside data, including behavioral information, on a single user or set of users, illustrates the need for the FTC to quickly clarify to marketers that they can no longer hide behind the flimsy excuse that targeting is ok because it isn’t so-called personally identifiable. As the FTC February 2009 staff report on behavioral advertising noted, “Staff believes that, in the context of online behavioral advertising, the traditional notion of what constitutes PII versus non-PII is becoming less and less meaningful and should not, by itself, determine the protections provided for consumer data...”<sup>87</sup>
63. The Commission should review the definitions for targeting developed for data

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<sup>84</sup> Turn, “Privacy Policy,” <http://www.turn.com/corp/about/privacy-policy.jsp> (viewed 4 Apr. 2010).

<sup>85</sup> Turn, “Turn Platform Solutions Features and Benefits,” <http://www.turn.com/corp/platform/platform-features.jsp> (viewed 4 Apr. 2010).

<sup>86</sup> [x+1], “Privacy,” <http://www.xplusone.com/privacy.html> (viewed 2 Apr. 2010).

<sup>87</sup> Federal Trade Commission, “Staff Report: Self-Regulatory Principles For Online Behavioral Advertising: Tracking, Targeting, and Technology,” Feb. 2009, <http://www.ftc.gov/opa/2009/02/behavad.shtm> (viewed 2 Apr. 2010).

exchanges by the Interactive Advertising Bureau. It is clear from such a review that it strains credulity to allow the claim that all this fine-grained information on a consumer isn't personally identifiable, and hence excused from meaningful privacy protections. For example, in its February 2010 document, the IAB defines behavioral targeting as "Using previous online user activity (e.g., pages visited, content viewed, searches, clicks and purchases) to generate a segment which is used to match advertising creative to users (sometimes also called Behavioral Profiling, Interest-based Advertising, or online behavioral advertising). Behavioral targeting uses anonymous, non-PII data."<sup>88</sup>

64. While BlueKai and eXelate say that users can examine the data collected on them, the process fails to provide a candid explanation of what really occurs with the data.<sup>89</sup>
65. Rocket Fuel suggests that its data collection is part of a "virtuous cycle" to deliver "better ads." It then provides little context for opt-out, except a link—"we hope you're equally happy with your role in this endeavor, but if not please click here to opt out of personalized ads based on the Rocket Fuel cookie."<sup>90</sup>
66. These practices developed in the U.S. are being exported abroad, creating privacy concerns in the EU and in the Asia/Pacific areas. For example, the Rubicon Project now serves both the United Kingdom and Europe, providing "billions of pieces of proprietary market data to match each online publisher advertising impression to the best money-making opportunities from online advertising networks."<sup>91</sup> OpenX is now working with Europe's largest ad network operated by Orange of France Telecom.<sup>92</sup>

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<sup>88</sup> IAB, "Networks & Exchanges Quality Assurance Guidelines," p. 38.

<sup>89</sup> BlueKai, "Opt Out," <http://www.bluekai.com/optout.html>; eXelate, "Consumers: Opt Out/Preference Manager," <http://www.exelate.com/new/consumers-optoutpreferencemanager.html> (both viewed 2 Apr. 2010).

<sup>90</sup> Rocket Fuel, "Privacy Policy for Web Surfers," <http://www.rocketfuelinc.com/html/privacy/index.html> (viewed 3 Apr. 2010). See also "AdSense Opens Up to 'Certified Ad Networks': Three Questions for Google."

<sup>91</sup> "The Rubicon Project Opens London Office; Justin Thomas Named Director of UK Publisher Development," 2 July 2009, <http://www.rubiconproject.com/about/press/the-rubicon-project-opens-london-office-justin-thomas-named-director-of-uk/> (viewed 5 Apr. 2010); Suzanne Bearne, "The Rubicon Project Expands into Asia Pacific," *New Media Age*, 26 Aug. 2009, <http://www.nma.co.uk/the-rubicon-project-expands-into-asia-pacific/3003834.article> (subscription required).

<sup>92</sup> "Orange-France Telecom Group and OpenX Announce Partnership to Launch Orange Ad Market," 31 Mar. 2010, [http://www.openx.org/about/Orange-France\\_Telecom\\_Group\\_and\\_OpenX\\_announce\\_partnership](http://www.openx.org/about/Orange-France_Telecom_Group_and_OpenX_announce_partnership); "Luc Thang: Orange Ad Market will Create More Value for Publishers and Better ROI for Advertisers," *ExchangeWire*, 1 Apr. 2010, <http://www.exchangewire.com/> (both viewed 5 Apr. 2010).

67. While we support a system that benefits publishing and advertising, the privacy and consumer protection equation must be brought into balance.<sup>93</sup>

## VI. Legal Analysis

### **The FTC's Section 5 Authority**

68. The companies named in this complaint, as well as others involved in real-time tracking and bidding—including those that provide data optimization services for profiled targeting—are engaged in unfair and deceptive practices.<sup>94</sup>

69. A trade practice is unfair if it “causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition.”<sup>95</sup>

70. The injury must be “substantial.”<sup>96</sup> Typically, this involves monetary harm, but may also include “unwarranted health and safety risks.”<sup>97</sup> Emotional harm and other “more subjective types of harm” generally do not make a practice unfair.<sup>98</sup>43 Secondly, the injury “must not be outweighed by an offsetting consumer or competitive benefit that the sales practice also produces.”<sup>99</sup> Thus the FTC will not find a practice unfair “unless it is injurious in its net effects.”<sup>100</sup> Finally, “the injury must be one which consumers could not reasonably have avoided.”<sup>101</sup> This factor is an effort to ensure that consumer decision making still governs the market by limiting the FTC to act in situations where seller behavior “unreasonably creates or takes advantage of an obstacle to the free exercise of

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<sup>93</sup> Rubicon Project, “Manifesto Core Belief,” <http://rubiconproject.com/manifesto> (viewed 2 Apr. 2010).

<sup>94</sup> Clifford, “Instant Ads Set the Pace on the Web”; Steel, “Exploring Ways to Build a Better Consumer Profile”; and Learmonth, “Holy Grail of Targeting Is Fuel for Privacy Battle.”

<sup>95</sup> 15 U.S.C. § 45(n); see, e.g., *Fed. Trade Comm’n v. Seismic Entertainment Productions, Inc.*, Civ. No. 1:04-CV- 00377 (Nov. 21, 2006) (finding that unauthorized changes to users’ computers that affected the functionality of the computers as a result of Seismic’s anti-spyware software constituted a “substantial injury without countervailing benefits.”).

<sup>96</sup> FTC Unfairness Policy, *supra* note 113.

<sup>97</sup> *Id.*; see, e.g., *Fed. Trade Comm’n v. Information Search, Inc.*, Civ. No. 1:06-cv-01099 (Mar. 9, 2007) (“The invasion of privacy and security resulting from obtaining and selling confidential customer phone records without the consumers’ authorization causes substantial harm to consumers and the public, including, but not limited to, endangering the health and safety of consumers.”).

<sup>98</sup> FTC Unfairness Policy, *supra* note 113.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

consumer decisionmaking.”<sup>102</sup> Sellers may not withhold from consumers important price or performance information, engage in coercion, or unduly influence highly susceptible classes of consumers.<sup>103</sup>

71. The FTC will also look at “whether the conduct violates public policy as it has been established by statute, common law, industry practice, or otherwise.”<sup>104</sup> Public policy is used to “test the validity and strength of the evidence of consumer injury, or, less often, it may be cited for a dispositive legislative or judicial determination that such injury is present.”<sup>105</sup>
72. The FTC will make a finding of deception if there has been a “representation, omission or practice that is likely to mislead the consumer acting reasonably in the circumstances, to the consumer’s detriment.”<sup>106</sup>
73. First, there must be a representation, omission, or practice that is likely to mislead the consumer.<sup>107</sup> The relevant inquiry for this factor is not whether the act or practice actually misled the consumer, but rather whether it is likely to mislead.<sup>108</sup> Second, the act or practice must be considered from the perspective of a reasonable consumer.<sup>109</sup> “The test is whether the consumer’s interpretation or reaction is reasonable.”<sup>110</sup> The FTC will look at the totality of the act or practice and ask questions such as “how clear is the representation? How conspicuous is any qualifying information? How important is the omitted information? Do other sources for the omitted information exist? How familiar is the public with the product or service?”<sup>111</sup>
74. Finally, the representation, omission, or practice must be material.<sup>112</sup> Essentially, the information must be important to consumers. The relevant question is

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<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

<sup>106</sup> FTC Deception Policy, *supra* note 112.

<sup>107</sup> FTC Deception Policy, *supra* note 112; *see, e.g., Fed Trade Comm’n v. Pantron I Corp.*, 33 F.3d 1088 (9th Cir. 1994) (holding that Pantron’s representation to consumers that a product was effective at reducing hair loss was materially misleading, because according to studies, the success of the product could only be attributed to a placebo effect, rather than on scientific grounds).

<sup>108</sup> FTC Deception Policy, *supra* note 112.

<sup>109</sup> *Id.*

<sup>110</sup> *Id.*

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

whether consumers would have chosen another product if the deception had not occurred.<sup>113</sup> Express claims will be presumed material.<sup>114</sup> Materiality is presumed for claims and omissions involving “health, safety, or other areas with which the reasonable consumer would be concerned.”<sup>115</sup> The harms of the online marketers outlined above are within the scope of the FTC’s authority to enforce Section 5 of the FTC Act and its purveyors should face FTC action for these violations.

## VII. Prayer for Investigation and Relief

75. CDD, U.S. PIRG, and WPF request that the Commission investigate the companies and practices cited in this complaint, enjoin their unfair and deceptive business practices, and require the real-time tracking and bidding system to protect the privacy and economic welfare of U.S. consumers. Specifically, CDD, U.S. PIRG, and WPF request the Commission to:

Compel companies involved in real-time online tracking and auction bidding, including providing related data optimization, to provide an opt-in for such a process;

Require that these companies change their privacy policies and practices to acknowledge that such tracking and real-time auctioning of users, via a cookie and other enhanced data applications, involve personally identifiable information;

Ensure that consumers receive fair financial compensation for the use of their data;

Prepare a report for the public and Congress within six months that informs consumers and policymakers about the privacy risks and consumer protection issues involved with the real-time tracking, data profiling, and auctioning of consumers. The Commission should include in its report the impact of this system when delivering financial and health marketing to consumers, as well as whether data involving 13-17-year-olds are being real-time targeted, traded and optimized via the incorporation of other data sources.

Address the implications of potential information “redlining” on consumers if—based on the tracking and profiling of a user—companies decide not to

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<sup>113</sup> *Id.*

<sup>114</sup> *Id.*

<sup>115</sup> *Id.*

provide editorial content based on an assessment of their economic value or other sensitive data;

Provide such other relief as the Commission finds necessary and appropriate.

76. CDD, U.S. PIRG, and WPF reserve the right of supplement this petition as other information relevant to this proceeding becomes available.

Respectfully submitted,

Jeff Chester  
Executive Director  
Center for Digital Democracy

Ed Mierzwinski  
Consumer Program Director  
U.S. PIRG

Pam Dixon  
Executive Director  
World Privacy Forum

8 April 2010